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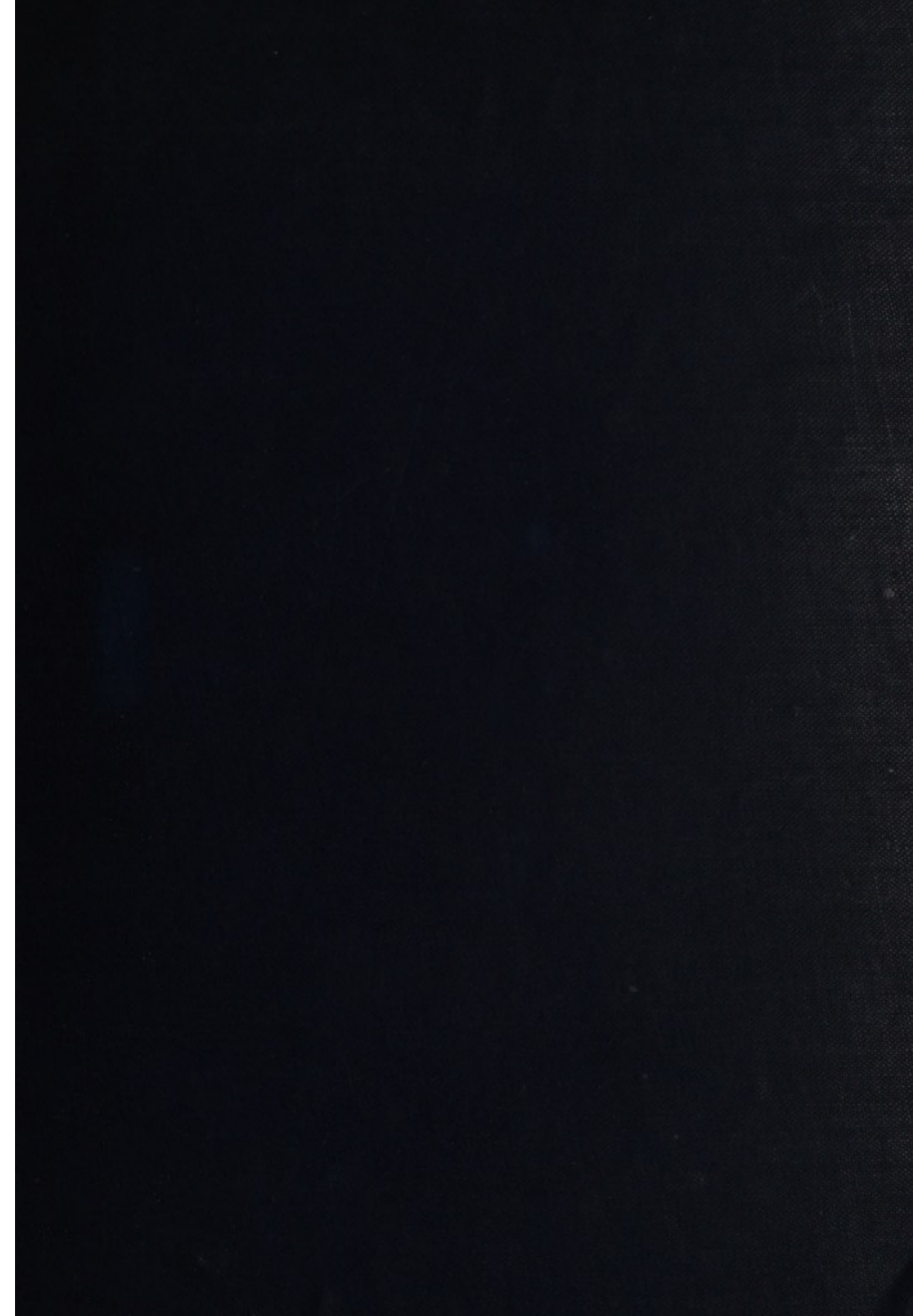
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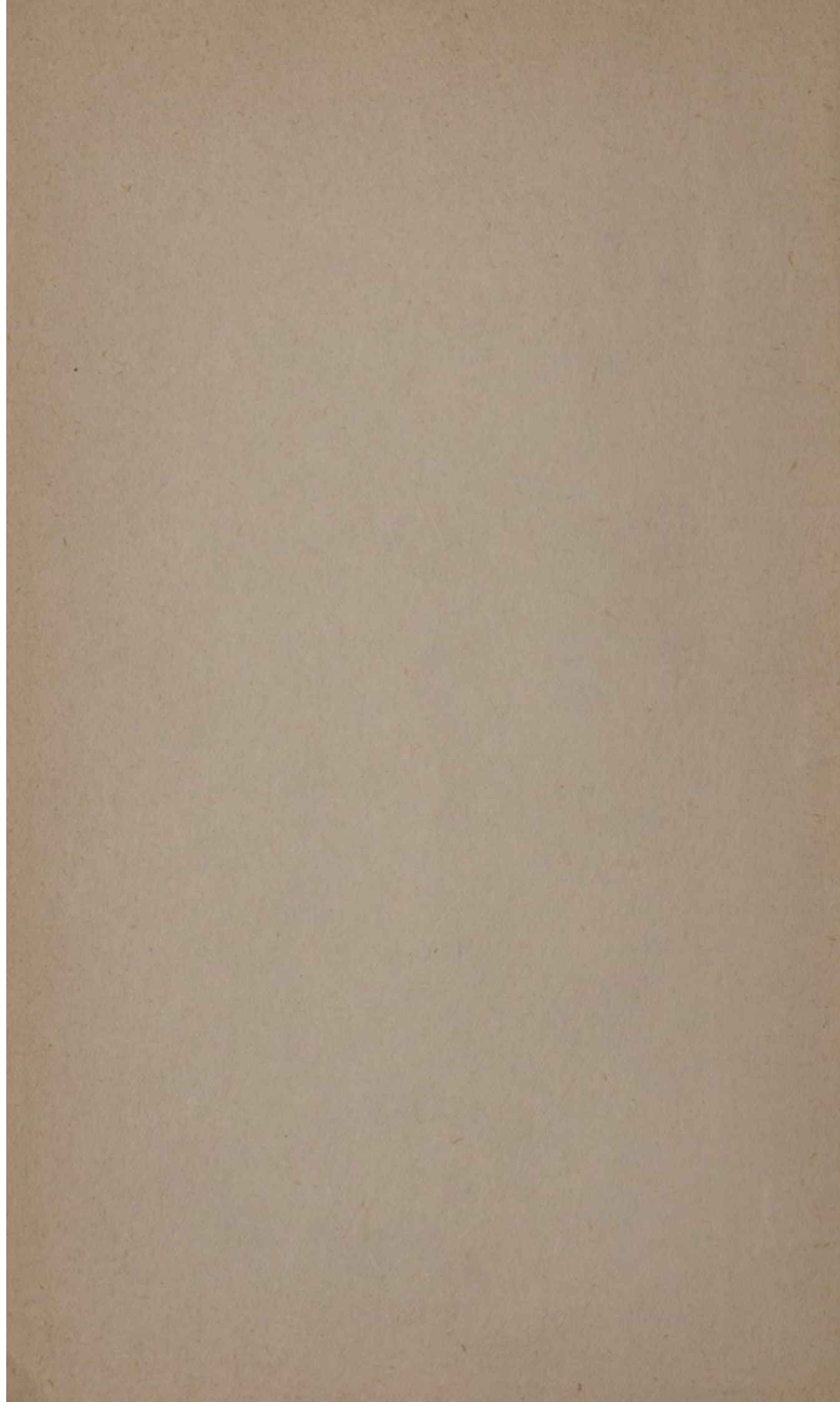


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ILLUSTRATIONS OF POSITIVISM

A SELECTION OF ARTICLES FROM THE "POSITIVIST
REVIEW" IN SCIENCE, PHILOSOPHY, RELIGION, AND
POLITICS

BY

JOHN HENRY BRIDGES, M.B., F.R.C.P.,
*Sometime Fellow of Oriel College, Oxford, and Medical Metropolitan
Inspector to the Local Government Board*

WITH A PREFACE BY

EDWARD SPENCER BEESLY

A New Edition Enlarged and Classified

EDITED BY

H. GORDON JONES

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PREFACE TO THE FIRST EDITION

MOST of the numerous articles contributed by Dr. Bridges to the *Positivist Review* [1893-1906] were concerned not with the passing topics of the day, but with the fundamental principles of Positivism. Written in the last thirteen years of his life, they represent the maturest opinions of one to whom his co-religionists were always accustomed to look up for teaching and counsel. In these short Essays his aim was to set forth Positivist doctrines with a simplicity of language and a fullness of illustration which should make them easily intelligible even to the most unlearned. His qualifications for this task were a perfect mastery of his subject and a singularly impressive style that compels the attention of the reader.

Thinking that it would be deplorable if a series of papers of such unique and permanent value were to be left buried in the back numbers of a periodical, I suggested to Dr. Bridges, a few months before his death, that he should arrange the most important of them for republication. He had begun to do this, but had not carried the work far when he was overtaken by his last illness. I have therefore made a selection which probably includes all the articles that he would have most desired to preserve. I have availed myself of such alterations as he had made—they were few and unimportant—but, finding no indication as to a new grouping of the articles, I have left them in their chronological order. Thus placed they have not, indeed, the methodical arrangement and completeness of a text-book; but perhaps for that very reason the general reader may find them more attractive. Few, if any, of the

more important aspects of Positivism are, I think, left untouched; while, if some are more than once handled, such insistence is not without advantage.

I have only to add that I am in entire agreement with all the opinions expressed in these Essays. In republishing them I think I am rendering the greatest service to Positivism that lies in my power.

E. S. BEESLY.

21 West Hill, St. Leonards-on-Sea,
September, 1907.

NOTE TO THE SECOND EDITION

A NUMBER of posthumous papers by Dr. Bridges, many of which were originally delivered as addresses or lectures, have been added to this edition, which is issued by the English Positivist Committee. Particulars as to the origin of these papers, where known, are given in footnotes. They have all appeared in the *Positivist Review* since the death of Dr. Bridges in 1906, and none of them had the advantage of being revised for publication by the author himself.

Three papers that did not appear in the first edition are now included. The Address on the Day of All the Dead was first published in the *Positivist Review* of April, 1906, and reprinted in the volume of *Essays and Addresses*. The two other papers included are those entitled "The Darwinist Utopia" and "A Visit to Pierre Laffitte."

Numerous bibliographical and explanatory footnotes have been added to this edition, and an Index has been supplied in order to correlate the papers as much as possible, and so increase the utility of the book. The references in these notes are to the 2nd editions of the *Positivist Catechism* and the *General View of Positivism*, in the English translations. The *Cours de Philosophie Positive* (4th ed.) is denoted by the reference *Phil. Pos.*, and the *System of Positive Polity*, in the English translation, by the reference *Pos. Pol.*

I have also taken advantage of the opportunity afforded by the issue of a new edition to classify all the papers in accordance with the nature of their subject-matter. Such a classification as that adopted here has, I think, the great advantage of bringing out

the full value of these admirable Essays, and of exhibiting in greater prominence the synthetic quality which was such a marked and valuable feature of all Dr. Bridges' writings.

H. GORDON JONES.

September, 1915.

ADDENDUM

In the footnote on p. 80 it should have been stated that the list of books in the Positivist Library will also be found in *The Positivist Catechism* and *The Positivist Calendar and Other Tables*. For Comte's account of the Library see *Pos. Pol.*, vol. iv, pp. 351-53.

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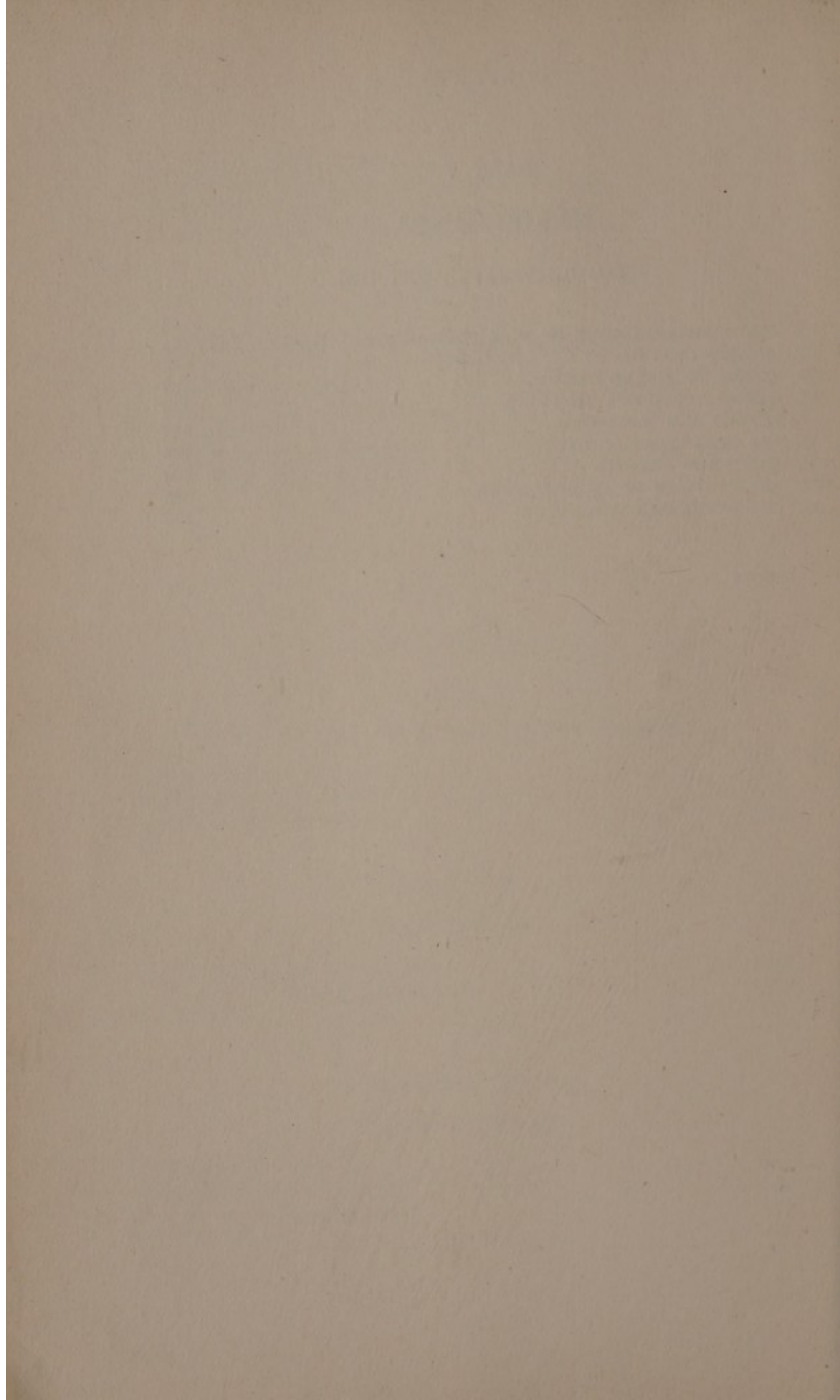
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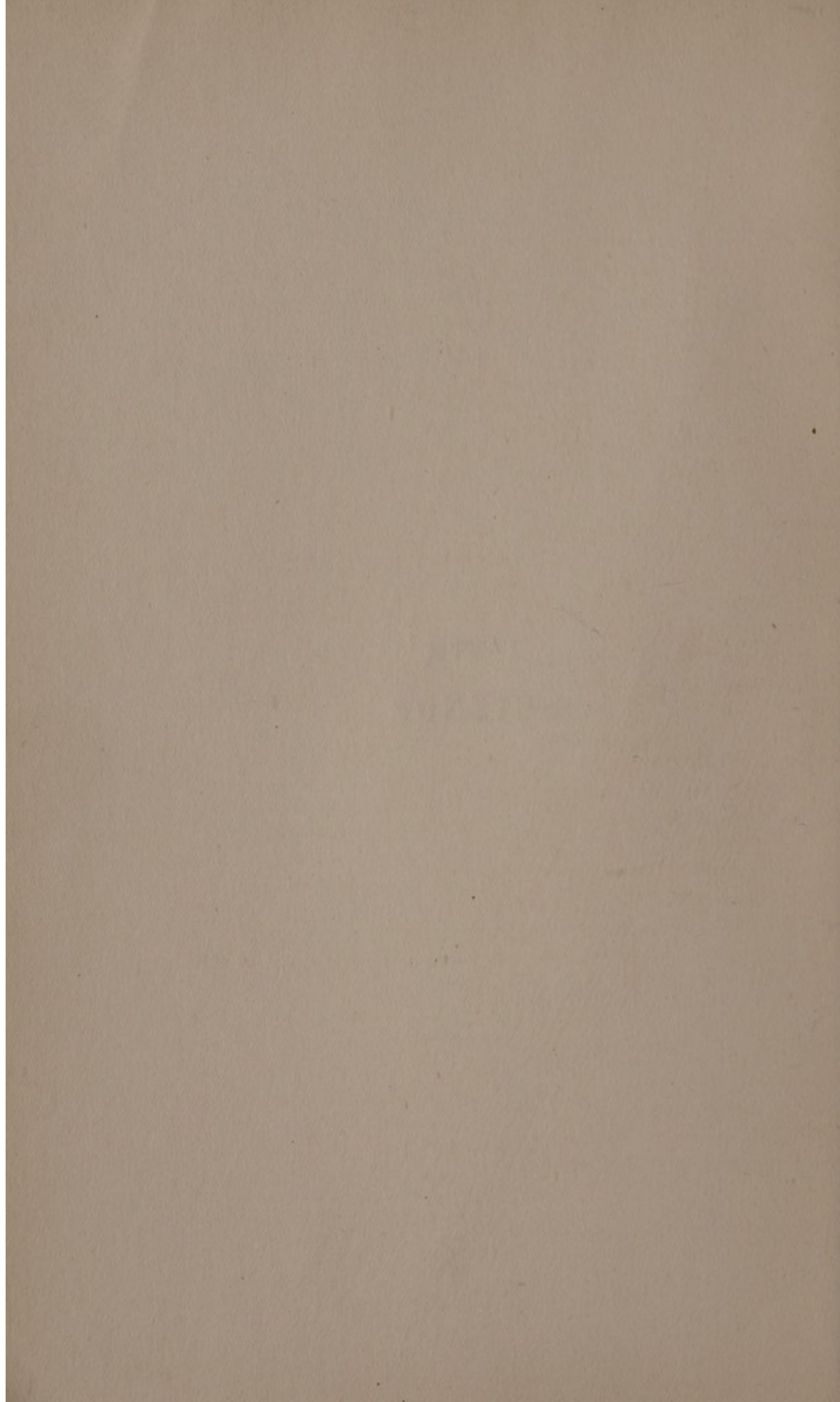
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PART I
SCIENCE



CHAPTER I¹
BIOLOGY
I
BICHAT²

SIX months have passed since the centenary of the death of Bichat, which took place, in his thirty-first year, on July 22, 1802. It is too long an interval, yet not too long to make it inopportune to recall his great services to mankind.

The leading facts in Bichat's short life may be told in a few words. Born in 1771 at Thoirette, in the department of Ain (then in the province of Bresse), he was educated by his father, a physician of the Montpellier school, and afterwards at Lyons, under an eminent surgeon, Petit. He passed through the terrible siege of 1793, and then went to Paris, where he studied under the great master of surgical art, Desault. Desault appreciated his genius, and received him into his house more as an adopted son than as a secretary. After Desault's death in 1795 Bichat undertook to edit his works, and at the same time plunged into an arduous course of anatomical study. From this resulted, in 1800, his *Treatise on Membranes* and his *Physiological Researches on Life and Death*, and in the following year his *General Anatomy*. His health was undermined by strenuous and incessant work, and an accidental fall in the summer of 1802 on the steps of the Hôtel-Dieu brought about the illness from which he died a fortnight afterwards. He was buried in the cemetery of Clamart, but in 1845 the body was transferred to Père-la-Chaise.

Bichat dealt with one of the most difficult subjects that can be offered for man's consideration, the Theory of Life; and in his hands it may be said to have passed from the metaphysical to the positive stage. During the eighteenth century the facts of living bodies were studied by two opposing schools; by the first as a deduction from physical and mechanical discoveries, by the second as the procedure of a metaphysical entity, the vital principle.

¹ Any reader who is not familiar with Comte's classification of the sciences is advised to study the paper on "The Ladder of the Sciences" in Part II before reading Part I.—ED.

² January, 1903.

Boerhaave may be taken as the representative of the former school; Van Helmont, Stahl, and Barthez of the latter. To Boerhaave, eagerly availing himself of the physical attainments of his time, and more especially of Harvey's discovery of the circulation as resulting from the muscular forces of the heart, the human body presented itself as an engine working on mechanical principles. Animal heat, for instance, was caused and maintained by the friction of particles in the rapid movement of the blood. Again, towards the close of the seventeenth and during the beginning of the eighteenth centuries, chemistry began to emerge as a distinct science. Its discoveries, imperfect as they were, attracted another school of physicians, who used them as a mode of explaining vital action by ferments and by conflicting action of salts. Against these crude attempts to reduce life to a play of physical and chemical forces a memorable and persistent protest was raised by Stahl, and after Stahl by Barthez. Stahl put forward the conception of an *Arché* pervading the organism, relaxing this part, bracing that, and thus regulating their supply of blood or the activity of their secretion. It was in many respects analogous to the *Psyché* of Aristotle. Barthez, in the latter half of the eighteenth century, was far better equipped than Stahl with philosophical principles and scientific knowledge. But the Vital Principle by which he accounted for the unity of the organism, for the *consensus* of its functions and the regulation of molecular change, was essentially identical with the *arché* of Stahl. Both thinkers were at one in their conviction that the organic world exhibited phenomena for which mathematical, physical, and chemical sciences could not account.

In equal contrast with these opposing schools, the one crude, mechanical, and incomplete, the other nebulous and incomprehensible, Bichat endeavoured to present the laws of phenomena characteristic of living things, without attempting to penetrate their primal cause.

Most physicians [he says] have begun by looking for this primal principle; they have tried to descend from the study of the nature of life to that of its phenomena, instead of rising from observation of these to the formation of their theory. The *psyché* of Stahl, the *arché* of Van Helmont, the vital principle of Barthez, looked at as the central source of vital action, have been the foundations on which all physiological discussion has rested. But each of these foundations has given way in turn, and of their ruins nothing has been left except facts of sensibility and mobility tested by rigorous experiment. The narrow limits of man's understanding almost always debar

his access to first causes. A veil wraps them in innumerable folds which prove to be impenetrable.

In the study of nature our guiding principles consist of certain general results of first causes. From these we derive numberless secondary results. It is the act of connecting the latter of these with the former that is the note of intellectual capacity. But to inquire into the connection of our general principles with their first causes is like the march of blind men on a road where the chances of error are infinite. Nor is the knowledge of these first causes needful. We can study the phenomena of light, of heat, of oxygen, without knowledge of what the essential nature of each of these things may be. And so in the study of life we can study the properties of organs animated by life without knowing what may be their vital principle. Leaving, then, those first causes unexamined, let us concentrate our attention on their great results.¹

Pursuing this method, and abandoning all attempts to discuss the origin or the essential meaning of life, Bichat surveyed the facts of living bodies, and reached many of the great generalizations on which biological science is founded. It is true that, so far from being always successful, this treatise on *Life and Death* opens with an error, or at least with an unguarded statement that may easily be mistaken for an error; the proposition that "Life is the sum of the functions that resist Death." "All that environs living bodies," he continues, "tends to destroy them." That is to say, as he goes on to explain,

it would destroy them if they were not living. But they contain a principle of reaction against external forces which constitutes their life. Of this principle we know nothing in itself; we know it only through its phenomena, and the most general of these phenomena is the perpetual alternation of action and reaction between living bodies and the world without them.

We see from this that Bichat had grasped the conception of the environment (*milieu ambiant*, as Blainville and Lamarck called it), which is so essential to the conception of life. If with this he had combined the thought of Individuation, to use the pregnant expression of Coleridge, the process of integrating heterogeneous elements into a definite whole, his description of life would have left little to desire.

Following on this general conception of life comes the analysis of the two kinds of life found throughout the animal kingdom; the

¹ *Recherches sur la vie et la mort*, pt. i, art. 7.—ED.

life of nutrition common to animals and plants, and the life peculiar to animals of sensation and motion, the life of relation, as it may be called, bringing the organism into contact with distant objects in the world around it. This analysis is conducted with extreme precision and admirable breadth of view. It is pointed out that the organs of sensation and of voluntary motion are double, and are disposed symmetrically with regard to the axis of the body, strikingly contrasted in this respect with the organs of nutritive life, such as liver, bowels, heart, spleen, etc., which are for the most part single and unsymmetrically arranged. Connected with this difference in form is a difference in action. Vegetal organs act continuously, animal organs with alternating intermittence. Those who are familiar with Comte's theory of the brain will remember the use made of this principle in throwing light on the continuity of moral functions as opposed to the alternating action of intellectual and active functions. Bichat was in error as to the seat of the passions. His life was too short and too absorbingly occupied to allow him time for examining Gall's anatomical investigations of the brain, and the hypothesis founded on them. He misinterpreted the disturbing effect of passions upon nutritive organs as implying that these organs were their seat. None the less is it the case that they are intimately associated with the affective functions of the brain, and that the action and reaction of the physical and moral sides of our nature cannot be understood until this association has been more accurately examined.

Bichat concludes this part of his treatise with some striking observations on the contrast between the two kinds of life with regard to education. At birth the functions of organic life, some of which have been already brought into exercise, attain perfection at a single step. The heart beats as well as it will ever beat. The lungs, liver, digestive organs, are in full working order, and will attain no further progress. But the brain, the nerves, the muscles, have a long process of education before them. The law of Habit comes into play. Life in the social state will ultimately develop all these organs of animal life to unimagined degrees of perfection. We are led here to the point of contact between the two sciences of biology and sociology.

From the study of life Bichat proceeds to that of death. His work on this branch, as on the other, is a signal illustration of the definite precision and certainty that mark the positive spirit. Death, regarded as a failure of vital power, as a disappearance of the vital principle, is a vague metaphysical conception that tells us

nothing. What Bichat does is to take the organs of the three functions most essential to life—circulation, respiration, and innervation—and to show us in detail and with certainty how an injury to one of these organs affects each of the others, and how it acts on the other organs and tissues of the body. Beginning with the death of the heart, he inquires successively its results on the brain, on the lungs, and on the body as a whole. He is careful to point out that in the higher vertebrates there are practically two hearts communicating only through the capillary systems of the lungs and of the bodily tissues, the right heart transmitting black blood, the left heart transmitting red blood. The death of the heart has no immediate effect on the brain except the cessation of the mechanical impulse caused during life by the heart's contraction. But in the lungs the stoppage of the right heart involves the arrest of chemical change in the blood, and consequent arrest of supply of aerated blood to the brain and to other organs of the body.

Fatal injury to the lungs, involving stoppage of chemical change in that organ, involves transmission of black blood through the coronary arteries to the muscular tissues of the heart, and similarly of black blood to the brain, thus paralysing the nerves that act on the muscles of respiration.

Fatal injury to the brain does not act directly and immediately on the heart. On the lungs, however, its effect is immediate. The intercostal muscles and the diaphragm being paralysed, air ceases to enter the lungs, aeration of the blood ceases, and black blood is transmitted to the fibres of the heart and to the other organs of the body.

All these results are not merely stated as probable conjectures; they are rigidly demonstrated by vivisectional experiment. Comte has spoken strongly of the futility of the experimental method in the majority of physiological researches. It is usually the case that sudden injury to one organ produces disturbing effects on the action of all the rest, which render it impossible to draw any valid conclusion from the experiment. Especially is this true of vivisectional experiments on the nervous system, and above all on the brain, as is sufficiently proved by the barren results of brain vivisection during the nineteenth century. Nevertheless, Comte did not strain this view so far as to maintain that experimental research had been without result in every instance. He distinguished certain cases where it was possible to isolate the action of one organ from that of the rest, and among these exceptions he specifies the experiments of Bichat. It needs only to supply a note of warning. Once made

by a master-hand and controlled by competent observers, such experiments do not need repeating. They were made on weighty grounds for the purpose of discovery. They are not to be repeated for the purposes of education.

In 1801 Bichat published the most important and influential of his works—the *Anatomie Générale*. The central conception of this treatise, universally acknowledged to have made an epoch in the science of life, is the analysis of organs into their component tissues, and the attribution to each of these of its appropriate degree of vitality. Hitherto the organs of the body had been regarded simply as mechanisms adapted to the performance of a particular function, but otherwise as having little or nothing in common with each other. From this standpoint it was difficult to form synthetic views of the facts of life, to regard the organism as acting as a whole. A complete change resulted from Bichat's conception. It may be illustrated by a familiar example. Many old people now living will remember to have heard in their youth that a friend or neighbour was suffering from what was called "white swelling" of the knee-joint. Regarded as a disease special to the joint, and affecting all its parts, it was treated empirically, and with nugatory—often with bad—results. Bichat's conception altered the whole way of looking at the matter. The joint was now seen to be a complex organ, into the formation of which many distinct tissues entered: connective tissue, bone, cartilage, vascular tissue, sinew, muscle, nerve, integument; it was, in fact, made up of eight or nine different materials moulded into a special form for the purposes of the joint, each of these materials entering into the formation of numberless other organs. Each of these tissues was examined by Bichat not merely in reference to any special organ, but as found throughout the body. Each was seen to have its own special degree of vitality, its own forms of disease. It is easy to conceive the flood of light shed upon the medical treatment of any diseased organ by this way of regarding the matter. Remedial measures were henceforth adapted, not to the whole organ indiscriminately, but to the one or more tissues affected, whether in that organ or elsewhere. The effect on the science of life was to regard life, not as an abstract impalpable entity pervading the organism, but as a series of phenomena varying with each tissue. Bichat thus created the branch of biological science known as histology, the scientific study of tissues—a study which, in the course of a century, has grown through unenlightened specialism to cumbrous dimensions which have often proved obstructive to scientific progress. In estimating his work we must remember that it was

done without the aid of the compound microscope; that the chemistry of organic substances was in its infancy; and that comparative embryology hardly existed. The way in which all tissues were differentiated out of pre-existing cellular structures was left to be opened thirty years afterwards by Schwann and Schleiden, and has been followed out more recently with remarkable results by Virchow and others.

Thus it was that in the last year of the eighteenth century, and in the first year of the nineteenth, Bichat inaugurated the positive theory of life. Much doubtless remained to be done by others. Lamarck at this time was engaged in tracing the evolution of life from its lowest to its highest forms, and was followed in this by such men as Blainville, Oken, and Goethe. Gall, meanwhile, was investigating in the higher vertebrates and in man those functions of the nervous system which lie at the foundation of the social state. A generation had hardly passed before Comte, on these foundations, had instituted the science of sociology.

II

LAMARCK

DURING the half-century that preceded the publication of Darwin's *Origin of Species* the name of Lamarck was but little known to the European public, and was imperfectly recognized even by men of science. Goethe, who devoted such deep attention to the philosophy of Evolution, seems never to have heard of his name. Darwin himself, as his correspondence shows, had a very imperfect apprehension of his speculations. Though Lamarck is now admitted to have been the founder of Invertebrate Zoology, he spent the last twelve years of his life in poverty and blindness, consoled only by the persistent and heroic devotion of his daughter, Cornelia. The very place of his burial in the cemetery of Mont Parnasse is forgotten.

One exception there was to this discreditable neglect of a thinker and explorer who is at length admitted to hold the foremost place in the theory of Evolution. Auguste Comte, who was far from accepting his speculative conclusions, recognized from the first his transcendent services to biological science. He saw the light which Lamarck had thrown on the fundamental fact of life—the action and reaction, tending continuously to adjustment, between organism

and environment. He placed his *Philosophy of Zoology* in the short list of works occupying the scientific division of his Positivist Library. It is not the only instance in which Comte thus anticipated the verdict of history. His judgment of the great mathematical physicist Fourier, and of Leroy, the pioneer of comparative psychology, have been in the same way accepted by later generations.

Dr. A. S. Packard, professor of Zoology in Brown's University, U.S.A., has recently published a volume on *Lamarck, the Founder of Evolution: His Life and Work*,¹ which supplies adequate information for those who may wish to know more about this remarkable man. He was born, August 1st, 1744, at Bazentin-le-Petit, in Picardy [Somme], the youngest of eleven children, descended on the father's side from an ancient family of Béarn, near Lourdes. He was brought up, like so many illustrious Frenchmen of the seventeenth and eighteenth centuries, by the Jesuits; but at his father's death, in 1760, he joined the army, where, in the following year, he so distinguished himself at the battle of Vellinghausen as to be promoted on the field by his General, Marshal Broglie. An accidental injury forced him to leave the army. He betook himself to Paris, and studied botany and medicine. He published an important work on the Plants of France; and through the powerful patronage of Buffon became Professor of Botany at the Academy of Sciences. In the years that followed he travelled in pursuit of his science in various parts of Europe, and in 1789 he was made keeper of the Herbarium in the Royal Garden. In 1790 he brought before the Legislative Assembly his scheme for the organization of the Museum of Natural History, which was carried into effect three years afterwards, during the fiercest throes of the Revolution, by the National Convention. The sphere assigned to Lamarck was that of Invertebrate Zoology, a department of science which he had not previously studied, but which may be said to owe its existence, or, at any rate, its entire reconstruction, to his labours. As conceived by Linnæus, Invertebrates had been classified under the two divisions of Insects and Worms. In Lamarck's hands a new world was revealed to the student, leading to wholly new conceptions of life. The two classes of Linnæus were developed into ten. For the first time, Crustaceans, Arachnids, Cirrhipedes, Annelids, and Infusoria were recognized as distinct classes. The generalizations which he was led to form by his studies of these forms of life were

¹ Longmans, Green, and Co.; 1901.

given to the world in a series of discourses delivered annually in the opening years of the nineteenth century, and they were summed up in 1809 in his *Philosophie Zoologique*.

Lamarck made no attempt to account for the Origin of Life. He contented himself with saying that the simplest forms of life were those from which all the rest had gradually issued. In giving rise to her varied productions, two conditions were made use of by Nature: time, and favourable surroundings. Time she has always at her disposal. As to modifying circumstances, they are inexhaustible. The essentials of these consist in the influence of all the environing media (*milieux ambiants*), in the diversity of local causes (*diversité des lieux*), in habits, in actions, in movements; finally, in means of living, of self-preservation, of self-multiplication. Moreover, as the result of these different influences, the faculties developed and strengthened by use (*usage*) became diversified by the new habits maintained for long ages; and by slow degrees the structure, the consistence, in a word, the nature and condition, of the parts and organs participating in all these influences became permanent, and were propagated by generation (*hérédité*).

It is important to note that Lamarck never put forward the view that the Evolution of Life took place in a linear series, of which each term exhibited a higher grade of development than the one preceding. His conception was rather that of a tree sending out in the course of its upward growth many lateral branches, each of which in turn ramified into smaller branches till the final twigs were reached. He made not the slightest attempt to range the infinite host of species in subordination one to another. But the great groups did, as he conceived, form such a series, and might be lineally arranged. And, in any case, when we pass from the highest forms of life to the lowest, or inversely, as from man to the protozoon, neglecting the divergent branches, we follow necessarily, as in the case of a pedigree, a line of direct descent.

How did Lamarck regard the question of *Species*? We call *species*, he says, "every collection of individuals which are alike, or almost so, and we remark that the regeneration of these individuals conserves the species and propagates it by continuing successively to reproduce similar individuals.....This idea was quite simple, easy to grasp, and seemed confirmed by the constancy in similar form of the individuals which reproduction or generation perpetuated. But the farther we advance in the knowledge of the different organized bodies with which almost every part of the surface of the globe is covered, the more does our embarrassment increase in

determining what should be regarded as species, and the greater is the reason for limiting and distinguishing the genera. As we gradually gather the productions of nature, as our collections gradually grow richer, we see almost all the gaps filled up, and our lines of demarcation effaced. We find ourselves compelled to make an arbitrary determination, which sometimes leads us to seize upon the slightest differences between varieties to form of them the character of what we call a species; and sometimes one person calls a species what another calls a variety."¹

"For a long time," he observes, "I thought all species were constant in nature, and that they were constituted by the individuals which belong to each of them. I am now convinced that I was in error, and that only individuals exist in nature. The origin of this error, which I shared with other naturalists, lay in the long duration, relatively to us, of the same state of external circumstances in each place which a given organism inhabits." A great impression was produced about this time by the results of the examinations, in the hands of Cuvier and Geoffroy Saint-Hilaire, of mummified animals brought by French explorers from Egypt. Specimens of cats, crocodiles, and other animals, known to be many thousands of years old, were found to be exactly similar to animals existing there at the present day. This was taken as a sufficient proof that species were permanent. But to this Lamarck's reply was that 4,000 years, though a long period in reference to human history, was an extremely short one in reference to the history of the earth. Mankind is apt to judge of dimensions relatively to itself. During those few thousand years the changes of environment in Egypt have been quite inconsiderable; consequently, there was no reason why organisms acted on by that environment should have changed. The great physical changes in our planet have required an incomparably longer period to produce.

But we are often in a position to watch changes in the environment; and there we see the organism undergoing modification. If we look at the facts of life as it exists around us, we see that in all the animals and plants which man cultivates and breeds for his own use—horses, dogs, cattle, poultry, wheat, vegetables, and fruits innumerable—marvellous changes have taken place; varieties have been produced, exhibiting divergences from their original state far greater than the naturalist requires in distinguishing one species from another. The original form of *Triticum sativum* has

¹ *Philosophie Zoologique*, vol. i, ch. 3.—ED.

disappeared, or, at least, cannot be indicated with certainty. Mark the changes which take place in the leaves of so familiar a plant as *Ranunculus aquatilis*, if some of them are allowed to grow above and apart from the water. Take a grass from a damp, low-lying field; let it live for many generations on a hillside in good soil; then transplant it for a further series of generations to a barren mountain. Its transformed condition would undoubtedly be described by botanists as a distinct species.

Lamarck's hypothesis was that the simplest forms of life—microscopical specks of amorphous protoplasm—were continually, in some unexplained manner, being produced by nature, and that deviations from this original form were produced by interaction with surrounding circumstances. New modes of action stimulated by these circumstances, when continued through a sufficiently long series of generations, gradually resulted in the formation of new organs. Hence the gradual growth of new species. The habit of exercising an organ increases it; and these increments, summed up after repeated reproductions, modify it more and more, so that at length it no longer seems the same organ.

Lamarck has been misrepresented as saying that the organs of an animal were created by its desires; that an animal wishing to modify any organ ultimately succeeded in doing so. What Lamarck really says is that, owing to changes in the environment, an animal was exposed to new *wants*, from which resulted certain actions; and that these actions, repeated for a sufficient course of time, led to a modification of organs. The giraffe, finding itself in need of leafy food, continually strained upwards to reach it, with the result that in the course of generations the neck and forelimbs were elongated. The Darwinian hypothesis is that, somehow or other, among giraffes a variety occurred with longer neck and forelimbs, and that this variety, being better adapted to its surroundings, survived. Either hypothesis is possible; perhaps both may have contributed to the result. Meantime, it is important to remark that evidence of either one or the other is wanting.

Similar remarks apply to Lamarck's way of accounting for the tentacles of the snail. "I conceive," he says,

that a gasteropod mollusc which, as it crawls along, finds the need of feeling the bodies in front of it, and makes efforts to touch these bodies with some of the foremost parts of its head—sending to these every time supplies of nervous and other fluids—I conceive, I say, that it must result from this reiterated afflux towards the points in question that the nerves which

abut on these points will, by slow degrees, be extended. Now, as in the same circumstances other fluids of the animal flow also to the same places, and especially nourishing fluids, it must follow that two or more tentacles will appear and develop insensibly under those circumstances on the points referred to.

Since the time of Darwin a new theory of evolution has been put forward by Weismann and his school, in which use-inheritance—*i.e.*, the transmission of habits acquired during the lifetime of an individual—is declared to be impossible. From generation to generation, according to this view, the germ-plasm is passed on intact, embedded in the tissues of the body, but wholly immune to their influence. So far as climatic agencies may operate directly on this germinal plasm, so far only may it be regarded as modifiable. Otherwise the sole cause of variation is the mixture of plasms resulting from the union of sperm- and germ-cell. It follows on this theory that modifications of tissues caused by exercise and habit during the lifetime of an individual leave the germ-plasm unaffected, and are not transmissible to progeny. Weismann's hypothesis has been worked out in marvellous detail. The germ-plasm has, according to him, an elaborate architectural structure, containing, in subordination to each other, idants, ids, determinants, and biophors, each coming into operation at the appointed time, and regulating the successive formation of organs and tissues. So elaborate, indeed, is this explanation of development that it is hardly easier of comprehension than the facts which it proposes to explain. And during the whole process we are asked to believe that the tissues of the body (somatic cells) are debarred from exercising any reacting influence on the germ-cells which are embedded in them. It may be noted that it is only in rare instances that these cells can be traced by actual inspection during the whole course of growth. In the vast majority of cases these "germ-tracks" are invisible, and their existence is a matter of inference.

On the whole, it may be said that the demands made on scientific imagination by this hypothesis have been seldom exceeded in the history of science. It is no matter of surprise to find that a strong tendency has shown itself in the rising generation of biologists to revert to Lamarck's theory of inherited habit, and to regard it, side by side with Darwin's and Wallace's theory of the survival of the fittest, as an important factor in the evolution of life upon the globe.

III

THE DARWINIAN CONTROVERSY¹

DARWIN, in England, is popularly identified with the belief in Evolution as opposed to Special Creation. In this country Science was later in shaking off theological trammels than elsewhere. In France or Germany such a book as Paley's *Natural Theology* would have been utterly disregarded by men of average education. It will be remembered that Paley imagines a savage to have picked up a watch, and to infer from its movements that it must have been made by some intelligence greater than his own. His inference, as will now be admitted, would really be that the watch was itself the intelligence. Paley, however, went on to argue that because the first and second vertebræ, known as atlas and axis, fitted one another like two pieces in a machine, or because the structure of the knee-joint displayed arrangements for various motions useful in walking, therefore the human body must have been made by some intelligence vastly superior to that of man. On the Continent, where scientific men were less fettered by religious prejudices, naturalists were struck not so much by the ingenuity of these and other devices as by their imperfection. They were less impressed by the fact that the eye was so formed as to allow rays of light to converge on the retina than by the fact that it was a very defective optical instrument, in which the plans for avoiding spherical and chromatic aberration were extremely inadequate. In different animals there were various degrees of adaptation: the eye of the eagle, for instance, was seen to be incomparably superior as an organ of vision to that of man.

Ranging animal structures of all sorts in a series according to the degree of adaptation to their purpose, the best being far short of perfection, the worst showing a very imperfect degree of attainment, biologists were speedily disabused of the idea that the Providence superintending the phenomena of life was of infinite wisdom. Wisdom of some kind there was, but not infinite. The prevailing tendency among philosophic minds at the beginning of the nineteenth century was towards belief in a *nisus formativus*—a force of a progressive kind innate in animal structures, and moulding them by slow degrees into more and more perfect correspondence

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with their environment. It is probable that no naturalist of repute during the nineteenth century seriously believed that lions and tigers, birds and fishes, oak-trees and cedars, rose suddenly from the ground on a given day as Milton describes. Either they dismissed the question from their minds as insoluble, or they framed for themselves some such scheme of evolution as may be found in the writings of Buffon, Lamarck, Oken, or Goethe.

Indeed, if we go much farther back we find that Evolution commended itself to the untaught mind of primitive nations far more readily than abrupt Creation. It was easier in the earlier days of Hindoo religion to conceive of the universe as growing from an egg than to imagine it created suddenly from nothing by the fiat of an invisible will. The sublime abstraction of the Mosaic story has been taught to Christian and Mohammedan children for so many centuries that the stupendous difficulties involved in it have faded from view; or, rather, the social value of belief in the government of the world by a despotic benevolence has, till lately, been so overwhelmingly great as to blind men to the problems which that creed left unsolved. During the nineteenth century Monotheism as a system dominating the actions of statesmen has lost its power. Retaining much of its hold over private life, intimately bound up still with our conceptions of right and wrong, of conscience and of duty, it no longer exists as a controlling force in politics. And as one among many consequences of this stupendous change, evolutionary theories of nature are again in the ascendant, as they were in the days of the Ionian philosophers five or six centuries before Christ.

Among such theories, that which bears the name of Darwin holds for the time the foremost place. Two causes explain this prominence—the enormous wealth of knowledge which this great naturalist grouped round his theory, and the undoubted reality of the three fundamental facts on which the theory is founded. These facts are—(1) that in every new generation of each species there are variations; (2) that more individuals are born than can possibly find subsistence; (3) that those are most likely to survive whose variations best adapt them for the competitive struggle. Of these three facts there can be no doubt whatever. It is certain, therefore, that Darwin has brought to light one very powerful factor in organic evolution. The grave discussions that have arisen since his death turn on the question whether, in addition to this factor, there are also others. Darwin himself admitted the existence of others, notably of the factor on which Lamarck insisted earlier in the century—the

inheritance of characters acquired by each individual during its brief period of existence. Habitual exertion of any muscles will cause these muscles to grow. Lamarck maintained that the increased size was transmitted to descendants, and that here lay a source of evolutionary change. By many students of evolution, notably by Mr. Spencer, such transmission is accepted; by others, and foremost among them by Weismann, it is not merely denied, but asserted to be impossible.

The grounds of Weismann's denial are to be looked for in his Theory of Heredity. The germ-plasm of each fertilized ovum consists, in his view, of two distinct portions, one of which, by a series of successive divisions, differentiates into various tissues and organs of which the body of the mature animal or plant is composed, while the other is transmitted unchanged to form the germ-cell of the succeeding generation. While so transmitted, Weismann maintains that it is entirely cut off from all connection with the tissues of the body containing it. Those tissues, therefore, can exercise no influence upon it. Ultimately this germ-plasm is mixed with that of another individual of the same species. In the offspring that ensues variations from the parental forms arise, and from these variations those which make for success in the struggle for existence survive and are perpetuated. This selection of favourable variations is, in Weismann's opinion, the sole source of organic evolution.

On this the first remark to be made is that the foundation of Weismann's theory—the doctrine, namely, that the germ-plasm of a species is handed on from one generation to another unmodified by the tissues of the body containing it—is a pure supposition, resting on but few facts, and against the probability of which there is much to be urged. The cells of an organism are not so cut off from one another as this theory would imply. "It is becoming more and more clear," says Mr. Adam Sedgwick, "that the cells composing the tissues of an organism are not isolated units, but that they are connected with one another." "The protoplasm of the whole body being continuous, change in the molecular constitution of any part of it would naturally be expected to spread in time through the whole mass."¹

In the second place, it is most important to recognize the fallacy that so often arises in comparing natural selection with the artificial selection practised by the breeder and the florist. These persons fix on any variation whatever that strikes their fancy in an animal or

¹ Quoted from Spencer's *Inadequacy of Natural Selection*, p. 40.

plant, and by breeding from this individual can intensify the variation to almost any degree of prominence desired. But nothing of this kind takes place in nature. Only those variations are perpetuated which give their possessor an advantage in the struggle for life. The advantage must be of a marked kind, and must be transmitted to a very large offspring. Slight variations disappear, on account of the constant intercrossing that occurs in the natural state. The breeder can perpetuate the slightest variation by keeping the breed pure. There is no provision for this in nature. By far the greater number of variations that occur neutralize one another when the next brood arises. It is strange how many readers of Wallace and Darwin fail to appreciate this fundamental distinction between the selective art of the breeder operating with conscious intelligence and the mechanical sifting process resulting from natural competition. Unconsciously, the old habit of endowing nature with personality crops up; natural selection is looked at as an intelligent agency. This tendency has been followed to strange lengths, which reach their maximum in Weismann's recent attempt to attribute sex itself to natural selection. Sex, according to him, makes variation possible; variation makes selection possible; therefore, sex is the result of selection! Truly Natural Selection, thus interpreted, is but the old metaphysical entity of Nature writ large.

Mr. Spencer has given strong reasons in support of Lamarck's theory of the inheritance of acquired characters as one of the factors of evolution acting conjointly with natural selection. He points out that a variation in any one direction, to be effective, implies other concomitant variations. An elk born with stronger and heavier antlers than his fellows can make little use of this advantage until the muscles of the neck and limbs have been strengthened in several rather complicated ways. To some extent this may be effected during the animal's life by increased use of the muscles concerned; and if this muscular improvement be inherited, a more powerful breed arises which will survive. Weismann's disbelief in such inheritance reduces him to the alternative of supposing that by fortuitous variation all these concomitant advantages arise simultaneously—an hypothesis of singular difficulty when account is taken of the number and complexity of the muscular and osseous changes, without which a mere increase in the size of the antlers would be useless.

Attention is called by Mr. Spencer to many structures and functions which seem easily accounted for on this supposition of inheritance of acquired characters, but which are hard to explain on any other

theory. The skin, for instance, varies extremely throughout its surface in sensibility to tactile impressions. In the middle of the back the pressure of two points when two and a half inches apart is felt as one point. The tip of the fore-finger will discriminate them as two when the interval between them is but the twelfth of an inch; the tip of the tongue when it is the twenty-fourth of an inch. Other parts of the body exhibit intermediate degrees of sensitiveness, these being nearly constant for each part. Admitting that in some of these cases an advantage may have been gained promoting survival, it is difficult to see this in others. For instance, the extremity of the nose has three times the tactual sensibility of the lower part of the forehead; the thigh, near the knee, has less than its middle portion; and so on. It is not easy to explain such differences by supposing them to have conferred such advantages on their first possessor as would lead to his survival in the competitive struggle, whereas it is easy to understand them on the view that they were acquired by use and so transmitted. On the whole, it would seem that Weismann's denial of the inheritance of acquired characters rests on an insufficient basis of fact, and that it makes evolution unintelligible by deducing it from a fortuitous combination of variations so improbable that, were it the only scientific hypothesis available, men of ordinary understanding would resort to the intervention of creative intelligence as the easier alternative.

Admitting inheritance of acquired characters and natural selection to be conjoint factors in evolution, it does not follow that they are the sole factors. A rising school of naturalists is disposed to dwell on certain internal factors directing the course of evolution in predefined channels. Of these sex is the most potent. A comprehensive survey of the phenomena of sex throughout the whole range of the metazoa shows the two opposing tendencies of activity—expenditure of energy, rapid chemical change, on the male side; and on the female, of passivity, receptivity, storage of energy and material. It would seem that many of the facts adduced by Darwin in support of his theory of sexual selection may be more suitably interpreted as following from the chemical structure of male and female protoplasm.

A review of the present state of scientific opinion may well inspire extreme caution in accepting any hypothesis professing to account for the various forms of life which have appeared upon the earth. Possibly the evidence may never be such as to enable us to form a dogmatic decision.

IV

LORD KELVIN ON THE MIRACLE OF LIFE

ON May 1¹ the first of five lectures on "Christian Apologetics" was delivered at University College, Gower Street, by Professor Henslow. Lord Kelvin, who was present, moved a vote of thanks to the lecturer; but remarked (I copy from the *Times* of May 2) that he

was unable to agree with him in maintaining that, with regard to the origin of life, science neither affirmed nor denied creative power.....They were absolutely forced by science to admit and to believe with absolute confidence in a directive power, in an influence other than physical, dynamical, electric forces. Cicero had denied that they could have come into existence by a fortuitous concourse of atoms. There was nothing between absolute scientific belief in creative power and the acceptance of the theory of a fortuitous concourse of atoms. Was there anything so absurd as to believe that a number of atoms, by falling together of their own accord, could make a crystal, a sprig of moss, a microbe, a living animal?

In the *Times* of May 4 Lord Kelvin admits the correctness of the report, but adds that he wishes

to delete the word *crystal*. "I desired," he said, "to point out that, while fortuitous concourse of atoms is not an inappropriate description of the formation of a crystal, it is utterly absurd in respect to the coming into existence, or the growth, or the continuation of the molecular combinations presented in bodies of living things. Here scientific thought is compelled to accept the idea of creative power. Forty years ago I asked Liebig, when walking somewhere in the country, if he believed that the grass and flowers around us grew by mere chemical forces. He answered, 'No! no more than I could believe that a book of botany describing them could grow by mere chemical forces.' Every action of human free will is a miracle to physical, and chemical, and mathematical science."

On May 7 a letter appeared from Sir W. T. Thiselton-Dyer, the Director of Kew Gardens. Lord Kelvin was, doubtless, the writer said, "an eminent man in physics, but for dogmatic utterance on biological questions there is no reason to suppose that he is better equipped than any person of average intelligence." Lord Kelvin, "in effect, wipes out by a stroke of the pen the whole position won

for us by Darwin." It was illogical, the writer continued, to distinguish between fortuitous concurrence of atoms in the case of a crystal and in the case of a living plant. "The argument from design applies for what it is worth as much to a diamond as to a caterpillar." Finally, he referred to words used by Lord Kelvin in Edinburgh in 1871: "If a probable solution consistent with the ordinary course of nature can be found, we must not invoke an abnormal use of creative power."

On May 7 Professor Burdon-Sanderson intervened, to state what he considered "the orthodox biological doctrine."¹ This is that

all processes observed in living organisms are of such a kind as to admit of being investigated by the same methods as are used in the investigation of the phenomena of non-living matter—i.e., by measurement of their time and space relations under varying conditions; in other words, by the method of experiment. But, beyond the limit thus stated, we have to do with processes which cannot be directly measured or observed. There are, first, the mental processes, whether of men or animals, in respect of which the experimental psychologist is unable to go beyond the estimation of condition and effects; and, secondly, the processes of organic evolution, by which the organism grows from small beginnings to such form and structure as best fit it for its place in nature.

Professor Burdon-Sanderson remarked in the course of his letter that Lord Kelvin, "as a man of transcendent ability," was capable of discussing biological problems, though himself a physicist. This, however, was vehemently denied on May 13 by Sir W. T. Thiselton-Dyer. "Transcendent ability will not enable a man, without previous training, either to paint an Academy picture or read the Hebrew Bible." In a subsequent letter (May 15) he reiterates that "directive power" is "the stroke of the pen by which Lord Kelvin wipes out.....the whole position won for us by Darwin." He adds: "What the Darwinian theory did was to complete a mechanical theory of the universe by including in it the organic world." "If, with Asa Gray and Cope in America, and Nageli in Germany, we set up 'a phyletic vital force,' we at once, as Weismann says, cut ourselves off from all possible mechanical explanation of organic nature."

A further contribution to the debate was made on May 19 by Professor Ray Lankester, from which two important sentences may be extracted:—

¹ The italics in what follows are the present writer's.

There is no relation [he says], in the sense of connection or influence, between science and religion.....Science proceeds on its path without any contact with religion.

Again:—

The whole order of nature, including living or lifeless matter—man, animal, and gas—is a network of mechanism, *the main features* and many details of which have been made more or less obvious to the wondering intelligence of mankind by the labour and ingenuity of scientific investigators.

If the words italicized (by the present writer) were omitted, and if in the first sentence "theology" were substituted for "religion," Professor Lankester's letter would read more plausibly. As it stands it suggests more doubts than one. If religion has to do with man's moral and intellectual life, and if the facts of man's life, no less than those of animals and gases, are due to "a network of mechanism," how can it be said that science can proceed on its own path without any contact with religion? And, again, assuming this mechanism to embrace the whole order of nature, it is a bold assumption (and the more it is looked at the bolder it will seem) that scientific men have revealed "its main features." Some of the ancients, dimly anticipating the reign of law, were wont to say *God geometrizes*. And, in truth, theologians who meditate on the existence and attributes of an omniscient God have no choice but to believe that all that has existed, or will exist, is for him matter of calculation, or rather of direct intuition. But we are men and not gods. We have to look at these things from the human point of view, not from the divine. And taking that humbler standpoint, we ask, has the "network of mechanism embracing the whole order of nature" been sufficiently studied to account for the muscular contractions, following on the mutual action of many millions of brain-cells, from which resulted the manuscript of *Hamlet*?

On the whole it will be admitted that this correspondence raises an unusual number of interesting questions. That the writers are distinguished, though in various degrees, might imply presumption when an obscure person ventures to criticize them. Only, since they cannot possibly be all of them right, it is permissible to ask, What in each case is the omitted half, or other fraction, of the truth? Without pretending to answer such a question, I subjoin a few remarks that may possibly suggest an answer.

Beginning with the speech which started the discussion, it is hard to repress surprise that a man whose contributions to physical science have been so great as those of Lord Kelvin should take so

limited a view of the scope and the methods of science. His strange observation that "fortuitous concourse of atoms" might account for a crystal, but would not account for a plant, would, if literally interpreted, cut at the root of physics, no less than of biology. His apologists say that they should not be taken literally, and that all that he meant was to draw a sharp line between the domain of physics and chemistry and the domain of living things; and to deny that the latter was amenable to scientific treatment in the same sense as the former. But this apology is hardly sufficient. The words were deliberately repeated in his second statement, addressed to the *Times* of May 4. And we have, further, to take into account his remarkable utterance in the same letter that "every action of human free will is a miracle to physical, and chemical, and mathematical science." From a great scientific authority, addressing a popular audience, a higher standard of precision is rightly demanded than from ordinary men; yet it is in precision that both these remarks are so curiously wanting.

To the student of Comte's *Philosophy of the Sciences*, of which, after sixty years of neglect, the cultivated intellect of France and Germany is at length beginning to appreciate the true import, the right way of stating the question is not doubtful. Arranging the abstract sciences in the order of the increasing complexity, and the diminishing generality, of the phenomena with which they deal, we find each term in the series depending on the preceding, while each adds separate inductions of its own. Thus, for instance, the science of chemistry, dealing with a more complex order of facts than the group of sciences known to us as physics, while depending on the laws which mechanics and physics supply—laws of momentum, temperature, radiation, electricity, etc.—furnishes its own mass of inductions, derived from observation of the properties of each chemical element, and of their modes of combination. Equations of motion, mutual action of "vortex-atoms," successive evolution of the elements, in some pre-terrestrial epoch, from an imagined "protyle," will not dispense with direct observation and experiment on oxygen, carbon, gold, and radium. The laws of chemical science cannot be treated as deductions from physics. They must be studied by the humble and patient process of induction from observed facts. We may admit that deductions from hypotheses, even when these are very hazardous, are often the channels through which new questionings of nature are suggested. But, except so far as such questions are verified afterwards by observation, they are of secondary value.

Very similar is the case when we pass from the study of chemical and physical facts to the study of living things. Here we find all the forces with which mechanics, physics, and chemistry have made us familiar in full working, only combined and co-operating in special and more complex ways. As far back as 1838, Auguste Comte, in the fortieth and forty-third chapters of his *Philosophie Positive*,¹ indicated the way in which the various forces of the inorganic world, gravitation, astronomical position, heat, light, electricity, chemical affinity, acted on the living organism; these actions, taken in connection with the corresponding reactions, constituting in fact the very process known to us as Life. *La notion systématique de la vie consiste dans une intime conciliation permanente entre la spontanéité intérieure et la fatalité extérieure.*²

Taking the simplest organisms known to us, we find their substance to consist of molecules formed from a very limited number of elements, but of a highly composite and unstable kind, undergoing processes of incessant building-up and unbuilding. They pass through a process, first of growth, then of decay, as the building process first exceeds, and afterwards falls short of, the unbuilding. They bring forth after their kind, either disappearing in this process, as in the case of *protozoa*, or in other cases undergoing, after a longer or shorter interval, the dissolution known as death. Further, the lower organisms display throughout their substance, and the higher organisms in special tissues, the remarkable phenomenon of contracting in response to certain stimuli, the stimulus to which response is given having some relation, vague or precise as it may be, to the needs of the organism. This capacity of being aroused or irritated, and of reacting—in ways which even in the humblest cases seem not quite machine-like, in response to the irritation—constitute in the higher animals the functions known as Innervation and Musculation.

Now, that this series of events is something quite unlike anything observed in inorganic nature is obvious. True that every act of a living thing involves chemical change, and that each one of these chemical changes has been imitated, or may conceivably be imitated, in the laboratory. True that a crystal exhibits growth, and, after attaining certain dimensions, gives rise to other crystals. True that close inspection of living substance reveals conditions—*e.g.*, relations of crystalloids and colloids, molecules of very high

¹ Cf. especially vol. iii, pp. 433–48.

² See *Politique Positive*, vol. i, p. 413; or vol. i, p. 335, Eng. tr.

complexity, etc.—which render the incessant sequences of chemical changes more intelligible. True again that a chemical change accompanies every contraction of every muscle—in other words, that work is impossible without food. Nevertheless, none of these truths, important as they are, avail to account for the fact which we call feeling, or for the discriminative selection proved by Darwin and others to be shown, in response to incident forces, by insectivorous plants, as well as by animals endowed with a nervous system.¹

Including, as we must, in our idea of life the rudiments of sensation, thought, and feeling, we are unable to form any full explanation of it as derived from the play of physical and chemical forces. "Under its subjective aspect," says Mr. Spencer, "Psychology is a totally unique science, independent of, and antithetically opposed to, all other sciences whatever. The thoughts and feelings which constitute a consciousness.....form an existence that has no place among the existences with which the rest of the sciences deal."² A Positivist would, perhaps, state the case somewhat differently. But Mr. Spencer's words serve to show the impossibility of supplying a complete correlation of life with the laws revealed by the inorganic sciences. And it is just this impossibility which has given rise to the belief, to which Lord Kelvin and others have given expression, that Life in some of its manifestations is miraculous.

It is miraculous only for those who fail to see that every other ultimate fact in Nature may be called a miracle with equal justice. Who can tell us why Newton's apple fell to the ground? Endless conjectures as to the cause of gravitation (pressure of extra-mundane atoms, shrinkage of vortex-atoms in the ether, and many others) have been made during the last two hundred, or, indeed, two thousand years, and we are no nearer a solution than in the days of Lucretius. The time came when Galileo asked the question, not why bodies fell, but how they fell, and then, indeed, a scientific revolution began. Newton carried on the work in the same spirit as his predecessor. He studied the laws of gravitating matter, but not the cause of gravitation. He believed, indeed, as Descartes, Roger Bacon, and many of the ancients had believed, in the existence of an ether pervading space, and that with the actions of this ether gravitation, and, indeed, all other phenomena, organic and inorganic, might somehow be connected. But he refused to make conjectures

¹ Cf. Romanes, *Mental Evolution in Animals*, pp. 49-51.

² *Psychology*, 2nd ed., vol. i, p. 140.

in regions where he had no means of verification. *Hypotheses non finxit*. Had he taken a different course, the *Principia* would not have been written.

So it is with Life. The cause, the ultimate origin, of life is beyond our ken. But its modes of manifestation lie open to our view; and these are subject to fixed laws, some of which we know already—more we hope to know.

Sir W. T. Thiselton-Dyer assures us that "directive power" is the "stroke of the pen by which Lord Kelvin wipes out the whole position won for us by Darwin," and adds that the Darwinian theory "completed a mechanical theory of the universe by including in it the organic world."

We may leave Lord Kelvin to fight it out with his opponents. The Positivist position in this matter is perfectly clear. We disbelieve utterly in the possibility of constructing any theory of the universe, theological or mechanical, which can stand discussion. Aiming at a theory, not of the universe, but of man's nature, which shall throw light on the problems of his conduct, we find it impossible to form such a theory without sufficient knowledge of the laws of Life, social and physical. Sociology and biology demand study of the laws of the planet on which Man lives and works, and of the solar system of which that planet is a part. The sum of scientific knowledge, thus colligated by the effort to know and to serve Humanity, we speak of as a subjective synthesis, and no other synthesis seems to us to be possible.

Given a free hand in the construction of hypotheses of Space and Ether, regardless of their verification, explanations of the universe can, no doubt, be supplied. But see the first obstacle that has to be overcome. If the universe is to be explained, it can no longer be supposed infinite; it must become again finite, as in the Middle Ages. There are mathematicians of eminence—Lobachevsky and Kingdon Clifford among others—who do not shrink from this. To this end it is necessary to suppose space to be "curved": and to maintain that the discovery of Thales, that the three angles of a triangle are equal to two right angles, is an imperfect approximation to the truth. This meets us at the outset. With further obstacles involved in contradictory conceptions of the ether I cannot deal here.

Great discoverers have often found their researches helped by working hypotheses which admit of no verification, and which are in the course of time replaced by others. Newton, for instance, made many discoveries in optics with an hypothesis as to the nature

of light which has long ago been discarded. To the worker in physical, biological, or sociological science such aids to thought are often as useful as diagrams and symbols are to the mathematician. Against such procedure it would be absurd to cavil. But it has too often been the case, especially in recent years, that these unverified and unverifiable hypotheses have been paraded before the world as momentous scientific discoveries. So far as this is done, the public is deceived, and is indeed being educated downwards. False conceit of knowledge, as Roger Bacon said long ago, and Socrates before him, is the worst of intellectual diseases. Feelings are touched by it, not thoughts only.

V

THE USE AND ABUSE OF EXPERIMENTS ON ANIMALS¹

1

No one can have been satisfied, not even the speakers themselves, with the recent discussion on Vivisection at the Church Congress. But the froth and foam of that unhappy quarrel having floated away, it may be useful to ask, What precisely are the contending forces? Is there any way of reconciling them?

Something will be gained at the outset if we realize that the question is not an easy one. Achieving this small step, we shall at least rise out of the fogs of commonplace controversy, the characteristic of which is that each party thinks the other to be mentally infirm, wilfully blind, or morally degraded. Lively epigram, brilliant sarcasm, passionate invective—all this small musketry of debate will avail us little in the solution of as difficult a problem as the nineteenth century has ever had to deal with. The present writer puts forward no claim to have reached a precise and definite solution: he aims merely at pointing out the temper and the point of view that will be found most helpful in dealing with it.

The principal difficulty, which, however, will not be dealt with on this occasion, is this: Assuming that experiments on living animals can be shown to have been fruitful of result in biological discovery and in the cure of disease, should any limits to such experiments be laid down? If so, of what kind should they be, and how should they be enforced?

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But this question must be reserved for a subsequent paper. It involves an assumption which most of the opponents of vivisection will regard as unwarrantable. Mr. Lawson Tait, an operating surgeon of undisputed eminence, denies it absolutely. The late Sir William Ferguson, an operator of extraordinary distinction, gave evidence before the Royal Commission in 1875 to the same effect, though with some qualifications. (See his evidence, 1015-1148.) His view was that a great deal had been done by experiment in regard to physiology and human knowledge, but that it had not been of that immense value to human nature that some claim for it. He doubted whether experiments had led to the mitigation of pain in the human subject. He quotes with approbation the Report of the Court of Examiners for Scotland of the College of Veterinary Surgeons in 1867, signed by James Syme, one of the most distinguished surgeons of the nineteenth century, containing the words: "We desire to express our opinion that the performance of operations on living animals is altogether unnecessary and useless for the purpose of education."

These are weighty authorities; but I think that those who read the evidence taken before the Commission in 1876 with a sincere desire to form an honest judgment on the point now before us—whether experiments on animals have or have not resulted in useful discovery—must feel that the testimony on the other side raised questions which these witnesses did not touch. The art of medicine, as distinct from that of operative surgery, deals with disturbances of vital processes. During the present century it has come to be felt more and more clearly that the disturbance cannot be understood until the ordinary condition of the process has been investigated. In other words, medicine must rest on the science of life, commonly known as biology.

We are thus led to the question, What part does experiment play in biological research? Its extreme advocates claim that almost every important discovery is due to it. I refer again to the Blue book of 1876. I do so because it is the only occasion on which the extreme partisans on either side have been fairly confronted before a mixed jury of experts and laymen, the jury itself containing extremists as well as moderates. It will remain, therefore, for many years to come an extremely valuable document for the discussion of the subject.

It was maintained before this Commission, repeatedly and with undeniable force, that useful results might follow from investigations that had no immediate curative object in view. Professor Burdon-

Sanderson's words may be quoted as perhaps the ablest exponent of this part of the subject. "The utility," he observes, in reply to Qn. 2296, "of physiological study ought to be judged of not so much by its direct applicability to disease as by the certainty that exists in our minds that eventually it will be the guide of practice in medicine." "The reason why medicine fails is that we do not know the nature of the diseases, and that we do not know the mode of action of the remedies which we use in many cases." He proceeds to illustrate this position by reference to experiments, avowedly involving pain, made with the view of explaining the complex process known as inflammation. This particular illustration cannot be properly discussed on the present occasion. But the general proposition, that the discovery of any law of nature will probably lead to practical applications beyond those that are contemplated by the discoverer, seems to me entirely unassailable. No one denies that Harvey's discovery of the circulation of the blood, and Bell's discovery of the sensory and motor functions of the two roots of the spinal nerves, have led to important practical results in the treatment of disease that were not thought of by the great men who conducted these researches.

Assuming biology to be the foundation of scientific medicine, what part has experiment played in biological discovery? It has done everything, is the cry from one side; It has done nothing, retorts the other. Truth, as usual, lies between the two extremes, but, as usual, is not equidistant from them. Experimentation on animals has achieved much. "Strong indeed," says Comte, "must be the mental bias of those who cannot recognize the profound value and the scientific importance of Harvey's simple experiments on the circulation, of the luminous series of investigations made by Haller on irritability, of a part of Spallanzani's remarkable experiments on digestion and generation, of Bichat's striking combination of experimental researches on the triple harmony between the heart, the brain, and the lungs, in the higher animals; of Legallois's admirable experiments on animal heat, and of several other analogous efforts, which, taking into account the immense difficulty of the subject, may almost be compared with the most perfect experiments that have been made in physics."¹ This comes from a thinker, capable of seeing two sides of a question, who, in the previous seven pages, had been maintaining that experimentation had done in the past much less for biology, and was likely to do much less in the

¹ *Phil. Pos.*, vol. iii, ch. 40, pp. 229-230.

future, than comparative physiology or than pathology. Those who are beginning to be a little sceptical of Professor Huxley's well-known dictum that incompetence in philosophy is the mental characteristic of the founder of Positivism may consult these pages with advantage. The condition of satisfactory and decisive experiment is to be able to arrange and compare two sets of facts that shall be exactly alike in every respect except in that point which is the object of the experiment. How difficult it is to realize this condition, even when dealing with inorganic matter, very few medical students are taught to understand. Their knowledge of physics is limited for the most part to the results contained in text-books. Of the mental process by which these results are obtained it is extremely seldom that they have learnt anything, either by conducting researches in a physical laboratory, or by studying the original memoirs of the principal investigators. If every student of medicine who desires to engage in original research were compelled to study some of the masterpieces of experimental logic—such, for instance, as the first volume of Faraday's collected memoirs, and notably the "Memoir on Induction" of November, 1837—he would be better able to appreciate the difficulties which surround scientific experimentation, even where the matter operated upon is homogeneous and stable. He would feel much greater hesitation than at present as to conclusions reached where the substance on which experiment is being made is not merely heterogeneous and unstable in the highest degree, but of which also the differentiated parts are knit together by ties so subtle, and so obscure, that the difficulty of limiting the area of disturbance is, in a very large number of cases, insuperable.

Of these obvious truths the history of vivisectional operations on the brain during the last half-century offers many striking examples. In opposition to Gall, Flourens maintained, as the result of his very painful experiments, that the functions of the cerebral hemispheres were not multiple, but single, and the scientific world of that time agreed with him. Recently, as everyone knows, vivisection claims to have shown the exact reverse—namely, that these functions are not single, but multiple. I cannot discuss here the value of these later experiments, which were to some extent anticipated by pathological research. I wish to speak with all due respect of the eminent men who conducted them. But the conclusion forces itself upon the mind that the conditions of really scientific experimentation were not observed, for the reason that they were not attainable. That the conclusions reached are without value it would be very rash to

assert. But the triumphant tone in which it is habitual for writers in the *Times* or for lecturers before popular audiences to speak of them is assuredly not justifiable. Our knowledge of the minute anatomy of the brain is as yet, and for a long time is likely to remain, far too imperfect to define the precise paths of nervous action between its various parts, and thus to limit, with any approach to exactness, the area of disturbance caused by such experiments as these. A further difficulty in right interpretation of the facts observed is to eliminate the separate and distinct perturbations due to anæsthetics and to pain, since these sometimes occur consecutively in the course of one and the same experiment. (See report already cited, Qn. 3365.)

Doubtless there have been many experiments on the nervous system to which the foregoing criticism does not apply, or applies with diminished force, because the anatomical relations of the parts had been clearly defined beforehand. Bell's researches, and many others of our own time on the nerves that control the circulation, might be named as instances. Nor, again, does it apply to many of the investigations, carried on by men of such intellectual competence and knowledge as Koch and others that might be named, of the minute organisms that are now recognized as agents in the production of infective poisons. But to many of Koch's imitators the objection applies in full force. The observations made during these experiments, though apparently easy, need something more than a practised hand and eye. Without a mind well protected by native vigour, as well as by training, against the fallacies of interpretation they are worse than useless. Recent discussions at medical congresses have supplied abundant examples.

It will be seen that the foregoing remarks do not point towards a sweeping condemnation of experimentation on living animals. But they do distinctly tend towards a limitation of such experiments in the interest of scientific progress to that comparatively small number of investigators who in each generation are mentally qualified to perform and to interpret them.

The intellectual aspect of the question has been here considered. It remains to regard it from the ethical standpoint.

2

It was pointed out that purely scientific considerations indicated the expediency, not indeed of total abstinence from experiments on animals, but of restricting the practice to the comparatively small

number of persons qualified to set about such experiments with proper safeguards against wrong conclusions from the facts observed. The ground taken was in many respects identical with that maintained before the Royal Commission by Mr. George Lewes (see Qn. 6325-6417), himself a keen biologist and experimenter. "A great deal of experiment," says Mr. Lewes, "is quite useless; useless because it very often could not prove what is attempted to be proved. The organism is so complex that when you produce even a slight disturbance you are seldom certain of what other disturbances you produce, so that an experiment which seems quite decisive by the phenomena it presents will turn out to be totally indecisive, because the same results may be obtained by a totally different experiment." The illustration given by Mr. Lewes in support of this view is particularly instructive, though a hundred others equally telling might have been quoted. Two physiologists of high repute experimented successively on the cray-fish. The first destroyed certain ganglia, and, from the phenomena observed, he drew dogmatic inferences as to their function. The second, without touching these ganglia, cut off the large nippers of the animal. The phenomena observed in the second case were identical with those observed in the first. Mr. Lewes believed "that a considerable amount of experiment might be got rid of if the students were early impressed with the belief of the excessive difficulty of getting at any result—a belief which would prevent any experiment being lightly undertaken." (6330) "I think," he went on to say, "that for the sake of science experiment ought to be restricted; but I think it must come from the professors themselves inculcating a sense partly of responsibility to the animals and partly of responsibility to science, not to encumber science with useless lumber, which the mass of it is." These are the words, be it remembered, of a man of keen intellectual activity who had studied for many years in the physiological laboratories of the Continent, and who believed vivisection as a portion of experimental science to be a necessity, though a very painful necessity.

So much for experimentation on animals, looked at from the intellectual side. The more difficult and complex question remains of regarding it from the ethical standpoint. It is from this quarter that the recent onslaught on the practice has chiefly been directed—much of it sincere but blind, much of it perversely exaggerated, and some of it inspired by an underlying dislike of scientific progress. Due allowance being made for all these motives, which, by provoking angry reprisals, have seriously delayed the solution of the question,

there remains, I cannot but think, ample ground for maintaining a due degree of moral pressure on this subject from a public which cannot do without doctors and men of science, and very sincerely wishes to be able to respect them.

Certain misconceptions which have befogged the discussion may be cleared away at starting. It is often said that experiments are either made under anæsthetics, or that where they are not—as in the bacteriological experiments now being conducted on so large a scale—the operation of introducing poisonous matter into the circulation is as trifling as a pin-prick. Both these statements are true, but they do not dispose of the matter. In the first class of experiments, that to which the word “vivisectional” is properly applied, there arises the question, What becomes of the animal when the effects of the anæsthetic have passed away?—and the answers to this question are not always reassuring. In the second class, which at the present time is far the more numerous, what has to be thought about is not the operation, but the inevitable discomfort and distress of death by poisoning.

But again it is claimed that medical men and men of science are for the most part humane men, and that humane men will not do or sanction inhumane things. The first of these propositions may be freely granted by those who demur to the second; and the only remark that need be made upon it is that laws, and the moral censures that have the force of law, are intended not for the majority who do right, but for the minority who do wrong.

But the second proposition is far more doubtful. If any one lesson is taught more clearly than another by the history of civilization, it is that humane men have not seldom done, and much more frequently connived at the doing of, extremely cruel things. Those who think that the officials of the Spanish Inquisition were all of them, or even most of them, men of cruel disposition have read their history to little purpose. The most eloquent among the denouncers of slavery, the authoress of *Uncle Tom's Cabin*, freely acknowledges many of the owners of slaves to have been kind and generous. A hundred years hence it will be surprising to Englishmen of the upper classes to read that their grandfathers and grandmothers rode after wild animals, the breeding of which had been carefully encouraged, and which were destined to be torn in pieces by dogs. But what a libel it would be on English country gentlemen of the present day to stigmatize them as cruel men! The attitude of Yorkshire and Lancashire manufacturers fifty years ago when the horrors of the factory system were first revealed, the attitude of kind-hearted

clergymen at the present moment who look with equanimity at the transmission of Maxim guns to Uganda, are analogous cases. In none of these instances can we infer the humanity of the things done from the humanity of those who do them.

The amazing inconsistency of opinion in this matter might lead us to despair of finding a definite standard of right and wrong. But ethic, the science that guides individual conduct, presupposes a broader and less complex science—that of the social organism. The social state into which each one of us is born governs our judgments, and leaves the strongest but a limited margin of independence. It follows that, as the social state develops, our ethical judgments will be changed also; not capriciously, but in accordance with definite though obscure laws. It follows also that, as the ties that bind together each part of the social organism are even more subtle and far-reaching than those that correlate the organs of any plant or animal, no special profession or guild in a community is entitled to look upon its own actions as things apart. Their effect on the whole must be taken into account by those who wish to act rightly. Men of science, who exercise already considerable influence on society, and who some day, when their conception of science has become wider, will exercise much more, are responsible like other citizens, and even more than they, for the influence of their actions on the general standard of ethical practice. To be conscious of pure motives in themselves is not quite enough. They have to think whether what they do is likely to "cause their brother to offend." The standard of humanity to animals in England, though possibly higher than in some southern countries, is confessedly far lower than it should be. It is for the leading spirits of each generation to see that, so far as they are concerned, it is made higher. That scandalous atrocities have been perpetrated in certain physiological laboratories of the Continent few will be so bold as to deny. Why is it less important or less reasonable to guard against the importation of cruelty than against the importation of cholera?

That the views here expressed, if generally adopted, would be restrictive, though by no means absolutely prohibitive, of experiments on living animals is, of course, obvious. Those who share them will do well to admit frankly that some loss to biological science may result from the restriction, even though the loss may be more than compensated in other ways. In the medical schools of Alexandria of the third century B.C. it was the practice to experiment on living criminals. The higher ethic introduced by the Roman Stoics had made this procedure impossible by the time of

Galen. Henceforth experiment was restricted to animals lower than man, and was loaded with all the scientific disadvantages arising from their lower nervous organization. It is impossible to say that the altered standard may not have retarded discovery. But who has dared to doubt as to the balance of loss and gain?

In the case before us it seems highly probable that what loss there may be in one direction will be made up for by gain in other ways, biological as well as ethical. A wide field, for instance, lies open for scientific research in the psychological study of living animals as throwing light upon the functions of the brain in man. Georges Leroy in the last century, Gall, Comte, Darwin, Romanes, in the present century, have sufficiently worked this field to show the rich harvest of discovery that awaits future explorers. But the first condition of discovery is the loving sympathy with animals which alone can sustain the higher faculties, whether of the observed or of the observer, in continuous action.

It has been said already that no pretence is made, either in this or the foregoing paper, of offering a final or complete solution of a very difficult question. The general consensus of educated opinion that the difficulty exists would be of itself an important step in advance. The two combatant parties, to each of whom the other seems hopelessly in the wrong, are not likely to listen very patiently. But there is an increasing number who see that there are two sides to the question; and it is these, and not those, who will decide the issue. That there should be a strong check, moral if not legal, on physiological experiments made by unqualified persons will be generally agreed. This is already a recognition that the biological and the physical laboratory are two widely different things; since most people would follow Faraday in encouraging a boy who had a bent that way to experiment on inorganic matter, however ignorantly.

Here, then, is a point of departure; and though, in discussing the nature and degree of the checks to be imposed, there will for a long time to come be divergence, yet practical concurrence on many points may be reasonably looked for. It is much that a Report should have been signed by men so far apart as Professor Huxley and Mr. Richard Hutton, recommending the "legal recognition of the claims of the lower animals to be treated with humanity, and the right of the community to be assured that this claim shall not be forgotten."

CHAPTER II

PSYCHOLOGY¹

I

THOUGHT AND FEELING²

SIR ISAAC NEWTON'S words have been very often quoted that in our search for knowledge we were like little children picking up a few shells upon the seashore. Well, it seems clear that we have something else to do than to pick up shells upon the shore. We have to build a house somewhere with firm foundations: we have to till the land, and sow it, and gather in the harvest; we have to navigate the sea, and seek for merchandise on the other side. If the mathematics and mechanics of Leibnitz and Newton had been a mere intellectual amusement like chess playing, it would not have brought immortality to their names. As it was, their discoveries were felt by the authors of them, and by those who followed and accepted them, to be connected with a vast revolution in the history of mankind. We who look back upon them after two hundred years can see how intimately they are bound up with the vast change that is bringing mankind from the state of war to the state of peaceful industry, from the conceptions of theology to those of science.

Newton, Kepler, Copernicus, like the Greek geometers, whose work they continued and carried forward, were driven by a force greater than themselves to concentrate their thoughts on certain problems to the rejection of others. They were not working for any object of immediate utility, but they were endeavouring to make the world of man, that infinitely small part of the universe which surrounds man, more intelligible to him, so that he might the better act upon it. They were not working for their own

¹ It will be noticed that the psychological papers in Part I have been placed under the separate heading of "Psychology." This has been done mainly for the reader's convenience, the grouping adopted here not being intended as a facsimile of Comte's classification of the higher sciences.—ED.

² A posthumous paper.—ED.

generation. But they were serving the permanent interests of Humanity.

Now what is true of philosophers and men of science, that, under pain of utter failure and waste of effort, they must have some compass to guide their thoughts, some principle of choice, is equally true of every grown-up man and woman each in his or her own sphere. It is one of the elementary laws of mental health that we should attend to one thing at a time. Of the myriad impressions that are rushing in vast streams through the floodgates of the senses, any one of which may reproduce itself at any moment in the memory, there must be some one which at any given time is dominant, and to which all the others are subordinate. We see the need of this by what happens when our mind is relaxed without being utterly passive, as in the case of dreaming. Crowds of impressions pass fortuitously through the mind, joining themselves to one another in an utterly haphazard and fantastic way. In inflammation of the brain, in the temporary insanity following on poisoning with alcohol, we see the same thing. Impressions register themselves in confused crowds, no one of them being central and dominant. They are not brought to a focus at any one point. These facts of disease illustrate the state of health. It is a law of mental health that one impression should dominate over the rest at each particular moment, and should be dwelt upon to the exclusion of the rest. We may call this the Law of Attention.

What brings about this dominance of one impression over the rest?

This law brings us to another part of the subject. Man's reason, mind, intellect, thinking faculty, is not a thing by itself; it has no independent existence. Philosophers for many centuries have talked and disputed as though what they call *Mind*, the rational or thinking functions, were something that could be separated from the man and looked at apart. But this way of looking at the matter becomes impossible under the light thrown on it by the science of biology. The process of observing and thinking is now recognized as one of the functions of the brain; not of the whole brain, but of one of the group of organs of which the brain consists, and which, while distinct, are intimately bound up with one another. Supposing, what at present seems the likeliest supposition, that the intellectual functions of the brain reside in the convolutions of what is called its frontal lobe, we may say then that these functions cannot go on harmoniously and healthily

except under the influence of some strong stimulus from that part of the brain appropriated to emotion and desire.

Agir par affection, et penser pour agir.¹

We act under impulse: between impulse and act comes thought. Here we have the whole process of brain action set before us in seven words. They contain more truth than seven hundred volumes of philosophical discussion on the attributes of the human mind.

Take the teaching of comparative biology, and glance for a moment at the mental working of any animal familiar to us—a cat or a dog, for instance. In the cat watching for hours till the bird or mouse comes near enough for her silent spring—in the dog's persevering search for some object of his master that has been lost—we have instances of perfectly healthy working of the animal's mind. Sounds, sights, odours innumerable pass over the senses of the animal utterly unheeded. One idea, one impression reproduced in memory is absolutely despotic over all the rest; the idea of the prey to be caught, or of the object to be found. Animals of every species display perfect sanity in doing the particular kind of work that belongs to them. The higher animals show intellectual capacity of a very high order. A fox maintaining himself and his family in a settled country has to pit his wits against those of man, to steer his course amidst rocks and quicksands of every possible kind. His brain is a rich storehouse of impressions of odours and sounds and visions, each of which has its meaning for him; one image, that of the desired prey, dominating all the rest and keeping them in perfect subordination.

In the animal and in the primitive savage the Intellect is the slave of the Emotions. Every sensation, every thought is wholly subservient to the desire of obtaining food for the family or tribe. As the social state grows, as wealth becomes stored up, there are hours in the day or week not wholly taken up with the satisfaction of animal desires: there are sports, dances, ceremonies, rituals, religions. A priestly class arises wholly absorbed in the collective life of the tribe, in the service of the tribal gods; that is, in ideal conceptions of the life of the tribe in the Past and in the Future. These priests lay down precepts and rituals, and establish a discipline of life. So that this higher life of leisure, the thoughts that are not wholly absorbed in getting food and drink, are kept

¹ Comte, *Catéchisme Positiviste*. "Act from affection, and think in order to act."—ED.

in check by a dominant purpose. There is a ruling image, that of the god to be appeased, or of the ancestor to be worshipped. There is mental health, because the thoughts of the tribe are all concentrated on a common object of worship. They bow down before a higher Power which sways their whole lives. The caprices of lust and desire are kept in stern check. There is a discipline of life, and therefore a control of the mind's wanderings. Still, the mental health is imperfect, because the intellect is in bondage to the heart, rather than doing free service.

I will not follow out the history of religion, with its long series of changes; times of growth alternating with times of decay. But it is needful to see that health of mind cannot be looked at apart from health of character and health of the whole social environment. The mind, the reason, the speculative function is not something that can be isolated from the rest of life. On this point there are curious illusions. Pure speculation, pursued by itself and for itself, can only land us in utter scepticism or in utter incoherence. Imagine that one half the world good-naturedly consented to maintain the other while it was investigating what are called the laws of the universe. Suppose each observer set to watch a single star. But there are more stars in the sky than there are human beings on this planet. And when all of them were watched and chronicled the word *all* would still mean that tiny fragment of the whole which our senses fortified by telescopes and photographic machinery can reach. The universe remains outside. Wearied with thus draining the ocean with a sieve, we may well revert to those who ask us, Does the universe exist at all? I venture to assert that if the question much agitated by metaphysicians, What is the foundation of belief? be probed to the bottom it will be found that we must take refuge in the first clause of our triple formula.¹ Love is the principle. Thought is governed and controlled by desire; desire which at first is fixed on the narrowest interests of self, and which, growing as we grow, gradually reaches to the widest interests of Humanity. Apart from those interests in the past, present, and future we are floating on a shoreless sea. We have no anchorage for belief.

¹ *I.e.*, Comte's religious formula: Love for Principle; Order for Basis; Progress for End.—ED.

II

MENTAL HEALTH¹

I MEAN by mental health the state of mind in which we are most likely to see the truth and to catch hold of it. It is surely not needful to spend words in proving that this is a weighty and important matter. It may be thought perhaps that seeking the truth forms for most of us a very small part of our lives. Most men spend the greater part of each four and twenty hours in eating, drinking, sleeping, and in earning food for the morrow by hard work. So that some may suppose that search for truth is the occupation of a few philosophers whose parents or ancestors have left them money enough to dispense them from the trouble of working for a livelihood.

But let us begin farther back and lower down. To eat, to drink, to sleep may not need any effort of the wits. The most helpless idiots can swallow food if food be placed in their mouths. Perfectly idle rich people are in this condition; and they, too, tend to become witless if they go on in the same way for generations, like certain species of ants described by Lubbock who need another species of ants to do every office of life for them, and who starve without their help. But most men, like most animals, have to work hard for their food. This hard work implies two things: the wolf or fox must run hard and far to overtake his prey, must strike hard to kill it when overtaken; this is one thing. But also the animal must hear and smell with exquisite delicacy in order to find it. So the workman must see straight and aim right. The sailor must see land very far off. The signalman must know the colour of lamps. In other words, they must be sensitive to visual, auditory, olfactory appearances. And this depends on physical and mental health.

Observe the rarity of perfect health. If all marksmen had perfect health of brain and muscle, all would hit their mark. Yet one in a thousand wins the prize after years of struggling for it. Therefore, in this most rudimentary form of perfect health, seeing straight, most men fall far below the standard of health. Are they better in hearing? Take an instance. A child of precocious musical talent of seven years old was taken by his father to play in a friend's house. He had left his own violin at home, and at

¹ A posthumous paper.—ED.

the first bar he played on the one given to him he said, "Father, this fiddle is tuned a quarter of a tone higher than mine at home." His father and friend were astonished. They were accomplished musicians, one of them a celebrated composer; and they were wholly incapable themselves of appreciating by mere memory the distinction between the two violins, both, of course, perfectly tuned, but one tuned a quarter of a tone higher than the other. On sending for the instrument, however, it turned out that the child was right. That child was Mozart, compared with whom probably every other human being then in the world had an imperfect ear for tune. Yet observe, even for Mozart there are ranges of vibrations, perceptible possibly by bird or insect, to which he would be deaf.

Take, again, the sense of smell. Compare the poor, blunted olfactory sense of civilized man with that of a trained retriever or of a Red Indian. Let us see, then, where we are landed. It would seem that in this humblest department of mental health the whole human race is in the condition of partial paralysis—all of us belong to the halt, the maimed, the cripples. Note also that the very fact of our being able to point to such wonderful distinctions in the fineness of sense between one being and another carries us on a great way farther. It enables us to imagine the possibility of vast regions, undiscovered worlds of sensations of which we poor mortals remain, and must ever remain, as utterly ignorant as the inhabitants of a planet in which everyone was blind would be ignorant that there were any stars in the sky.

Yet, hopelessly imperfect as our senses are, it is on them that we depend for such knowledge as we have. It was long ago said by old Greek thinkers, and it was repeated by the philosophers of the Middle Ages: There is nothing to be found in the mind which is not first found in the senses. The senses, it was long ago seen, supply the raw material of all knowledge. Leibnitz, and Kant after him, have something more to say on this matter. But it needs no metaphysician to tell us that the senses are the gateways of knowledge. John Bunyan, in his admirable allegory of the Town of Mansoul, describes the five gates of that town, Eye gate, Ear gate, Nose gate, and the rest. One of these gates may be blocked, and provisions may enter in through another, and may work round by tortuous streets and lanes of that town to the same central market-place. Nay, two senses may be destroyed. A child may be born deaf and born blind also, as Laura Bridgman, and yet through the sense of touch and the sense of muscular resistance

such material of knowledge may flow in as shall issue in perfect fellowship with the human race in thoughts and feelings. But imagine a child born blind, deaf, without the sense of smell or taste or touch or of muscular resistance, such a child must remain with any mental capacities it may have as hopelessly dormant as a seed buried with an Egyptian mummy thousands of years ago.

You find nothing in the mind which you do not first find in the sense. This was the old saying, to which Leibnitz replied, "*Except the mind itself.*" And some half-century after Leibnitz the second of the great German thinkers, Kant, made his celebrated attempt to ascertain what it was which the mind itself contributed, apart from the mass of material coming in through the gates of the senses.

This is not the place to speak of Kant's philosophy, even in the most cursory and superficial outline. But so much at least has become common property of all people who think at all about the matter since his time. What we call knowledge is a compound in which we have to distinguish two factors: the raw material supplied through the senses, the appearances, visual, auditory, muscular, etc., or, to use the Greek word, now quite naturalized in modern speech, the phenomena, which the eye, the ear, the touch, and the sense of muscular effort supply; and, on the other hand, the building up of this material by the mind itself. Kant went so far as to say that the necessity of conceiving that things take place at a particular time or in a particular place was due to the structure of the mind; that time and space were forms of the mind. Be this as it may, the essential point for us to realize is the two-fold aspect of every judgment or act of knowing performed by man; the *objective* element coming from the senses, the *subjective* due to the mind itself. Suppose two persons coming into a room the temperature of which is at sixty degrees Fahrenheit. One of the two comes from an overheated inner chamber, and says this room is cold; the other, entering from frosty air outside, says this room is hot. In each case the subjective condition of the observer modified the judgment. In this particular instance the sense of sight, being afterwards appealed to, gave information from the thermometer correcting the very imperfect sense of heat-perception, so that a better judgment was soon formed. But it may serve as an illustration of the two aspects, subjective and objective, in every fact of knowledge.

Comte has thrown a flood of light upon Kant's great discovery by pointing out that knowing is like every other fact of life; it depends on action and reaction between the organism and the

environment. And here we are brought at once to our special subject. As bodily health consists in the due adjustment of organism to environment, the healthy lungs breathing pure air, healthy digestive organs assimilating wholesome food, sound limbs doing work hard enough and not too hard for them, so should it be with mental health. The appearances, phenomena, of the outer world must be truly presented through the channel of the senses; the mind must react on these appearances soundly, and build them up into the perception of an object on which judgment can be formed. There goes a great deal of mental work to the perception of any object in the world around us. It seems a simple thing when one is walking in a field to say, I see a tree or a house. But let the environment be changed, let the clear air become semi-opaque fog, and the complexity of the process becomes evident. Colour is gone; there are certain darker tints in the universal grey around us; there is nothing to measure distance by; we have to walk to the object to know how many of our paces must be measured till we can touch it. We may make conjecture after conjecture as we go on, always following the universal law that governs our mental workings, that we make the simplest hypothesis that serves to put together all the facts we have got. We find out at last whether what is before us is a house, a tree, a rock, or a haystack; but it often takes a long time. In clear daylight we go through the same processes; but we go through them with such rapidity, owing to long experience, that we are not conscious of them. In the case of men who have been born blind and who have gained the power of sight after they have grown up, the process of interpreting the sensations of sight, of reconciling them with those of touch and of muscular resistance, and of building them up into the perception of an object, is a long and troublesome one.

Now this adjustment of the inner to the outer, of organism to environment, is just what is disturbed in disease. Disease of mind, like disease of body, is nothing but the ordinary healthy process carried on with too great, or with too little, intensity. When Don Quixote saw a large, lofty object with long appendages waving swiftly through the air, the impressions made on his retina were just the same as those made on any other passer-by; but the mode of building them up by the mind, of piecing them together, of interpreting their meaning as a whole, was different. What others recognized as a windmill he interpreted as a giant madly whirling his arms through the air. Each new phenomenon was twisted into agreement with the pre-existing hypothesis. So

again, when the wine-skins were recognized as slumbering giants, and attacked with his good sword, the red gush of wine that issued was fresh proof to him of their giant-nature. And if the truth was forced upon him by the passive brain and shrewd perceptions of Sancho, still the preconceived view was further complicated to meet the new facts. Thus, when he was forced to recognize Mambrino's helmet to be a barber's basin, it was a malignant magician who had thus transformed it, to bring ridicule upon his profession of knight-errantry. By the machinery of magicians he was thus always able to make any sort of facts whatever square with his preconceived theory.

With Don Quixote's morbidly active brain contrast the morbidly passive intelligence of Sancho. Eyes, ears, senses of touch and taste—these were keen enough. But his ideas he is perfectly satisfied to take on trust from those about him. That Don Quixote is a knight-errant, that his business is to go about the world redressing grievances and saving distressed maidens—all this he accepts quite readily. But nothing can make him take a barber's basin for a helmet, or a flock of sheep for an army of infidels, or a wine-skin or a windmill for a giant. When put on his judge's bench in Barataria he will give many a shrewd judgment as to what passes under his eye. But he is perfectly satisfied to believe on hearsay that Barataria is an island, and that he is the Governor of it.

It was Comte, I believe, who first pointed out that in the mental states of these two men we have the two factors of mental health presented in this isolated, one-sided way, with all the life-giving, dramatizing power of Cervantes' genius.¹ The two together make up a sane man.

III

AIDS TO MENTAL HEALTH²

How are we to attain mental health and to preserve it? How are we to get what the French call *justesse d'esprit*, the power of seeing

¹ The same contrast is brought out, without ever passing the limits of sanity, in Fielding's *Tom Jones*, between Squire Western and his sister. "The brother never foresaw anything at a distance, but was most sagacious in immediately seeing everything the moment it had happened; (so) the sister eternally foresaw at a distance, but was not so quick-sighted to objects before her eyes."

² A posthumous paper.—ED.

straight, of looking the difficult problems of life fairly in the face, and of forming sound judgments on them? We are helped in this by some of the great thinkers in the world, who have put forward what may be fairly called Manuals of Mental Hygiene.

The first of these is Bacon: and the manual I speak of is to be found in the opening pages of his *Novum Organum*. He describes there four different kinds of bias which are likely to lead the mind astray. He calls them idols, fictitious likenesses of Truth, which lead men aside from the worship of the Truth itself. These false gods are as follows:—

1. *Idols of the tribe*: false tendencies belonging to the whole race of mankind: as when we are apt to take man's thinking and seeing faculty as the measure of truth: imagining we know something of the universe because we know something of the way in which the universe acts upon ourselves.

2. *Idols of the den*. Each one of us has his own separate twist impelling him to take too sanguine or too depressed a view of the matter in hand; to make bold conjectures, or to make no conjectures at all.

3. *Idols of the market*. We are the slaves of words; we take the common coinage by which ideas are passed from man to man for the ideas themselves. They are often but paper money. It needs but a short glance at the history of our race to tell us what havoc the worship of words has wrought. Take as an instance the glib way in which men talk of "Laws of Nature" as of something really existing outside us and independently of us; instead of taking them for what they are, perceptions of general facts, modified and limited by the imperfections of our thinking faculty. Every leading article, every political speech, is full of these idols. "Rights of Man," "Freedom," "Progress," all of these are coins in common circulation containing a good deal of base metal, and furnishing us with very good reasons for doing the thing we happen to wish to do at the time. Probably no one idol of the market has received so much of this mistaken homage as the word *Religion*. That word, which should mean the state of readiness to devote every faculty to the highest good known to us, has been twisted and distorted to mean adherence to this or that doctrine or symbol of Mohammed, or Jesus, or Auguste Comte, and has become not seldom the source of bitter hatred and strife, instead of union.

4. Lastly, there are the *idols of the theatre*; the fallacies

flowing from an elaborate system of thought which hangs together well, and of which we are apt to think that it embraces and explains all truth, and that outside of it is no salvation. It is thus that in Bacon's time everything was thought to be explained by the principles of Aristotle's philosophy. Because Aristotle had said that the most perfect kind of motion was motion in a circle, therefore Kepler was not likely to be right when he maintained that the planets moved in ellipses. Some of us Positivists have erred in the same way.

From all these *Idols* Bacon urged men to turn away, and look steadily and patiently at the facts themselves. Of course this is a Utopia of his. We cannot each one of us rebuild philosophy from the foundations: we must accept systems, we must take much on trust, we must use the words of our mother-tongue to interchange our thoughts. Still we may profit by the vigorous warning he has given us to look straight at the facts, to get our knowledge as far as we can fresh from the fountain-head. These few pages of Bacon's book are a Manual of Mental Hygiene.

I will now speak of another such manual, written rather for his own use than for the world, by a still greater thinker than Bacon—Descartes. His *Discourse on the Method of Guiding Reason in the Search for Truth* tells a very clear and distinct story of the sort of gymnastic training through which he made his mind pass before undertaking the gigantic work which he set himself to do, that of building up from the foundations a system of Philosophy based on Science. His first process was to go through a long period of close intercourse with practical men of the world: soldiers, statesmen, men of business and others. He had found that in the metaphysical discussions of the schools men allowed their reason to wander here and there in the most fantastic way; but on matters where their personal interests were concerned, on things which they had at heart, he saw that men observed accurately and reasoned soundly. Therefore he spent several years in travel, following the armies on either side in the Thirty Years' War that was then waging, watching the way in which men thought and acted in critical moments of life, and thus living in an atmosphere of mental soundness.

I pass over the special precepts as to reasoning which he laid down for his own guidance, namely:—

1. To insist that every proposition which he accepted should be conceived with perfect clearness, so that there could be no mistake as to its falsity or truth.

2. To divide every problem into as many parts as possible, taking up each distinctly.

3. To maintain orderly arrangement of thoughts, beginning with the simplest and passing to the more complex.

4. Carefully to review all the divisions of the problem, so as to make sure that none was omitted.

I pass to the rules of practical conduct to which he bound himself. He was reconstructing the whole theory of life, divesting himself as far as possible of every preconceived opinion. While the old edifice was being demolished it was needful, he says, to build himself some temporary shelter, like the sheds builders use when a great building is in progress.

His first rule was to conform to the religious and social beliefs of his country, following the views of the most sensible and moderate men among his acquaintance.

His second was to be firm and resolute in action; and, having once decided which among many doubtful judgments was the least doubtful and uncertain, to follow it and act on it steadily as though it were perfectly established. When lost in a wood follow one straight path, he says; it may not take you the way you wish to go, but at last it will take you out of the wood, whereas vacillation will keep you circling about there eternally.

His third rule was the rule of renouncement: never to wish for things that were not within his power. Thoughts were within his power, things for the most part were not. The first were to be governed, the second let alone.

Now, in all this mental hygiene two things seem especially noteworthy. First, the sense of fellowship with men, the respect for that sense which all men have in common, and which men act on unconsciously everywhere; and the dependence of mental health on a calm, collected, strenuous condition of character. Very far from Descartes was that conception of mind as something solitary, disconnected, which could work by itself apart from the rest of our nature. And if the sense of fellowship with men was necessary for him, how much more for the mass of mankind, for whom the attempt to pull down the structure of belief in which they found themselves, and build another in its place, would have been the wildest delirium!

I come lastly to a third Manual of Mental Hygiene, left unfortunately by its author in such a condensed form as to need careful deciphering; I mean the *First Philosophy* of Auguste Comte.¹

¹ See the *Pos. Pol.*, vol. iv, pp. 154-65; also Laffitte's *Cours de Philosophie Première*, 2 vols., 1889-94.—ED.

The first law is that of forming the simplest hypothesis. Our knowledge is not absolute, but conjectured. We form, when in a state of mental health, the simplest hypothesis that the facts at our disposal admit of. When diseased either by selfish passion, or any other disturbance of reason, we twist the facts into accordance with prejudice, explaining, for instance, our friend's actions by all kinds of crooked and malicious motives, instead of by the simplest, which commonly are the most favourable.

Secondly, our judgments are compound results in which the two factors are impressions from without, and our own mental structure reacting on those impressions. Mental health consists in the right adjustment of these two factors. But the right adjustment is not the same in all ages of the world. In the earlier ages of mankind the inner working of mental organizations is more capricious, arbitrary, fantastic. In the later and adult stage of man it becomes gradually subordinate to a third law, which is that all the facts of life tend to arrange themselves in a definite way, and to follow in orderly sequence. This great fact of the universal prevalence of law we only discover after many centuries of difficult search, and till it has been universally grasped, the right degree of adjustment of the inner to the outer, the subordination of our thoughts to the order of the world is not possible. A temporary adjustment is made by subordination to imaginary beings of like passions with ourselves, but more potent.

Now, in devising practical rules for mental health it is evident that, like all other rules of practical medicine, they must vary with the varieties of individual temperament. In a previous paper¹ I have spoken of the two great types of mental unsoundness: that in which the mind is unnaturally active, in a state of morbid excitement; and that in which it is abnormally inert and sluggish, swayed helplessly by the impressions of sense. We may call the first the insanity of excitement; the second the insanity of stupidity. Don Quixote typifies the first; Sancho Panza the second. Bear in mind the great law which Comte attributed to Broussais—namely, that states of disease are simply states of health improperly intensified or improperly relaxed. Preventive mental medicine, the hygiene of mind, will devote itself, therefore, to these two tendencies, the degree of which differs in each individual.

Mental hygiene is then practically education of the mind. There are two agencies of which it disposes: art and science. Broadly

¹ The preceding paper on "Mental Health."—ED.

speaking, art stirs up the inner workings of the mind, science promotes the subordination of the mind to the outward order. It would seem, therefore, that both agencies are needed. Art acts by increasing our power of calling up and arranging images under the influence of emotions. A child has a confused memory of some favourite animal or house or tree—the draftsman or modeller teaches him how to render that confused image definite and distinct by the use of line and shade and colour, by carved wood or moulded clay. The musician calls up a definite train of emotion by a succession of harmonies following in proper rhythm. The poet combines images of eye and ear by calling up visions of men and deeds of long ago in words musically chosen. So that the immediate operation of all effective art is to set men free from the flood of impressions streaming in through the senses, and to lift them into a world of memories and of ideals. Man is a creature of large discourse looking before and after. Art enlarges the discourse and intensifies the vision. Science, on the other hand, inspires resignation, and gives confidence and precision to action. Whirled helplessly onwards in the machinery of the solar system, our days and nights and years are appointed for us. We cannot leap from off our shadow, we cannot by taking thought add one cubit to our stature. All we can do is wisely to guide our action in accordance with these resistless laws. Resignation brings resolution. We steer fearlessly across the ocean, believing in the laws of astronomy; we work onwards for the Religion of Humanity, believing in the laws of social evolution.

Now, it is to be noted that in the scheme of life and education put forward by Comte, art and science are carefully and elaborately intertwined. From seven to fourteen the child's teaching is almost entirely artistic and poetic. Manual dexterity, the fine sense of touch and muscular adjustment, is to be encouraged in every way both by games and school-work. Of music and singing I need not speak. Comte's prophecy that singing and drawing would soon become as natural and common as reading and writing, utterly visionary as it seemed in Comte's time, is steadily approaching fulfilment. With all this the imagination is to be vigorously trained. Fables, ballads of the home, ballads of the nation, ballads of the noblest sons and daughters of Humanity in every nation, and in more languages than one—such will be the child's mental nourishment.

Then, and not till then, in later youth, comes the stern mental training that is to fit the young man and the young woman for firm

and serious handling of the problems of life. Mathematics, implanting the senses of clearness, of certainty, of resignation to irresistible destiny. Physics, training the powers of observation and induction and mapping out for us the future field of practical work. And, finally, ethics, the science of human nature and conduct; beginning with man the first of the animals, and closing with man the creature and the servant of Humanity.

In this scheme of mental hygiene the study of man is the centre and the summit of the whole; the study of the calculus and of external nature serving simply as the preamble. There will always be all kinds of special scientific studies just as there are now, connected with the various pursuits of life; researches connected with engineering, with telegraphy, with chemical work, and so on. But these will be for special classes of men and special occupations. In the scheme which is to call out the full powers of the citizen the study of man's nature and man's duty must hold the central place.

I defined mental health as the state in which we were likeliest to see the truth and lay hold of it. Waiving all sentiment, and looking simply to the actual facts of the case, I believe that the last word of philosophy upon the matter is this, that without human fellowship there can be no real certainty at all. Isolate me in thought, word, and deed from my fellow men, and why should I believe any single proposition whatsoever? The objects round me—men, animals, houses, trees; what are they but phantasms, groups of appearances, some more fleeting, some more constant? My own existence—why should I believe in that? It may be a dream like the rest. "Pure reason" leads not where Kant thought, but where Hume thought it led—to pure scepticism. Doubt of everything; doubt far transcending the doubt of Descartes or of Kant; doubt of all existence, whether of mind or matter. Hume the sceptic was also Hume the builder. He laid the two foundation-stones on which Comte built afterwards: the fact of belief, the fact of love. We believe, said Hume; whether with or without ground, the fact is that *we believe*. And the fact is also that *we love*, without hope of reward. Hume did not put these two facts together. But Comte did.

Love, said Comte, is the principle; this is no mere gush of amiable sentiment; but when we probe the matter deeply we shall find there is really no meaning, no coherence in philosophy, otherwise. For if not, then see the consequence. Assume for a moment the standpoint of one of the ordinary scientists of our time. To him there is no hierarchy of the sciences, no subordination of one

to another. Scientific pursuits stand precisely on the same level. Whether we count the loose stones on the moon's surface, or work out the velocity of every asteroid, or the spectroscopic facts of every one of the million stars known to us, or solve every problem in the theory of numbers, it is all science, therefore all alike valuable. Say rather as Solomon said of old, or as Faust says to us now, all alike valueless, vanity of vanities. It is sublime to stand isolated in the universe and speculate? For a being within finite power this would mean mere idiocy, as though a child stood gazing at a toy of his own creation. For a being with finite powers it is a thing miserably futile, since the whole sphere of his thought, be it wide as Newton's or narrow as an Australian Black's, when compared with infinity is infinitely small. Intellect without love is therefore void of meaning. But intellect in the service of Humanity—whether it be Archimedes measuring the sphere or a mother nursing her sick child, matters not—is ennobled and redeemed.

IV

COMTE'S PSYCHOLOGY

WE are told that the Education Department are propounding psychology as a subject with which teachers in elementary schools should be conversant. On this subject a remarkable letter appeared in the *Times* of May 26¹ from Mr. Thomas Case, a well-known Oxford professor, to the effect that, having himself studied this subject and lectured upon it for thirty years, he was unable to indicate any tangible results that would be of the slightest use to Board-school teachers. Whatever may be thought of Mr. Case's view, it serves as a fresh and forcible illustration of the danger of entrusting important educational problems to a Government department. Government, in the ordinary official sense of the word, is wholly incompetent to deal with questions of this kind. They belong to the spiritual, not the temporal sphere, and separation of these spheres is of the very essence of sound politics. Under the spiritual sphere are included not merely, not even principally, theological and ecclesiastical affairs, but all that relates to the guidance of man's spirit, whether in religion, in philosophy, in science, or in art. With such a question as the expediency of

¹ 1899

teaching psychology to children or the teachers of children the State has, in any healthy condition of society, nothing whatever to do, any more than it has to do with the question whether Weismann's theory of evolution is superior to Darwin's or to Spencer's, or whether Catholics or Positivists have the sounder social and ethical system.

On the subject of psychology it is thought by many that the Positive Philosophy breaks down. In Comte's classification of the sciences he leaves, it is said, no place for it. He fails, say his opponents, to deal with the structure and functions of the human mind. Now, if this charge were true, it would be fatal. A philosophy of any kind in which the highest functions of man were not considered would be the play of *Hamlet* with the part of the Prince left out. And especially would this be true of the Positive Philosophy, the fundamental principle of which is that man is the central object of study, the final goal of research. That man is mankind's proper study is the chief distinction of that philosophy, on the one hand, from theological philosophy as represented by Aquinas, in which the central object of study is God; and, on the other, from the Cosmic evolutionists, who attempt to show how the universe came into being.

If psychology be defined, as its etymology would lead us to define it, as the scientific study of the *psyché*—that is to say, of the moral and mental activities of man, and of the animals more or less resembling man—it is the central field of Positive research. But the word is often understood in a more restricted sense than this; and also the methods of study are, in many cases, of a kind not likely to lead to any definite issue. The restriction consists in concentrating attention on the intellectual activities of man, to the complete exclusion in some cases, and in other cases to the entire subordination, of his moral or emotional activities. And, secondly, the method upon which reliance is principally based is that of "interrogating consciousness." The investigator is supposed to observe the phenomena of consciousness while they are going on. To the validity of this method Comte raised strong objections. As Mr. Spencer remarks: "The mere act of observing the current phenomena of consciousness introduces a new element into consciousness which tends to disturb the processes going on. The observations should be oblique rather than direct; should be made not during, but immediately after, the appropriate experiences."¹

¹ *Psychology*, vol. ii, p. 249.

Comte maintained that an experience of many centuries had shown this method to be barren of result. He thought that there were more direct and fruitful ways of studying the laws of mind. But of this afterwards.

Let us return to the point first mentioned—the relative importance in man's life of thought and of emotion. Wise and practical observers of man's life and character from the earliest ages have always been aware that passions, good or bad, generous or ignoble, have always played a predominant part in determining his actions. This is one of those truths so universally familiar that its very uniformity and universality often induce us to forget it. Yet in any systematic survey of the *psyché*, of the living principle of man, this "subordination of the intellect to the heart," to use Comte's name for it, must be taken as the starting-point. Among truthful observers of man's nature, few will deny that the great poets stand foremost. Take, then, the large assemblage of human lives represented in Homer's two epics and in Shakespeare's dramas. How many of these are stirred by motives of speculative research? Once, and no more, each of these poets has told us of such a man. In Homer's *Odyssey* we have the passion of knowledge for its own sake, which in Dante's version of the story is described as overriding the most sacred ties of duty. The tragedy of *Hamlet* turns on the dislocation of intellect from its normal relation to character. These two instances apart, what of the other thousand and one? Passions, impulses, loves, hatreds, jealousies, heroisms, treacheries, customs, habits, traditions, make up the tissue of their lives. That a speculative principle, a theory, a development of reason, is at work among them always and everywhere, may be quite true; is, indeed, a truth which it is essential to recognize. The part which reason plays in human life is of vast and far-reaching consequence. But in the great majority of cases the individual man or woman has known nothing of it; and hitherto the few who have known have not been always the wiser or the happier for the knowledge. It will be otherwise, we may hope, in the future.

In the *psyché* of the higher vertebrates it is easy to see that what intellectual life they have is wholly subordinate to their emotional life. Desire for food, sexual impulses, devotion to offspring, accesses of destructive fury, are the governing forces in most of them, and stimulate the senses and the rudimentary powers of thought in ways that have been often described by naturalists, but by none so vividly as by Leroy in the admirable *Letters on*

Animals,¹ of which Comte was the first to appreciate the importance. Added to these very elementary instincts are others of a less personal kind, especially in those of the vertebrates that make some approach to the social state; such instincts as the love of power and of praise, and even the purely altruistic instinct of attachment. The two conclusions—(1) that the higher animals reason; (2) that they reason in strict subordination to emotions and desires of the kind here stated—have been long accepted by those who look straight at the facts, and who are not in bondage to the pedantry of the schools. And among those who have established them three names stand prominently forward—Leroy, Gall, and Auguste Comte. The evidence on which they rest has been gathered together in our own time by Romanes,² but, so far as I can see, no new principle has been added, though many new facts have been brought forward in support of them. Of Gall's contribution to the result much is said in the correspondence of Comte with Mill already spoken of in this *Review*.³ Comte, dissociating himself absolutely from Gall's premature attempts to localize propensities and affections in particular parts of the brain, and entirely repudiating his analysis of intellectual functions, thought nevertheless that he had rendered an immense service to the scientific study of human nature (1) by showing anatomically that the brain was not a single organ, but a congeries of organs, each with definite functions; (2) by appropriating certain regions of the brain (the cerebral hemispheres) to the higher moral and mental functions; (3) by distinguishing with a high degree of probability a large number of the elementary propensities or instincts of which human nature consists; and especially in showing that some of these instincts were not self-regarding, but altruistic. His demonstration that the impulse of unselfish love was innate in the structure of man was looked on by Comte as a discovery of equal moment with the hypothesis of the earth's double motion put forward in the sixteenth century, in spite of much evidence to the contrary, by Copernicus. As to Gall's attempt to localize these functions, it can only be regarded as one of the hypothetical devices of which the history of science is full, and which, by making it possible to think with clearness and precision about the facts under discussion, have often promoted scientific discovery.

¹ *Lettres sur les Animaux* (1762–1781). Eng. tr. in 1870. The work was placed by Comte in the last section of his Positivist Library.—ED.

² In his *Animal Intelligence and Mental Evolution in Animals*.—ED.

³ The paper alluded to will be found in Part V of this volume.—ED.

In his letters to Mill, and elsewhere, Comte speaks of the exaggerated number of elementary organs and functions defined by Gall, and of the irrational manner in which many of them were arranged. His own view at that time was that they were reducible to twelve. But in the systematic review of the subject contained in the *Positive Polity*¹ the number stands at eighteen. The distinction from Gall and Spurzheim's phrenological system lies not merely in the diminished number of cerebral organs, but in their philosophical arrangement, and in the attempt made to depict the relations of the brain with the other organs of the body. As a subjective aid to the study of human nature—in other words, as a working hypothesis—it has never been surpassed; and though it may be modified in detail as new light arises, it is not likely to be soon replaced.

In defining the elementary emotions and propensities of man help is obtained from the study of other animals. But though it is evident that they share our passions, it is less evident that they share our reason; indeed, many thinkers of all schools, from Aristotle downwards, have denied it. Even those who, like Roger Bacon, were sufficiently superior to current prejudice to assert that animals stored up experience, generalized it, and drew inferences from it, have felt, as every sane man must feel, that the intellectual gulf between the highest animals and man is enormous. Here is the region in which metaphysical imagination delights to roam. Here it is that analysis of consciousness by introspective methods, carried on by thinkers who prefer the title of psychologist to that of metaphysician, has led them on such divergent paths. "Psychology," says Mr. Case in the letter above quoted, "is a science full of unsolved problems, and of questions waiting for answers." He gives a long list of such questions: "What is mind? What is its relation to body?.....What is the origin of knowledge?" and so on, which have been discussed for tens of centuries. "There are many psychological opinions," he tells us, "with hardly any psychological knowledge."

In discussing the problem of human reason Comte followed a wholly different method. Man, he observed, alone of the higher vertebrates, has lived continuously in the social state. Reason, so far as it is peculiar to man, is the result of accumulated inheritance, not necessarily of biological inheritance—though this is highly probable—but in the first place and mainly of sociological—that

¹ Vol. i, pp. 540-93.

is to say, of historical—inheritance. The connection of reason with articulate speech has been a familiar fact since the days when Homer spoke of men as the “voice-dividers.” Italians, like the Greeks of old, use the same word for speech and reason. Now, articulate language is essentially a sociological fact, as the great Italian thinker Vico was among the first to show. Its first beginnings arise from men working together. From their collective cries arose, it is probable, the earliest names, if not for feelings yet for things, and above all for actions. The first steps in this course are all-important. These once taken, the machinery for handing down intellectual results from one generation to another grows rapidly more effective. In this way we have at a very early stage of human development the great characteristic which distinguishes human from animal intelligence, the power of recalling a feeling, a thought, or an action, and of dwelling upon it as an object of thought. Our conclusion, therefore, is that human reason, and human language its embodiment, are sociological facts, and must be studied by sociological methods.

Every organism, says Comte in the opening chapter of his *Positive Philosophy*, and every organic structure may be looked at under two aspects—statically, as fit to do certain work; dynamically, as actually working. Sometimes the one aspect is more accessible to research, and sometimes the other; both in the end must be brought into unison. Statical research, in the case of intellectual functions, consists in examination of the brain-structure with which they are connected; it is a branch of biological science. Their dynamical study consists in analysing the results of the work done. To the question, What is the origin of mind? Positive Philosophy returns no answer. To the question, What are the laws of mind? that philosophy answers by investigating the ways in which mind has worked. One way of approaching the investigation will be through the science of philology, when studied in the comprehensive way which Comte projected, as a branch of sociology. Another way will be by an equally comprehensive grasp of the history of science.

Let us study [Comte said] the actual path followed by the human mind when at work. Let us see what has been the procedure followed in establishing the various branches of exact knowledge which we already possess. Now this is precisely what “Positive Philosophy,” as conceived in this work, proposes to do. In a word, looking upon scientific theories as so many great logical facts, the thorough examination of these

facts must be our principal resource in ultimately attaining a knowledge of the laws of reason.¹

A short paper of this kind can but touch the fringe of a vast region of thought. Enough has been said to show that Comte did not neglect the subjects commonly treated of by psychologists, though he approached them by ways widely different from those that are usually followed.

V

FUNCTIONS OF THE BRAIN

1

ON this subject a book has been recently published by Dr. Bernard Hollander, who gives as his alternative title *The Revival of Phrenology*.² He claims to have established not merely that Gall was the initiator of rational exploration of the brain from the anatomical point of view, but that most, if not all, of his localizations of intellectual and moral functions are correct. In support of this last assertion he brings forward a large mass of pathological evidence; that is to say, of cases of injury or disease of the brain, observed during life and examined after death. Recent experimental researches on the brain he conceives to be in some cases valueless, in others misinterpreted. A chapter is devoted to Comte's modifications of Gall's views. These Dr. Hollander does not accept.

Those who accept Comte as their master, as the present writer does thankfully, though no blind disciple, can only rejoice at any sincere effort to restore Gall to his true position, as a discoverer in that most essential department of biology which deals with the higher functions of the animal organism. To no great name in the history of science has such systematic injustice been done, not merely during his own lifetime, but throughout nearly the whole of the nineteenth century. Perhaps his friends have injured him as much as his foes by adopting and perpetuating his mistakes. Be this as it may, Dr. Hollander has done good service by urging all who are interested in the subject—a subject embracing the whole

¹ *Phil. Pos.*, vol. i, ch. i, p. 30.

² *The Mental Functions of the Brain*, by B. Hollander, M.D. (Grant Richards; 1901.)—ED.

range of man's thoughts and emotions—to study Gall in Gall's own writings, and to leave off judging him by the misrepresentation of opponents or by the travesties of itinerant charlatans.

A few words as to Gall's position as an anatomist and as a philosophical thinker. As Dr. Hollander rightly remarks, it is very commonly misunderstood. He began life as a physician practising in Vienna, at that time the first medical school in Europe, and enjoying general esteem from the Court downwards. When the French Revolution broke out he was in the prime of early manhood. About 1794 his lectures on the brain began to alarm the clerical authorities. He left Vienna, and for the next ten or twelve years prosecuted his researches into the nervous system in Berlin and many other centres of medical study in northern Germany, in Holland, and in Switzerland, accumulating large masses of observations both on structure and on function, losing no opportunity of visiting prisons and asylums, and spending much time in studying the brains of animals. A memoir founded upon these researches was presented to the Academy of Sciences in Paris in 1808, a year after his permanent settlement in that city. In the twelve following years he was engaged in preparing and publishing his great work, entitled *Anatomy and Physiology of the Nervous System Generally, and More Especially of the Brain, with Observations as to the Possibility of Recognizing Many of the Intellectual and Moral Dispositions of Man and of Animals by the Form of their Heads*. This work was in four folio volumes, with an additional volume containing 100 engraved plates. Three years afterwards, in 1825, appeared his final work on the *Functions of the Brain*. This at least is the "running title," common to all the six volumes. But it is worth while to note that each volume has a distinct title. Thus, vol. i is entitled "On the Origin of the Moral Qualities and the Intellectual Faculties of Man, and the Conditions of their Manifestation"; vol. ii, "On the Organ of Moral Qualities and Intellectual Faculties, and on the Plurality of Cerebral Organs"; vol. iii, "Influence of the Brain on the Shape of the Skull: Difficulties and Methods of Determining the Fundamental Qualities and Faculties, and of Discovering the Position of their Organs"; vols. iv and v, "Organology, Setting Forth in Detail the Instincts, Propensities, Sentiments, and Talents; in other words, the Fundamental Moral Qualities and Intellectual Faculties of Man and Other Animals, and the Position of their Organs"; vol. vi, "Critical Review of Certain Works on the Anatomy and Physiology of the Nervous System, and Restatement of the New Theory."

With regard to this final work of Gall, it may be noted that it is in great part a restatement of what has been already said in the larger work. References are continually made to the plates of the folio edition. Having, however, had the earlier work, as well as the later, for many years in my possession, I may observe that there is very much in the later work that is new. And, as it is more accessible than the folio edition, I shall continue to refer to it. Undoubtedly the plates of the atlas should also be examined. They exhibit Gall's strength and originality as an anatomist. But his pictures of the convolutions, in which he localized moral and intellectual functions, must not be taken as scientific evidence, though Dr. Hollander often appears to accept them as such. Gall was not helped and controlled by the art of photography.

It will be seen that, of the six volumes on the *Functions of the Brain* only two are occupied with what is commonly understood by phrenology; the allocation of special instincts and faculties to special portions of the cerebral hemispheres, with the corollary that examination of the skull becomes a mode of discerning character. It cannot be too often repeated that Gall never used the word *phrenology*. The word, as used by many of the disciples who have obscured his name, implied a boast of finality which was quite alien to him. "How far I am," he wrote in the preface to his sixth volume, "from supposing the structure to be finished! I have but laid the foundations. It needs more than one man's life or one man's wealth to carry this vast work to its conclusion.....What we need is a complete collection of animal skulls, not merely of animals of different species, but also of individuals of the same species, in whom special faculties or qualities have been peculiarly prominent. We want a complete collection of animal brains, modelled in wax after nature. We want a large collection of skulls, or at least of plaster busts, of men and women distinguished for some special quality or faculty. Finally, we want far more extensive knowledge than we at present possess of the instincts, industrial aptitudes, qualities, and faculties of animals."

By far the greater part of Gall's work is devoted to the discussion of the general principles on which a truly scientific physiology of the brain should rest. He had to contend, in the first place, with metaphysical thinkers who denied the existence of distinct moral and intellectual tendencies innate in man and the higher vertebrates; who talked vaguely of the *I* or the *Me* as a mysterious impalpable entity, diffused in some unknown manner through the body, an abstraction that it was impossible to locate or attach

to any definite part—a function, or assemblage of functions, without an organ. He had, in the second place, to argue with thinkers like Condillac, who looked on the infant mind as a *tabula rasa*, formed and differentiated by impressions received through the senses of the outer world. Finally, he had to argue with anatomists whose knowledge of the structure of the brain was not much greater than that possessed by Galen, certainly very slightly superior to that of the Italian anatomists of the sixteenth century. It may be said without fear of contradiction that Gall was the first to dissect the brain rightly—that is to say, from the base upwards, and not from the upper surface of the brain downwards. Gall's method led him by a direct path to the discovery of the mode in which the grey substance of the convolutions was connected with those nervous structures at the base of the brain in which there is the least difference between man and other vertebrates. The detailed list given by Dr. Hollander of Gall's special discoveries in this department, though perhaps slightly exaggerated, is of great interest and value.

It would be wrong, however, to represent anatomical research as Gall's principal method of discovery. In the science of life we have to correlate structure with activity. Given the function, we have to find the organ, or inversely. Generally, though not always, the study of function comes first. And at any rate this was the case with Gall. In the introduction to his final work¹ he tells us that he was impressed from childhood by the diversity of character in members of his own family, all brought up under the same circumstances. Passing from home to school, he remarked that schoolfellows of the same age and size, of similar social position, and undergoing the same mental discipline, differed widely in intellect and character. There were brave boys and cowards, false and true, studious and indolent. Some learnt their school tasks well and easily; others hated books, but had a keen eye for the ways of birds and insects. He saw, further, that these characteristics did not change easily or often. The generous, open-hearted boy of one year was generous and open-hearted in the year following. And so with other qualities, bad or good. Exceptions there might be, but on the whole the clever lad and the stupid were clever or dull to the end. Now, these observations were not very remarkable or original, it may be thought. They were not. Very many people had seen an apple fall to the ground before Newton. But Newton,

¹ Vol. i, pp. 1-20.

supposing the legend to be true, profited by his observation, and so did Gall. Gall followed his observations up with obstinate continuous questioning, carried on for a long time silently. What lies at the back of all these differences? One point had struck him very early in his career. He had remarked that boys with prominent eye-balls were very commonly distinguished for powers of verbal memory. From this remark he drew at the time no further conclusion than the surmise that other distinctive characteristics might also have some external sign connected with them. It suggested questions to be asked of Nature when the opportunity of answering them should arise.

The opportunity came when his medical studies began. His professors taught him what they knew of the structure of the nervous system. It was not much. Bell's discoveries as to the motor and sensory functions of the spinal nerves had not yet been made. Bichat's great generalizations as to the distinction between the life of nutrition and the life of relation, and as to the tissues appropriated to each, were still recent when Gall settled in Paris; as his first volume shows, he eagerly assimilated them. Of his researches into the nervous system, something has been already said. But neither from Bichat nor from anyone else could he obtain an answer to the question: What is the function of that part of the nervous system—the cerebral hemispheres—in which man most conspicuously differs from the other vertebrates? At most he could get the vague answer: The brain is the organ of mental operations. As to feelings, affections, propensities, desires, all that goes to make up the character of a man as distinct from his mental capacity, the inquirer was told to seek for the source of such things in the heart, in the lungs, in the liver, in the bowels, anywhere but in the brain. Gall's meditations on the facts he had gathered together in early youth as to the innate differences, moral no less than intellectual, between one human being and another, between one and another animal of the same species, led him to his great hypothesis that the brain was the organ of moral propensities as well as of intellectual operations, and that, as both one and the other were diverse, so distinct organs must exist for each. With the discussion of these two principles his first two volumes are occupied.

In the third volume he attacks the problem: In what way may we hope to arrive at the allocation of distinct functions to definite portions of the brain? It is commonly assumed, and Gall himself sometimes gave colour to the assumption, that he arrived at his results by the purely empirical process of inquiring whether in men

distinguished for some special tendency of mind or character any part of the cranium was prominent. But Gall was well aware of the necessity of beginning in quite a different way from this. He is most emphatic in asserting that in this inquiry the study of function must precede the study of organ. "I owe," he says, "nearly all my anatomical discoveries to my physiological and pathological conceptions."¹ Undoubtedly, he went on to say,² the study of brain structure, pursued on the comparative method—comparing, that is to say, other vertebrates with man, the infant brain with the adult, the brain of man with that of woman, the healthy brain with the diseased—might have put inquirers on the right track, if they had not been blinded by the nebulous metaphysics of the time. But though it might have suggested the true path of inquiry, there was another and a more important question which had to be answered first. It is well here to use Gall's own words³:—

From the moment that I had obtained certain indications of elementary forces, moral and intellectual, other than those spoken of by philosophers, I felt the need of concentrating all my researches on the discovery and determination of those instincts, propensities, and talents that were definite in character. I was convinced that for these alone could separate organs exist, of which the position could be assigned. I was continually repeating to my friends: Point out to me the fundamental forces of the soul, and then I will undertake to find the organ of each and its position. I found the first problem surrounded by far more difficulties than the second.

How far Gall solved the second is a question reserved for another paper. What is here insisted on is that he gave precedence to the first.

Here is the field in which Gall and Comte come into contact. How greatly Comte admired Gall's work is well known to students of the *Philosophie Positive*,⁴ of the *Positive Polity*,⁵ and of the *Positivist Catechism*. A further reference may be made to the Introductory Chapter in Dr. Ingram's most valuable work, *Human Nature and Morals*, published in 1901.⁶ In Comte's Historic Calendar the final name commemorated is that of Gall.⁷ None the less did Comte feel that Gall's work, not on the anatomical or

¹ *Fonctions du Cerveau*, vol. iii, p. 145.

² *Ibid.*, pp. 146-50.

³ *Ibid.*, pp. 166-67.

⁴ 45th chapter.

⁵ Vol. i, pp. 540-93.

⁶ See p. 71 (note).

⁷ For brief biographies of the 558 persons commemorated in this Calendar see *The New Calendar of Great Men*, edited by Frederic Harrison. (Macmillan and Co.; 1892.)—ED.

objective side merely, but also on the physiological or subjective side, stood in need of entire revision. He devoted much thought, through many years, to the work of this revision. He did more; he brought a new method.

The faults in Gall's demarcation of "fundamental" or elementary functions were due to the imperfection of his philosophy. His biological studies had been profound and original. He had studied animals, he had studied individual human beings with wonderful independence and breadth of view, with audacious freedom from theological and metaphysical prejudice, and with splendid mastery of the comparative method. But of the social organism, and of the laws that govern its growth, he had no knowledge. Comte's discoveries in this region from 1822 to 1826 came too late for him. Nor does he show any knowledge of the remarkable work of Comte's immediate predecessor, Condorcet, on the *Progress of the Human Mind*.¹ In the growth of man and the growth of Humanity there is a parallel, of which Pascal more than two centuries ago was dimly aware, and which Comte was the first to bring into full light.

In defining the elementary functions of the brain Comte defines his method thus: Sociological suggestion controlled by zoological verification. Sociology operates in two ways on the solution of the problem. First, it magnifies facts which, in the microcosm of the individual, would be hardly perceptible, as the poet says:—

In the legend of man I see
Writ large what small I saw
In my life's tale; both agree.

If Gall could have more closely studied that "legend writ large," he would have avoided many mistakes. But, secondly, sociology complicates the solution by presenting many feelings and instincts which have all the force, and often more than the force, of the elementary affections shared by man with the higher vertebrates, or with animals still lower in the scale. Such, for instance, are love of country, the sense of honour, of justice, of modesty, and numberless others, which are obviously bound up with long continuance in the social state. We have here to make use of the second clause of Comte's criterion: zoological verification. Thus, to take a simple instance, the instinct of compassion, being common to many of the higher animals with man, would be regarded as elementary. The sense of justice, examined by the same test, would

be looked upon as compound. Further explanations of Comte's survey of the elementary functions of the brain will be found very clearly and simply stated in Dr. Ingram's book above mentioned. That survey, as set forth in tabular form, owes obviously very much to Gall's admirable labours. But what is new in it brings it into closer accordance with fact, and renders it far fitter for the social and moral purposes which Gall and Comte alike held always in view.

2

In biology, as was said before, the twofold problem is to discover the organ of each function, and the function of each organ, while never losing sight of the fundamental fact of life, the adaptation of organism to environment; and remembering always that, in the case of brain functions, environment includes all that is meant by the word *education*. It usually happens, but not always, that the function attracts attention first. Respiration, digestion, circulation, excretion were studied by Hippocrates and other physicians of the Græco-Roman world, and studied often to good purpose, though their knowledge of the organs performing these functions was extremely limited. On the other hand, the spleen and the liver supply instances where the structure of the organ has been minutely studied, though the purpose served by it is still most imperfectly understood. How do we stand in this respect with regard to the brain? That the brain was a receptacle of sensations and a source of motion was well known to the later Greek anatomists. In the Middle Ages knowledge had gone farther, thanks in great part to Arabian naturalists. Roger Bacon allocated in the brain of animals, no less than in that of man, memory, perception, and a mental process (*virtus cogitativa*), which he found it hard to distinguish from reasoning.¹ Descartes's amazing theory of animal automatism discouraged speculations of this kind. But they were revived and placed on a far sounder and broader basis by philosophic naturalists in the eighteenth century, notably by Georges Leroy in his celebrated *Letters upon Animals*. It was seen at length that the psychical life of man, no less than of other animals, was made up in far larger measure of emotions, feelings, propensities, affections, volitions, than of intellectual processes. And when Gall added his own observations of animal and human life to those of Leroy, he was brought to the conclusion that affections and propensities, no less

¹ *Opus Majus*, ed. Bridges, vol. ii, pp. 7-12.

than argumentative processes, had their centre in the brain; that the brain was the organ, not merely of mind as commonly understood, but of those innate affections and dispositions which count for so much in the character of every man and woman born into the world. Gall brought a large mass of evidence pointing to the conclusion that the brain was not an organ, but rather an assemblage of organs. This was denied by his contemporaries; and even in recent years there have been some (the late G. H. Lewes was among them) who maintained that the brain was a single organ, and that every part of it acted uniformly and simultaneously. But the evidence that has accumulated during the last forty years that different parts of the brain differ in structure and in function is entirely conclusive. The grey matter of the convolutions, consisting as it does of myriads of cells of different shape and size, arranged in layers which the microscopist can distinguish, is not the same in the front regions of the brain as in the middle region, this again differing from the hindmost region. The precise meaning of these facts we do not know as yet, and it may be very long before we know it. "The great bulk," says Dr. Ferrier,¹ "of minute cerebrospinal anatomy is in the most unsatisfactory state." But, interpret the facts as we may, a glance at any series of magnified sections of the grey matter of the convolutions taken in different parts of the brain (such, for instance, as may be seen in pp. 141-42 of Ferrier's work) is enough to show the striking difference of the size, shape, and arrangement of the brain cells in different regions.

Evidence of a more significant kind, and bearing more directly upon Gall's system of localization, was given by Broca's discovery, forty years ago, that the singular affection called *aphasia*, in which the patient understands the meaning of words spoken to him, but cannot speak or write the words himself, was connected with disease in a particular part of the brain; the position (posterior extremity of the third frontal convolution) being very nearly that which Gall had marked as the organ of language. It should be added that the disease is usually limited to the left side of the brain. It is worth noting that this remarkable discovery was the result, not of experimentation on living animals, but of pathological observation. Dr. Bernard Hollander's contributions to our knowledge of brain functions rest in like manner upon pathological rather than vivisectional operations. Before discussing them, however, it is well to consider what vivisection has done in this matter, and this without

¹ *Functions of the Brain*, 2nd ed., p. 2.

entering on the present occasion into the moral aspects of this question, further than to refer to the papers on "The Use and Abuse of Experiments on Animals."

Gall himself considered the subject very carefully, and some of his remarks are worth quoting, for they have by no means lost their force. In vol. iii, pp. 156 ff., after a few general remarks on the prevailing tendency of physiologists to resort to operative methods rather than to accumulate physiological and pathological observation, he goes on to observe, with regard to mutilations of the brain in living animals:—

What we constantly find is that all that seems proved to demonstration by the mutilator A either does not occur in the mutilation practised by B, or else that B finds that his identical experiments prove exactly the contrary of what had been alleged by his predecessor.....Further, these cruel experiments on the brain, when made on animals low down in the scale, are very rarely conclusive for man. In fowls, pigeons, rabbits, and in the young of animals higher in the scale, animal life is very far from being under the complete domination of the brain. I admit that certain results have been obtained, though these are often extremely doubtful, with such facts as irritability, sensibility, the functions of viscera, voluntary motion, respiration, etc. But never can I admit that lesion and mutilation of the brain, whether produced by operation or by accident, is the right and sole method for revealing the functions of its constituent parts.

For such experiments to be successful a combination of conditions is needed with which it is impossible to comply. First of all, we must be able to limit the entire effect of the lesion to the special region of the brain on which the experiment is made. For if the shock of the operation, the hæmorrhage, the inflammation, extend to other parts, what conclusion can be drawn? And how prevent such extension? Then, again, in order to be sure that any organ has been entirely destroyed, we ought to be able to define precisely the extent of this organ and its origin. But who, before our researches, had the slightest acquaintance with the bundles of nerve-fibres which go to form the convolutions of the brain? The ordinary method has been to slice the brain horizontally, but the nerve-fibrils connected with the convolutions are not spread out horizontally. On the contrary, they pass down either diagonally, or vertically, or circuitously, towards the parts where they are reinforced, or towards their first origin. How, then, destroy any cerebral organ without injury to those which are contiguous with it, or without penetrating to the base of the brain, and thus causing the death of the animal?

Apart from this, it would be necessary to ascertain whether

an animal whose brain is wounded and mutilated, an animal agonized by pain and fear, were in a condition to exhibit those propensities, instincts, or faculties connected with the portions of the brain that were left uninjured. Captivity alone is enough to silence the instincts of most animals. The elephant will not pair in captivity; the nightingale's song ceases.....Lastly, what is more important than all, the inquirer should have a clearly defined conception of what he is to look for. He should be free from metaphysical prejudices; he should know what are the fundamental elements of human nature. Where do we find physiologists and anatomists who fulfil this condition?

Gall's criticism of vivisectional methods, as applied to the brain, was aimed at such experimenters as Flourens and Longet. It is impossible to deny its efficacy so far as their researches are concerned. But very much of it applies with equal force to far later researches than these. In 1870 Fritsch and Hitzig discovered that the grey matter of the brain, which till then had been regarded as insensitive, was excitable by weak electric currents. A fresh impetus was thus given to cerebral researches. Their work is best known in England through the repetition of their experiments by Dr. Ferrier, with certain modifications of his own. Dr. Ferrier admits Gall's main contention as to the difficulty of isolating any one part of the brain from the rest.

The functions of the whole nervous system [he says], the different portions of which form a complex solidarity, may be deranged by a lesion at any part; and, even if this should not be the case, there is at least great risk that the parts more immediately in relation with the lesion may be damaged temporarily or permanently.

And again:—

Unless the primary lesions are established in such a manner as to prevent their becoming the foci of secondary inflammatory processes, more or less diffuse, no certainty can be arrived at in respect to the direct effect of the lesions, however well circumscribed in the first instance; and thus errors of the most grievous description are apt to arise in reference to the delimitation of the respective cortical centres. The vast majority of the experiments made on this head by many physiologists; such as Munk, are vitiated by the almost universal occurrence of secondary encephalitis, with indefinite extension of the primary lesions.¹

What a comment is all this on the remarks of Gall above quoted,

¹ Ferrier, p. 269.

and on the thousands of brain vivisections that were carried on in the interval between his time and ours! Dr. Ferrier conceives that he has effectively stopped this extension of the lesions by antiseptic methods. What antiseptic surgery can do in ordinary flesh wounds is matter of common knowledge. But would he maintain that, in such a tissue as the retina, a single cell, or a single layer of cells, could be operated on, antiseptically or otherwise, without interference with adjoining cells? The cortex of the brain is not less delicate, not less intricately involved, than the retina, even to our present most imperfect knowledge; probably, as our pathological knowledge extends, it may be found a thousand times more delicate and more intricate. The present writer is no expert in this matter. He claims merely to be a patient student of other men's work. But it will be found that experts of at least equal authority in this matter with Dr. Ferrier—such, for instance, as Goltz—draw totally different conclusions from the facts that Dr. Ferrier describes, and believe that the muscular movements resulting from, or paralysed by, stimulation or destruction of special portions of the cortex are due to secondary irritations of other and "lower" parts of the brain. And, whether this be so or not, it obviously does not follow, because certain parts of the cortex of the brain are connected with the muscular system, and certain other parts with the organs of sense, that therefore these regions have none of the emotional or intellectual functions which Gall and others have assigned to them. To say that these functions are in no sense innate, but result from the social environment—in other words, from "education"—is to beg the whole point at issue. It might conceivably be tested by some one who removed the wounded animal from the laboratory, and nursed it with affectionate and sympathetic care, but not by the vivisector. I leave the ethical side of vivisection for the moment entirely apart, having dealt with it elsewhere.¹ It is only needful to say that, never having joined any organized agitation against experiments on animals, and being distinctly in favour of such experiments as have been directly and wisely aimed at the extinction of infectious diseases, I may claim to speak with some degree of independence. I speak assuredly in entire freedom from that "hatred of science" which the late Professor Huxley, in the blindness of his combative zeal, attributed to Positivists.

Dr. Hollander's book will, I hope, have the effect of directing students of this very important biological problem into sounder and

¹ In the 2nd paper on "The Use and Abuse of Experiments on Animals."—ED.

worthier methods of research. He has accumulated a large mass of pathological evidence which, in his opinion, goes to show that Gall's localization was justified, even in many of its minuter details. After careful study of this evidence I am driven to the conclusion that the greater part of it falls very far short of scientific proof. Dr. Hollander is perfectly right in saying, as Gall and others had said before him, that the kind of evidence required consists of careful observation of character and disposition during life, tested by accurate examination after death. This was the way in which Broca made his discovery of the "organ of language"—that is to say, of that part of the brain disease of which produced aphasia; by far the most solid acquisition which cerebral anatomy has made since Gall's time. The conditions required are these: (1) A competent observer capable of observing, judging, and analysing character; (2) Discernment of a morbid tendency during life limited to a single one of the elementary instincts; (3) Discovery of disease of the brain in a specially defined region after death, accompanied by well-grounded evidence that the rest of the brain was unaffected. The combination of these conditions is not all that is wanted, but it is the minimum. Evidence falling short of this standard may be useful in putting inquirers on the right track, or in suggesting a sound working hypothesis for further investigation; but this is all. Now, it will, I think, be clear to every careful reader of Dr. Hollander's cases that much of his evidence falls short of this standard. In some of the cases no post-mortem evidence is given. In many of them the injury to the brain discovered after death covered an area far larger than that which Dr. Hollander, apparently following Gall, assigns to the instinct in question. In other cases, again, the same symptoms would seem, supposing Dr. Hollander's assignment of function to organ to be correct, to be caused by over-stimulation of the organ that followed on its total destruction. And, what is more important, too much reliance is placed on *enumeratio simplex*, to use Lord Bacon's expression. It has to be shown, if possible, not merely that a morbid condition of function co-existed with an injury in a special region of the brain, but that the same morbid condition is *not* found in connection with injuries to another region. Perhaps the most interesting series of facts mentioned by Dr. Hollander is that relating to the instinct of nutrition (pp. 210-16). On the seat of the altruistic instincts, especially those of benevolence and veneration, the few pathological observations recorded are highly interesting and suggestive; though Dr. Hollander himself admits that they are insufficient, since he

deals with them as "materials for future localization." On the situation of special memories for number, form, place, time, colour, he appears to me entirely to fail in proving his, or rather Gall's, view.

It may also be noted that in the diagram of the brain presented in the frontispiece of Dr. Hollander's book the space allotted to the frontal lobes is likely to give rise to misconception, if the reader is allowed to suppose that the whole of this space is concerned with intellectual functions. It is more probably the pre-frontal than the frontal lobes with which these functions are connected; the larger part of the frontal lobes being occupied with the higher altruistic sentiments of benevolence and veneration. The point is of importance, if a theory of brain-functions is to be brought into adjustment with the facts of human nature, as recorded by its most skilled observers, whether statesmen, philosophers, or poets. With one accord all of these tell us that moral impulses have far more to do with the actions of men than reflective processes. Whether for good or evil, the intellect is subordinate to the heart.

That there is a general truth in the broad outlines of Gall's scheme of localization is a conclusion which, in spite of prolonged opposition, is gradually making its way in the scientific world; a conclusion anticipated to some extent by popular judgment and by the finer observation of artists. That in many ways it needs recasting will be generally admitted; and something was said in the preceding paper of the method to be followed in this process. Such criticism as I have offered of Dr. Hollander's work does not at all affect its value as a stimulus to further research, carried on by methods widely different from those which for half a century after Gall's death held the field, and which are still actively pursued. He urges, and with indubitable truth, that the most hopeful path of inquiry is to be found in pathological research wisely conducted. He adds that for this purpose, and also for other purposes, our present mode of treating lunatics needs fundamental changes. Our present monstrous plan of massing them together by thousands, so that the physician in charge rarely knows half of them by sight, will have to be abandoned. Individual treatment, and, where it may be possible, domestic and affectionate care, should be substituted. A record of the patient's life and character before, as well as after, the outset of disease should be kept in a way widely different from any that is now possible.

A short notice of Dr. Ingram's book on human nature will complete this series of papers by putting Comte's cerebral theory in

its true light as a valuable working hypothesis, not, indeed, as yet scientifically demonstrated, but nevertheless throwing great and indispensable light on social and moral problems.

3

It has already been mentioned that Auguste Comte accepted many of the leading principles of Gall's theory of the brain, regarding some as scientifically proved and others as affording material for a sound and useful working hypothesis as to the constitution of human nature. Reference has already been made to Dr. Ingram's recent work on this subject,¹ the first three chapters of which contain a very lucid statement of Comte's cerebral theory, taken from the final chapter of the first volume of his *Politique Positive*. Those who are interested in the subject will find Dr. Ingram's short work an excellent introduction to the study of the original.

And who is there that is not interested? This is not a matter to be monopolized by academicians, scholastics, or university professors. For thousands of years, from the earliest beginnings of history, men of every rank, race, and colour have insisted on knowing what they could of the nature of man. Prophets, poets, lawgivers, founders of religions, have gained a hearing because they were thought to know more about it than the mass of men and women round them. So absorbed were men in the study of it in primeval days that they found in it their first key for deciphering the riddle of the universe. Of the world around him man knew nothing except what was needed for the supply of his most urgent animal wants. On these points primitive man was a positivist, as Comte, notwithstanding his Law of the Three Stages, invariably maintained.² He knew much more than the average university graduate could tell him as to the way in which a flint would flake when struck, or how to rub two pieces of wood together so as to bring smoke and flame.

And so, too, had he a firm grasp of certain elementary facts as to his own nature: of the strain of muscular effort, of the storms of conflicting passions—greed, lust, and anger—of rare impulses of affection and reverence. It was by the help of facts of this kind that he built up his first crude theories of the universe. The forces of nature were assimilated to those of his own body and soul. This

¹ *Human Nature and Morals According to Auguste Comte*, with notes illustrative of the Principles of Positivism, by John K. Ingram. (A. and C. Black; 1901.)

² See *Phil. Pos.*, vol. iv, ch. li, p. 491.

is not the place to describe the rise and growth of the two phases of man's early religion—fetichism and polytheism—further than to say that both had their principal source in man's experience of his own passions.

Prophets, poets, and philosophers have told man from time to time, each in their own very different language, that knowledge of himself was worth more than any other kind of knowledge. Which have been the most effective teachers? We need not decide the question. But at least it may be said that philosophers, taken as a class, have not as yet convinced the world that they have a monopoly of this knowledge. There are many who think, and not without reason, that there is more wisdom to be got from the great poets than from systematic thinkers. In sounding the depths of the soul, in exploring the hidden paths of passion, what sane man will place the author of *Bacon's Essays* on the same level with the author of *Lear* or *Hamlet*? Compare Æschylus with Plato, Aquinas with Dante, Kant with Goethe, the result will be the same. With very rare exceptions, the influence of the poet (I speak only of the few great ones) has not merely been wider, but it has gone deeper.

The reason is not far to seek. Most philosophers have concerned themselves with analysing thoughts. Poets, without ignoring thoughts, have concentrated their attention on passions and actions. Of the best priests and prophets the same may be said. Striving to restore order among man's conflicting passions, and to establish a "rule" of life, they have been compelled to look on life as a whole. Conduct, says a modern poet, is three-fourths of life. To quote Corneille's paraphrase of the *Imitation* :—

Et ce qu'on aura su fléchira-t-il un juge
Qui ne regardera que ce qu'on aura fait?

Now, metaphysicians and psychologists have in very many cases ignored those elementary truths; yet they have been long known to the simple, and to those of the wise who were capable of learning from the simple. Open any manual of the history of philosophy—that of Renouvier or of G. H. Lewes, for example—or any modern treatise, whether of what is called distinctively "Philosophy" or of "Psychology," you find nine-tenths of their contents occupied with analysis of intellectual processes. Of the value of such analysis, very great in some cases, very small in others, this is not the place to speak. The sole point here insisted on is that the mass of plain men and women who feel the need of knowing something about their own spiritual nature—not this or that part of it, but the whole of it, mind, heart, and will altogether—find far more of

what they want in the *Imitation* of Thomas à Kempis than in Locke's or Leibnitz's *Essays on the Understanding* or in Kant's *Critique of the Pure Reason*.

Now, it was precisely because Gall's scheme of the innate propensities of human nature, as embodied in the structure of the brain, met this want that it produced so startling an impression on European thought in the early decades of the nineteenth century. Wise men occupied with reforming work in many departments—in the treatment of criminals, in the training of the young, for instances—were quick to recognize its significance. No part of Gall's work had deeper results than his endeavours to demonstrate in the organization of man and of the higher vertebrates the existence of a principle of unselfish love. The sixty-five pages devoted to this subject¹ are well worth re-studying. When it is remembered that theologians were still teaching the utter corruption of human nature, and that Hobbes's doctrine that all sentiments and affections were modes of self-love had as yet received no systematic contradiction, we are not surprised at Comte's comparison of this part of Gall's work with the hypothesis of Copernicus in far-reaching social importance. The eternal problem of wise government of human nature, untouched either for better or for worse by all the "wireless telegraphies" that the coming centuries may have in store for us, was brought down from a far-off region of inscrutable mystery to a homely, familiar land which all may tread; where there is

grass about,
Under befriending trees,
Where the shy buds venture out,
And the air by mild degrees
Puts winter's death past doubt.

For if, indeed, the capacity for unselfish love be innate in each one of us, as also in some of the higher animals who are our fellow-workers, a gleam of light is shed on the dark problems of life. Internecine attrition, with survival of what it may please destiny to let survive, ceases to be the sole and supreme law. A leverage is offered us on which to work in moulding man's life to higher things. The problem of reducing the conflicting emotions of man's life to harmony, of securing the ascendancy of altruistic over egoistic impulses in such a way as to leave the various forms of self-love free play for the activities and needs of vitality, remains, doubtless, complex and arduous in the highest degree, taxing the highest

¹ *Fonctions du Cerveau*, vol. v, pp. 254-319.

wisdom and devotion of countless generations, but still a soluble, not a chimerical and hopeless, problem. Each generation of workers may know itself to be nearer the goal.

Thoughts of this kind may suffice to indicate the importance to students of Positivism of Comte's picture of the psychical nature of man, and of its connection with his physical structure. For further details I must again refer to Dr. Ingram's volume; those who have leisure should study the subject in Comte's own writings, notably in the concluding chapter of the first volume of his *Positive Polity*. Once more let me insist on Comte's declaration that the position of the organs, with which the functions defined by him are connected, is not regarded by him as demonstrated, but is put forward as a working hypothesis. Such an institution is recognized in every department of science, and, indeed, is in many cases grossly abused. But in the present instance the important condition is complied with that is too often ignored: the hypothesis is amenable to disproof or to verification. In the meantime, since to deal with undefined functions leads almost inevitably to vagueness of thought, there are advantages in instituting provisionally imaginary organs, always provided that their provisional character is recognized. Finally, let it be borne in mind that, whatever modifications the hypothesis may need in the future, the psychical facts with which the hypothesis deals remain unaltered.

Before leaving Dr. Ingram's book I should like to call attention to a series of valuable "Notes Illustrative of the Principles of Positivism" with which it concludes. Most of those deal with Comte's way of using certain terms, familiar enough to philosophic students, but not always intelligible to the public. Such, for instance, are the contrasts between *absolute* and *relative*, *abstract* and *concrete*, *objective* and *subjective*, *laws* and *causes*, *static* and *dynamic*. Few thinkers abstained so carefully from technical terms, and, above all, from new terms, as Comte. It is the more important to have a clear understanding of the few which he employed, and Dr. Ingram's explanation of them leaves nothing to be desired. But in view of present controversies, and of the subject spoken of in the foregoing papers, I invite special attention to the note on "Psychological Introspection." Comte, as everyone knows, was extremely sceptical of the value of this process as a method of research, "believing that the direct observation of one's own mind in the act of thought, or under the influence of emotion, could not lead to trustworthy results." Not, of course, that he denied the obvious fact that our general knowledge of thought and emotion

was derived from consciousness. But to have general knowledge of a range of facts is one thing; to investigate the laws which regulate them is quite another; and Comte disbelieved in psychological introspection as a means of discovering these laws. For this view he has been roundly taken to task by the late Professor Huxley, who regards it as a convincing proof of Comte's "scientific incapacity" and "philosophical incompetence," and who contrasts it with what he represents to be Hume's view of the usefulness and necessity of the method of internal observation.

But, as Dr. Ingram shows convincingly enough by citing Hume's actual words, Hume's position in this matter is identical with that of Comte. The passage in question will be found in the Introduction to Hume's *Treatise of Human Nature*. Apart from its temporary interest as an illustration of the reckless inaccuracy into which Huxley was usually hurried when he spoke of Comte and his school, it contains a serviceable warning against fruitless expenditure of intellectual energy in a barren field.

Moral philosophy [says Hume] has this peculiar disadvantage, which is not found in natural—that, in collecting its experiments, it cannot make them purposely, with premeditation, and after such a manner as to satisfy itself concerning every particular difficulty which may arise. When I am at a loss to know the effects of one body upon another in any situation, I need only put them in that situation and observe what results from it. But should I endeavour to clear up in the same manner any doubts in moral philosophy by placing myself in the same case with that which I consider, 'tis evident this reflection and premeditation would so disturb the operation of my natural principles as must render it impossible to form any just conclusion from the phenomenon. We must, therefore, glean up our experiments in this science from a cautious observation of *human life*, and take them as they appear in the common course of the world, by *men's behaviour* in company, in affairs, and in their pleasures. When experiments of this kind are judiciously collected and compared, we may hope to establish on them a science which will not be inferior in certainty, and will be much superior in utility, to any other of human comprehension.

VI

MUTUAL AID

THERE is great value in mottoes. They condense a large and shapeless mass of thought into crystalline hardness and clearness; they enable us to concentrate attention on what would otherwise pass away and be forgotten like last year's clouds. Mottoes are like other formulae: we cannot do without them, yet we must not be their slaves. And, to prevent such bondage, it is well to take up one and another of them now and then, and ask what it means. Perhaps the crystal, closely looked at, may show new lights and tints.

Love is our Principle: this is the first clause of the threefold formula of Positivism,¹ looked at as a social doctrine. Of the two other clauses relating to Order and Progress—to evolution, as some might phrase it, in accordance with a definite law—we need say nothing at present. Let us fix our thoughts for a moment on the Principle.

The first thing to do is to acknowledge Love as a certain and unassailable fact, to be taken account of by science as much as gravitation, electricity, chemical affinity, or the multiplication table. It seems at first sight strange that there should be any doubt about so very obvious a truism. Nevertheless, doubt there is, as anyone may assure himself who asks the first average man of science he meets to discuss the subject. He is very likely to receive the answer that Love is a matter of sentiment, and that science has nothing to do with sentiment. Is the study of human nature, then, beyond the range of science? Human nature, looked at apart from sentiment, would be like *Hamlet* with the principal part left out. It needs but a glance at the drama of history, or at the homelier drama of commonplace life always going on around us, to teach us so much.

Other men will give our inquirer what seems to be a more satisfying answer. You must go, they will tell him, to the psychologists. Psychology is the scientific study of the *psyché*, of all that distinguishes living from dead matter, and especially of that department of life that Bichat called the life of relation; the study of sensation, motion, and all other functions of the brain and nerves. Unfortunately, when our inquirer opens his elementary treatises of

¹ See p. 39 (note).—ED.

psychology, he finds that the main thing spoken of is something that is called Mind, and our inquirer finds himself very often plunging in an ocean, sometimes in a morass, of metaphysics. He is told that he must study his own mind in the act of thinking—a difficult art which long practice will enable him to acquire. He remarks that other men engaged in the same practice often arrive at very different and incompatible conclusions. Lastly, he finds that at the end of the process he is as far from what he was in search of as when he began. He hoped to learn something about emotion, passion, impulse. But he is disappointed. He is told that these things belong to “tracts of consciousness in which integration is undecided,” that they “cohere little with one another and with other feelings,” that they “play but subordinate parts in the actions we chiefly class as mental.”¹ Mr. Spencer is, of course, too great a thinker to leave Emotion out of account; as may be seen by reference to §§ 209–13 and §§ 494–540 of his psychological treatise. But it is quite otherwise with many, perhaps with most, writers on psychology. And as psychology is now a subject recommended to school teachers by our various educational authorities, this error of regarding the *psyché* as made up chiefly of mental processes becomes of very serious social importance. A little book like Mr. J. M. Baldwin’s *Story of the Mind*² (in the Story Series of George Newnes) deserves more consideration from this point of view than many a voluminous treatise. Students of psychology are, of course, aware that Mr. Baldwin’s reputation rests upon other publications much more systematic and elaborate than this little primer. But to these we need not refer at present. Nor do I wish to speak now of the debatable propositions with which it bristles from the preface onwards; as that “the Evolution theory is adopted in its application to the mind.” Which evolution theory? We are left the more in doubt that a few lines afterwards (p. 7) we are told that the evolutionary process by which the purpose of the universe is working itself out is perhaps the law of Probabilities! But it is not for the purpose of discussing this or the other debatable detail that I refer to this and similar works; it is that from beginning to end the *psyché* which the book professes to deal with is identified with Mind. The book is called *The Story of the Mind*. Its first sentence runs thus:—

Psychology is the science of the mind. It aims to find out all about the mind—the whole story—just as the other sciences

¹ Spencer, *Principles of Psychology*, § 75.

² 1899

aim to find out all about the subjects of which they treat—astronomy, of the stars; geology, of the earth; physiology, of the body.

Let it be said at once that Mr. Baldwin's *Story of the Mind* contains much interesting, though rather desultory, information about a great many subjects. It touches on recent experimental researches on sensation and memory, on the comparison of mental processes in higher animals and in children, on the art of teaching, on certain diseases of the brain, on language, and on many other matters of much interest and importance. But of what we are seeking, a plain account of the elementary affections and passions of man and the higher vertebrates, we shall find hardly anything.

Gall's crude hypothesis of brain-functions had the enormous advantage of concentrating attention on certain elementary facts of human nature which are instinctively familiar to the mass of men and women, but which the academic world is in perpetual danger of forgetting. In any case, in Gall's psychology, and yet more in the revision of that psychology put forward by Comte in pp. 669-735 of vol. i of *Politique Positive*,¹ we have what we sought, a picture that preserves due proportions between the three aspects of man's psychic life—Feeling, Thought, and Activity. Elsewhere among systematic thinkers we shall usually seek in vain. If we want further guidance, we have to betake ourselves to the great poets, to the great naturalists, or to the practical wisdom and good sense of men and women unversed in scholastic ways. It was a soldier from whom that golden word came: *Les grandes pensées viennent du cœur*.²

These thoughts were suggested, or at least enforced, by Prince Kropotkin's remarkable work on *Mutual Aid*, published three years ago.³ Apart altogether from the strenuous struggles of his political life, Prince Kropotkin has become widely known to English readers by his lucid expositions of recent scientific discoveries, indicating philosophical capacity of no ordinary kind. In this work he makes a direct and important contribution to the psychology of man and animals, of the kind in which most modern treatises on the subject are so deplorably wanting.

Let us allow Prince Kropotkin to introduce his subject:—

Two aspects of animal life impressed me most during the journeys which I made in my youth in Eastern Siberia and Northern Manchuria. One of them was the extreme severity of

¹ Pp. 540-93 of Eng. tr.

² "Great thoughts come from the heart."—Vauvenargues; *Maximes*.

³ *Mutual Aid: A Factor of Evolution*. (Heinemann; 1902.)—ED.

the struggle for existence which most animals have to carry on against an inclement Nature; the enormous destruction of life which periodically results from natural agencies; and the consequent paucity of life over the vast territory which fell under my observation. And the other was that, even in those few spots where animal life teemed in abundance, I failed to find—although I was eagerly looking for it—that bitter struggle for the means of existence, *among animals belonging to the same species*, which was considered by most Darwinists (though not always by Darwin himself) as the dominant characteristic of struggle for life, and the main factor of evolution.

The author proceeds to describe the merciless rigours of the North Eurasian climate; the hard, long winter, the short burst of spring, the recurrence of cold in May, the storms of late summer, the rainfloods of autumn, the snowfalls of October. But while he was thus impressed by the overwhelming importance of the natural checks to over-multiplication thus imposed by Nature, he was equally impressed by doubts as to the reality of that fearful competition for food and life within each species which was an article of faith with most Darwinists.

On the other hand, wherever I saw animal life in abundance, as for instance on the lakes, where scores of species and millions of individuals came together to rear their progeny; in the colonies of rodents, in the migrations of birds which took place at that time on a truly American scale along the Usuri; and especially in a migration of fallowdeer which I witnessed on the Amur, and during which scores of thousands of these intelligent animals came together from an immense territory, flying before the coming deep snow in order to cross the Amur where it is narrowest—in all these scenes of animal life which passed before my eyes I saw Mutual Aid and Mutual Support carried on to an extent which made me suspect in it a feature of the greatest importance for the maintenance of life, the preservation of each species and its further evolution.¹

The first seventy-five pages of this very remarkable book are a collection of accredited facts, reported by observers in every department of natural history, in illustration of this agency of Mutual Aid as one of the dominant factors in evolution; the result being to reduce the agency of Malthusian competition to far narrower limits than was imagined, if not by Darwin himself, yet certainly by Huxley and many other Darwinists.

Darwin himself was far too vigorous a thinker, and far too

¹ Pp. viii-ix.

accurate an observer, to have underrated the importance of Mutual Aid as a factor in the evolution of animal life. In the third chapter of Part I of his *Descent of Man* he supplies a long list of facts bearing on this point; the warning each other of danger, the posting of sentinels, the aid rendered by each to all in hunting expeditions—these are some of the most ordinary and universal instances of the social instinct. We have to thank Prince Kropotkin for so largely adding to the number.

Yet it should be noted that, in thus insisting on the innate character of the social instinct, neither Prince Kropotkin nor Darwin was first in the field. Aristotle, the founder of Social Statics, had told us that man was a social or civic animal (*politikon zoön*). When the doctrinal trammels imposed by the Catholic Church, and accepted by most Protestants, were relaxed in the eighteenth century, Leroy's well-known *Lettres sur les Animaux* established a moral kinship between ourselves and the higher vertebrates. But the chief merit of establishing the innate and organic character of altruism, in both animals and man, belongs unquestionably to Gall. I advise those who doubt it to read the chapter on the subject in the fifth volume of his *Fonctions du Cerveau*, a work included by Comte, as also are Leroy's *Lettres*, in the Positivist Library.¹ They may sweep away, if they choose, the whole scaffolding of Gall's hazardous hypothesis as to the attribution of this instinct to this or that convolution of the brain. No one who looks at that hypothesis by the light of researches on brain functions made during the last half-century can regard it as proved; most will think it disproved. I prefer, for my own part, to regard it as a convenient mode of emphasizing the conviction, for which evidence of other kinds abounds, that altruistic feeling is rooted in the organic structure of man and of the higher animals; possibly of all animals. How it came there is a question which may, or may not, be answerable. Infinitely more important is the question, *Is it there?* On the answer to that question depends the possibility of a rule of life which shall survive every onslaught of theological and anti-theological controversy, and which shall govern man as long as man's life lasts. Sentiment, indeed, even the purest and noblest, is not morality. Standing alone, it may lead, as it often has led, to utter moral collapse. Nevertheless, it remains for ever true that Love is the Principle.

¹ For a full account of this Library see chapter on "The Positivist Library" in Frederic Harrison's *Among My Books*. (Macmillan & Co.; 1912.)—ED.

CHAPTER III

SOCIOLOGY

I

THE SCIENCE OF SOCIOLOGY

INTRODUCTORY

I PROPOSE in this and succeeding papers to give the substance of the fourth volume of the *Philosophie Positive*.¹ In the three preceding volumes Comte had dealt with bodies of truth already recognized as sciences, had shown their logical connection, and had arranged them in the order of increasing speciality and complexity. He begins the fourth volume by remarking that the science of social physics, otherwise named sociology,² did not as yet exist and had to be created. There could be no question of presenting it in a complete form. All that could be hoped was to explain the general spirit of the science, and to establish its fundamental principles.

Like other sciences, it has to be studied as a body of abstract truth quite apart from practical applications. Nevertheless, as the practical application in the present case is concerned with nothing less than putting an end to the anarchy of opinion which is dislocating society, it is well to begin by looking at the matter from this standpoint before entering on the strictly scientific inquiry.

In a healthy state of the political organism order and progress go together. They are as intimately associated as organism and life in an animal. But by an anomaly peculiar to modern times they have been dissociated and brought into antagonism. This is so throughout the West, but more especially in France. For three centuries systematic onslaughts have been made on the old framework of society. On what principles it is to be replaced no one is aware. Assailants and defenders alike strive to rebuild with old materials, borrowing ideas of order from the mediæval fabric, ideas

¹ Excluding, however, the last two lectures of this volume, on Social Statics and Social Dynamics.—ED.

² Comte introduced the term "sociology" in the forty-seventh lecture of vol. iv, instead of his previous expression "social physics."—ED.

of progress from the negative philosophy which began with Protestantism and culminated in the French Revolution. But it is time to look more closely at the two antagonistic systems.

Our debt to the theological system, under which the formation and early growth of society took place, is immense. But everything indicates its decline, and all efforts to restore it do but renew men's ardour for its entire destruction. The first test of a sound political doctrine is to be consistent with itself when developed and applied. How far does theological polity satisfy this condition? Obviously the whole course of modern civilization—art, industry, science—is avowedly alien to it; and yet no reactionary statesman, not even Bonaparte, has dreamt of trying to suppress these things. Thinkers like de Maistre, who aimed at restoring the papacy to its old supremacy, based its claims on purely human grounds, leaving divine right wholly on one side. See again how completely the retrograde school throws over the most vital of its principles, the independence of the spiritual power. Not merely in Protestant but in Catholic countries the Church is content to remain subject to the national government. How could it be otherwise? The first condition of an independent Church of Christendom would be that the sects should reunite. And even if this were possible, the State governments would take very good care that control of Church matters should not pass from their hands. The Holy Alliance formed after 1815 chose for its chief not the Pope, but the Czar. Again, not to speak of the internal dissensions in the retrograde camp between the Catholic and the feudal element, between the nobility and the monarchy, we find the retrogrades using revolutionary language when it suits them. They claim freedom for Irish or for Poles while rigorously suppressing Protestants in Spain and Austria.

Turning to the revolutionary school, we have to begin, as in the case of its rival, by recognizing its necessity. But for its exertions the positive school could never have arisen, or even have been thought of. Our mental powers are far too feeble to conceive of a social state wholly diverse from that in which we live. Catholicism had to be in great part destroyed before the conception of a non-Catholic society could be presented to the imagination; just as it was impossible even for so strong a man as Aristotle to suppose a society without slavery. Therefore the rise and progress of the revolutionary doctrine was inevitable. Each of its principles is, in fact, an embodiment of the spontaneous process of destruction in a definite formula. Unfortunately, these formulas, instead of being

regarded as temporary and transient, came to be considered as absolute truths, and as such have become distinctively obstructive to progress. We may regret this, but there was no help for it. Revolutionary ardour would never have risen to the needful level had not faith in its principles been overwhelmingly strong. Still, we have to face the fact that the revolutionary doctrine no less than the theological has become at the present time hostile to the establishment of the new order which lies before us in the future.

Let us look more in detail at the dogmas of this school. Its first and most fundamental principle is the right of private judgment, with which, of course, freedom of the press, freedom of speaking and teaching, and other liberties of the kind are connected. Note in passing that the retrogrades, no less than their opponents, assert this principle. It arose spontaneously in the course of the destructive movement, and has now come to be regarded as absolutely sound. We may at once admit that without it the positive philosophy could not have arisen. And yet this so-called truth turns out, when tested, to be quite untenable. If there is to be any science of social phenomena, it must follow the way of all other sciences—*i.e.*, when a law of nature is discovered it is definitely accepted, and not perpetually churned about as though for all time to come it were to remain an open question. The leading truths of science are not open questions. The mass of men accept them on trust from those whose competence is recognized.

Equality, another principle of revolutionary philosophy, must be judged in the same way. Needful as a protest against feudalism, it impedes reorganization when regarded as an abstract and absolute truth. In point of fact, men are born with vast inequalities, which the progress of civilization tends not to level, but to accentuate. Take again a third doctrine of this school, the sovereignty of the people. As a solvent of the old social fabric it was most effective. But for purposes of rebuilding it is worse than useless. To suppose that the better qualified are to remain in perpetual subjection to the unqualified is an absurdity. The doctrine of national independence has been overstrained in the same way. The papacy has lost its old power of uniting nations; but in some way or other it will remain desirable for Europe to retain some control over her constituent elements. And finally we have to apply to the revolutionary doctrine the test which proved fatal to its rival. Is it consistent with itself? Obviously it is not. In the first place, this so-called doctrine of progress has often been shamelessly retrograde, as when it sought under Rousseau's guidance to revert to a so-called state

of nature in which art, industry, and science would be needless excrescences. The tragic fate of Lavoisier is a startling example. Again, in defending its theories it has invested them with a sort of religious sanction borrowed from the theological system. It has set up an attenuated Christianity as a substitute for Catholicism, insisting on the need for some theological creed. While protesting against feudalism, it has given a new impulse to the military spirit, and has justified attacks on weaker civilizations on the specious plea of helping their advancement.

Thus the revolutionary and the retrograde school are both alike open to the charge of inconsistency. Their incessant antagonism and the alternate victory of each, neither being able to crush its rival, has resulted in the rise of a third party, which puts forward claims to reconcile and amalgamate them; the party which calls itself conservative, and which aims at imitation of the English constitution—a system adapted to English history and politics, but wholly unadapted to other Western countries. The oscillation of those parties has come to be regarded as normal and inevitable. On only one point are they agreed: each and all of them treat with indifference or hostility any attempt to seek for fixed scientific principles on which political action may be securely based. Such principles can only be discovered by the few who have qualified themselves for the search. To determine the value of a social institution is an extremely arduous and delicate task. For against the best of them, or in support of the worst, there is always much to be urged; and it is no light or easy matter, it needs the most instructed and the most comprehensive judgment, to strike the balance of approval or rejection. Meantime, as everyone thinks himself qualified to judge, the crop of extravagant propositions offered for acceptance increases daily. So far these aberrations have been in the main confined to public life; private and domestic morals have been left untouched. But this is only a question of time. Divorce, free-love, and other protests against traditions hitherto held sacred will speedily be forced forward. In public life the worst evil is the resort to corruption of every kind, from the coarsest to the most insidious, as the leverage of government. Exorbitant multiplication of functionaries is one form; another is the shameless permission to the privileged few to hold what opinions they please, while free speech is rigidly repressed among the masses. Here the Jesuits have set an evil example, which the politicians of every school have not been slow to follow.

Needless to say that scientific research into social phenomena

has been disregarded and discouraged, It is sought to remodel institutions without any care for the principles on which they are to be founded. Work that belongs to the spiritual sphere has been engrossed by the temporal. Governments are striving, and with miserable failure, to fill the office of thinkers. The result is that the greatest problems are entrusted to men utterly unfit for the task; lawyers and literary men, whose sole faculty is that of stringing sentences together cleverly, having neither the training nor the intelligence qualifying them to distinguish truth from error. Never was there a time in the world's history when mediocrity had such chances of success.

Thoughts like the foregoing might well inspire despair, were it not for the principles laid down in the previous volumes of this treatise.¹ But as, in other and simpler domains of thought, the fictions of theology and the cloudy abstractions of metaphysics have been replaced by the clear and definite conceptions of positive science, so it will be here, and that speedily. The separate elements of the positive solution exist; they have only to be united in a systematic whole. Social phenomena form no exception to the other phenomena of nature, except that, being more complex, their reduction to positive laws has been longer delayed. But in them, as in all others, the adoption of the positive method is certain, whether or not the particular application of the method here presented be the right one.

Remark first that this method fulfils the canon of consistency. Not merely does it take into account all aspects of existing civilization, but it embraces all transformations in the past history of man—a condition in which theological and revolutionary thinkers utterly fail. The evolution of Humanity takes its place as part of the general system of nature. The method is the same throughout. There is no break.

Teaching of this kind will find points of contact with the most opposite schools, rendering scrupulous justice to each of them. Its guarantee for Order is beyond dispute. Science has no other object than to establish order in the region of intellect, and on this all other kinds of order ultimately depend. Positive polity will control the revolutionary spirit, because, by showing the true services which the revolution has rendered, it can assign their proper limits. All that is useful in the revolution it will assimilate. Again, many social questions, scientifically examined, will be seen to turn not on

¹ *I.e.*, vols. i-iii of the *Phil. Pos.*—ED.

government, but on public opinion and improved morality. So viewed, they cease to be material for political faction. Further, the positive spirit has no pet theory of government to be pressed at all costs irrespective of time or place, as when it was sought to civilize Tahiti by the Protestant religion and a parliament. In some difficulties it will be frankly recognized that a radical cure is impossible, and that wise resignation is the proper course. A final security for order is that the positive method tends to eliminate incapacity. It can hardly be handled effectively by those who have paid no attention to the simpler phenomena of physics or biology.

As to guarantees of Progress under the positive system, they are obvious and certain. It is from the growth of scientific discovery that our distinct conception of progress has arisen. Christianity no doubt brought with it the idea of an advance upon the old dispensation. But its political type was fixed, and precluded farther advance. Progress in the revolutionary philosophy is mainly limited to the removal of restrictions—a purely negative result. And even here it is to the positive rather than to the metaphysical spirit that the elimination of theological institutions is really due.

By far the most important department of progress is that which relates to the betterment of the mass of the population, the most urgent and arduous problem of our time. And none will so conclusively prove the superiority of the positive school. The revolutionary mode of handling it is either to make it easier for men of exceptional power to rise from the ranks, leaving those behind them just where they were, or else to indulge in mischievous dreams of abolishing private property and of equalizing all human lots. Scientific study of the laws that govern the social fabric will reassure the friends of order against subversive schemes, will define the limits of temporal and spiritual powers in effecting social improvements, and will interpose an independent moral authority between workmen and their chiefs capable of arbitrating and of pacifying their strife.

Such being the vast field of public utility opened out by the reduction of social phenomena to scientific laws, it might be thought that students of the other positive sciences would hasten to occupy it. But a serious obstacle to this course is the absorption of these men in their own specialities, causing them to shrink from all that is comprehensive and general. And yet, so long as this unreasonable clinging to speciality continues, the two rival schools whose incompetence we have been discussing will retain their ascendancy.

The very process of applying scientific method to the facts of social life implies the subordination of the special to the general point of view. What is needed is that the various aspects of human life shall be looked at in their relation to one another, in order that due proportion be observed between the purposes to be aimed at. Unless, and until, the positive school takes this attitude, the theological and revolutionary schools, which in their own erroneous way strive to deal with life as a whole, will retain their influence, and the disastrous oscillation between them will not cease.

COMTE'S PREDECESSORS

There are two reasons for the imperfect condition of sociological science. One of these was pointed out in a previous paper.¹ It is more complicated than physics or biology; and biology can hardly be said to have been constituted as a distinct science till the beginning of the nineteenth century. But there is another reason. The fundamental problem of sociology is to discover the laws of social evolution. It follows that the phenomena of evolution must first present themselves to the student on a sufficiently extended scale. Aristotle had only Greek history before him. But to this the modern observer adds the facts supplied by the Roman Empire, the mediæval Church, and the five centuries of modern history culminating in the Revolution.

It is obvious that the greatest thinkers of antiquity had no conception whatever of a progressive growth of society in accordance with natural laws. Their tendency was to credit the legislator with unlimited powers of moulding society into any shape he pleased. Plato offers a very striking type of this state of mind. He put forward an ideal of a society² which was to be governed by philosophers, and in which the two fundamental institutions of the family and property were to be suppressed; on the whole, perhaps, the most notable example of systematic wrong thinking ever given to the world. Aristotle's refutation³ of these mischievous delusions may be read with profit. It is penetrated through and through with the positive spirit; that is to say, with the sense of reality and utility, of organic construction, and of human sympathy.

By refuting Plato, Aristotle had laid the foundation of what Comte calls Social Statics, the science which answers to the study of equilibrium in mechanics. In this branch of sociology we study

¹ That on "The Ladder of the Sciences," in Part II.

² In the *Republic*.—ED.

³ In his *Politics*.—ED.

the permanent conditions which make society, in whatever time and place, possible. Social Dynamics, on the other hand, which regards society as an organism having its own special laws of growth and development, was as foreign to Aristotle's mind as to other thinkers of his time. The greater part of his treatise, though full of striking observations and thoughts, is occupied with the discussion of different forms of constitution and government. In all these constitutions slave labour was taken for granted. Aristotle failed to foresee the disappearance of slavery. St. Paul and his fellow-workers, it may be said in passing, were equally blind to it three centuries afterwards.

The first event in history which implanted in the European mind the conception of progress was the establishment of the Christian Church. Catholic teaching insisted on the difference between the Old and the New Dispensations, between the Law and the Gospel. The new did not imply the condemnation of the old; it grew out of it, was founded upon it, went beyond it. The old was fitted to its time, but when the time was past it gave way to something better. It is impossible to exaggerate the importance of this conception. Those who grew up under teaching of this kind were far better prepared to grasp the notion of laws of development in human affairs than were the pupils of Greek philosophical schools. In the thirteenth century, the culminating period of mediæval thought, a yet further step was taken. Abbot Joachim boldly prophesied that, as the reign of God the Father was followed by the reign of God the Son, so this in turn would be succeeded by the reign of the Holy Spirit. Joachim found many listeners. But the decline of Catholicism had begun before this audacious thought could work its way to the general acceptance of Christendom. The Protestant sects never rose to this height.

But, though Christianity made it in this way easier for men to form the conception of a progressive society, it raised new obstacles of its own. It set up an absolute type of perfection beyond which there was to be no advance. Renan closes his celebrated *Life of Jesus* with the words, *Jésus ne sera pas surpassé*. If Renan could say this, what has been the effect of Christian dogma on those who accepted it unreservedly? The Catholic Church prepared the way for the idea of progress; Catholic doctrine has thwarted it.

In the fourteenth and fifteenth centuries the decline of the Church as a social and political power went on rapidly; and meantime there came the Renaissance of art and science. The first effect of this was to impress students of Homer, Virgil, and Cicero with the

immense superiority of ancient writers over modern. Men debate even now, and some may continue, perhaps, to debate till doomsday, whether or no Shakespeare and Dante are greater than Æschylus or Homer. On the whole, the Renaissance of literature and the classical system of education that followed from it have done more to discourage the notion of progress than to promote it. But the Renaissance of science had a wholly different result. Here the handing on of the torch from Greeks to Arabs, and from these to the schools of Western Europe, had consequences that no one could possibly mistake.

To take an instance. The later Greeks laid the foundations of some sort of algebra. In the hands of Mohammed ben Musa and other Arabians it became a distinct branch of science. Leonardo of Pisa and other Italians went on with the work from the thirteenth to the sixteenth century. The great Frenchman Vieta, followed by our own countryman Harriott, carried it still further, up to the time when the creative genius of Descartes, by using algebra as an instrument for generalizing the problems of geometry, gave it an entirely new meaning and purpose. So again in mechanics, Galileo began where Archimedes left off. In astronomy the same thing is equally obvious. The Arabs went on studying Ptolemy's version of Hipparchus from the ninth to the thirteenth century; and, being better instrument makers than the Greeks, made better observations of the stars and planets. Copernicus and Kepler inherited their results, with consequences that need not be repeated here. Thus the first clear conception of the progress of Humanity is due to the scientific spirit. It was a great mathematician, Pascal, who first defined it clearly in his celebrated aphorism: The long succession of the generations of mankind may be looked at as a single man, ever living and ever learning. Francis Bacon had said something of this kind before; and if Bacon had devoted more time to exact scientific study and less to worldly ambition, he might have said it more effectively and with less disdain for predecessors who were in many respects his superiors.

But the establishment of the fact of progress is a very different thing from the establishment of the science of Sociology. Progress, taken by itself and without reference to the order of which it is the development, is always a misleading, often a very mischievous, word; all the more that it can be used with so very slight an exertion of the reasoning faculties. Men knew that the planets moved many centuries before it was known how they moved. It has been obvious since the beginning of the world that plants and

animals grow; but the scientific study of their growth is a very recent matter, and is still extremely imperfect. In the science of living bodies there are two divisions which, for the purposes of study, have to be examined in the first place separately, though afterwards to be recombined; the study of structure, the study of function: often spoken of as anatomy and physiology. And as with the life of the individual, so with the life of the social organism, we have to study separately social structure and social growth: order and progress. And in the second case, as in the first, those have to be looked at in connection with their environment. For action and reaction between organism and environment, tending towards adjustment but never reaching it, is that which constitutes life, whether individual or social.

The conception of progress as the development of order, of the evolution of Humanity in accordance with definite and assignable laws, is the work of the nineteenth century. In the main it is traceable to Comte's great discovery of 1822, commonly spoken of as the law of the three stages.¹ But no discovery was ever made without many anticipations of it by previous thinkers. And of all men since Aristotle, Comte was the readiest to acknowledge forecasts of this kind.

One of the first to apply scientific method to social phenomena was Montesquieu, in his great work, *The Spirit of Laws*, published in 1748. That social and political arrangements were subject to the control of natural laws Montesquieu saw clearly. He was well versed in the science of his time; and, indeed, he was the first to make a satisfactory attempt to define what a natural law was.² "Laws," he begins by saying, "are necessary relations springing from the nature of things." This is vague, but he goes on to explain: "These rules by which the world is governed consist in constancy of relation. When two moving bodies are brought into contact, motion is received, increased, diminished, lost, in accordance with relations of mass and velocity. There is uniformity in every difference. There is constancy in every change." Behind the laws that men make for themselves, he goes on to say, there lie the laws that they are powerless to alter—the laws of their nature and their environment.

¹ Formulated by Comte in 1822 as follows:—"From the nature of the human intellect each branch of knowledge, in its development, is necessarily obliged to pass through three different theoretical states: the theological or fictitious state; the metaphysical or abstract state; lastly, the scientific or positive state."—ED.

² See Laffitte's *Grands Types de l'Humanité*, vol. ii, pp. 292-93.—ED.

Two years afterwards the great thinker and statesman Turgot, then a very young man, wrote his Second Discourse on the successive advances of the human mind,¹ in which he renewed and expanded Pascal's thought on the continuity of mankind. This discourse contains a very remarkable anticipation of Comte's law of the three stages, to which, however, no attention seems to have been directed till after Comte's death. The explanation of phenomena, first by supernatural agencies animated by human passions, then by abstractions, finally by mathematical laws, is clearly indicated. But no use is made of this thought as the foundation-stone of positive philosophy. Nor was it possible that it should be so regarded. Science for Turgot, as for Montesquieu, meant mathematical and mechanical science. The sciences of chemistry and biology were not as yet thought of as distinct branches of knowledge. Without biology there can be no true sociology. Apart from the conception of the series of the sciences following in the order of their increasing complexity, the law of the three stages remained barren of social result. How these two abstract conceptions were kindled by Comte's genius must be stated afterwards. The same remark may be made of Hume's remarkable essay on the "Natural History of Religion."²

Another great thinker must be numbered among the predecessors of Comte. In 1784 Kant wrote his *Conception of Universal History from the Point of View of World-Citizenship*. In this striking essay of twenty pages Kant attempts to show how the antagonisms of individuals and of societies are all working by a process of natural development towards final harmony; and, further, that the clear perception of the tendency towards such harmony will be itself one of the motor forces making for the ultimate result.³

Finally, we come to Condorcet, of whom Comte spoke always as his spiritual father. So much has been said of him in this *Review*⁴ that a very few words will here suffice. In Condorcet's essay on the *Progress of the Human Mind*⁵ we have the thoughts of Turgot and of Kant illumined by the flame of revolutionary enthusiasm which the certainty of death at the hands of unworthy

¹ *Deuxième Discours sur les progrès successifs de l'esprit humain*, delivered at the Sorbonne in 1750.—ED.

² 1757

³ See close of paper on "The Centenary of Kant" in Part V.—ED.

⁴ See the *Positivist Review* of November and December, 1893, and August, 1894.—ED.

⁵ *Esquisse d'un Tableau historique des progrès de l'esprit humain*, 1793.—ED.

colleagues and the wreck of his highest hopes for the immediate future were unable to quench. Of the ten chapters of his work the title of the ninth is worth quoting as indicating how inseparable in his mind were the intellectual and social movements: "From Descartes to the Establishment of the French Republic." That he was blinded by the ardour of his imperfect creed to the services rendered by the mediæval Church, and that he lived before Gall had incorporated the study of the higher functions of the brain into biological science, involved shortcomings in his work which it was one of the first tasks of Comte to rectify.

One word as to the economists of the eighteenth century, who have been sometimes classed among the first founders of sociology. That they played an important part in the movement of their time by removing the fetters of mediæval industry is certain. But their claim to create a distinct science of wealth apart from the study of society as a whole has done more to retard sociological science than to promote it. From this reproach, however, Adam Smith and Hume must be held exempt, for no such claim as this is to be found in their writings.

METHODS OF RESEARCH

That Sociology is in a far less perfect state than Physics or Biology is due partly to the complexity of its phenomena, partly to their connection with human interests and passions. But we see in its growth just the same stages as in other sciences: a theological and a metaphysical stage, and at last a dawning stage of positivism. Here, as in other sciences, we find the positive stage distinguished from the two former—first, by building on facts rather than on fancies; secondly, by looking at principles not as absolute dogmas, but in relation to their surroundings; thirdly, by the recognition of natural laws governing any artificial arrangements which man may make. Many politicians formerly, as some even now, evolved from their own minds what they thought was the best constitution; they maintained it to be the best, not merely for this or that country now, but for all countries in all times; and they believed it to be a panacea for all human ills. The constitution-mongering that went on during the French Revolution is the completest type of this state of mind. There is plenty of it still; but wise men are beginning to reckon it with the dreams of the alchemists. Adherence to fact, relativity of principle, recognition of natural laws controlling though not dispensing with human intervention—these are the features of sociology as of other sciences; and they are all summed

up in the word which is the touchstone of positive science: prevision.

Guided by the great principle of the consensus of all the parts of an organism, the scientific observer looking at a single part is often able to tell what the other parts will be like before he sees them. A thigh-bone was brought to Owen¹ from New Zealand; he saw it to be the bone of a bird of a particular class, and constructed the rest of the skeleton. Subsequent discovery of other bones showed his prediction to be very nearly true. In India, the varied races of which form an epitome of human progress, the discovery of polyandry in a mountain tribe will at once be recognized as compatible with many social virtues, and the tribe will be dealt with by the magistrate accordingly. Here, again, we have prevision of the whole from a part. A far more striking instance of scientific prediction in sociology is offered in M. Laffitte's striking analysis of Chinese civilization a quarter of a century ago,² when the Tai-ping rebellion seemed to threaten it with extinction, and Anglo-Indians were looking forward to the seizure of new provinces. Careful study of Chinese history, ancient and recent, under the guidance of Comte's philosophy of history, convinced M. Laffitte that these symptoms of dissolution were illusory, and that China would hold her own; although a more effective apprenticeship in the military art would be necessary. Subsequent events, the latest not excluded, have verified this prediction. But it is not to be supposed that all sociological forecasts will be verified, any more than the forecasts of the wisest physicians. It is enough that they are likelier to be true than those of untrained observers.

Everyone thinks he can observe social and political facts. In some sciences a man will admit that observation is difficult, because the facts are far away from him. He knows that he must have an observatory, well fitted with telescopes and other apparatus, in order to be an astronomer. He cannot be a chemist if he has no laboratory. As for biology, he has a notion that it is the business of doctors, and that he had better leave it alone. But, he will say, "surely in the common every-day life of man everyone can carry on observations for himself. We want no instruments, no scientific apparatus here." Now, the first step in social science is to recognize that this is a delusion. Scientific observation of social facts is not less but more difficult than observation of the stars.

¹ Richard Owen, the biologist.—ED.

² See *A General View of Chinese Civilization and of the Relations of the West with China*. Translated by J. C. Hall. (Trübner and Co.; 1887.)—ED.

Science is nothing but common sense systematized and carried a few steps farther. The countryman who chalks his door to keep count of his sales of beer or bread is a rudimentary mathematician. The senior wrangler deals with the same facts, but in a larger and more systematic way. In out-of-the-way places you will still find people who will tell you the time of day or night by looking at the sun or at Charles's Wain. This is rudimentary astronomy, and it is a pity that the pedantry of modern teaching should have driven it out of children's heads. Albertus Magnus, one of the founders of chemistry, got much of his knowledge by travelling about among the miners of South Germany. As for a knowledge of living things, cattle-breeders, gardeners, farmers, village herbalists have a large stock of it, very real as far as it goes, though often mixed up with prejudices and fancies. Such knowledge is the starting-point of science; but it is not science. And why? Because it is unorganized knowledge; because it contains no test for distinguishing true from false; because it supplies no theory by which to link isolated observations into a connected whole. The average Englishman hates the very word *theory*. Nevertheless, without theory there is no science, either in astronomy or in sociology. To observe by the light of a theory is the distinctive note of scientific observation.

The theory may be very erroneous; yet the observations made by the light of it may be in the truest sense scientific; they may enable us to predict. The Ptolemaic theory of the solar system has disappeared. But the long series of Greek and Arabic observations made under its guidance were thoroughly scientific; the accuracy with which eclipses or the place of any planet could be foretold in those days was very considerable. So with old theories before Harvey's time as to the functions of the lungs and heart. They were wrong; but they held together a mass of useful observations which otherwise would have been scattered and lost. All men observe; as indeed do all the higher animals. But to pass from common sense to science, to add new observations to the old, and connect them into a whole, we need a theory. It may be a mere supernatural myth, or it may be a mixture of truth and error; but there it must be. Our observations without it will be a mere heap of bricks and stones. No house will be built. It will be said that observation is warped in theory. Quite true. But it is like the saying that we so often hear in these days: All government is extremely liable to abuse. True; but when the inference is drawn, Let us dispense with government, we demur. The two cases are

analogous. Without government there is no society; without theory there can be no science.

Scientific observation of social facts is therefore not easier, but harder, than scientific observation of astronomical facts, because there is greater difficulty in constructing a rational theory by which to observe. The notion that our close contact with social and political facts makes them easier to observe is as far from the truth as possible. It is just this closeness which creates the difficulty. *On n'observe bien*, says Comte, *qu'en se plaçant en dehors*. We must get outside the facts if we want to look at them. If we were on the moon's surface, we should not see her to be round. That the earth is round we know, but only by careful reasoning. It is just because we are surrounded by the facts of our social and political life that most of us fail to observe them unless we have a clue to the labyrinth in the shape of a good working hypothesis.

What has happened in the present century is a striking proof of this. Between 1820 and 1830 Comte founded the science of Sociology.¹ He showed the analogy between social organisms and individual organisms; he proved that the former, like the latter, followed definite processes of growth. A host of workers has entered the field which he thus opened. Observations on folk-lore, on the growth of institutions, on the varied forms and history of religions, which had hitherto been scattered through books of travel or gathered into collections of anecdotes, have now a wholly new interest for us as verifications, corrections, or enlargements of Comte's laws of social structure and growth.

Let us pass from the method of direct observation to the method of experiment, which has done such great things in physics and chemistry, and which has been useful in biology, though to a more limited extent. In the higher animals violent interference with an important organ leads in many cases, though not in all, to such general disturbance of the whole as renders resort to this method equally unscientific and inhumane. In Sociology no such thing as experiment is possible, if we mean by it artificial interference with a given social structure for the sake of watching the result. But, in the science of Life, disease and the cure of disease, by lowering or exalting the functions of an organ, often throw new light on its

¹ See *Early Essays on Social Philosophy*, translated from the French of Auguste Comte by H. D. Hutton. A new edition with additional notes, and with an introduction by Frederic Harrison. (George Routledge and Sons; 1911.)—ED.

normal condition. In disease the laws of life are not abrogated; it is only that particular functions go on with greater or less intensity. The study of these modifications is the branch of science called Pathology. There is a pathology of social as well as of individual life. We have but too many examples of social diseases and malformations, crowded cities, crime, pauperism, insurrection, oppression of uncivilized races, and the like, and but too many ill-advised attempts to cure them, to be in want of material for studies of this kind. Pathology of individuals is, by common consent, entrusted to those who have passed through some qualifying discipline. Is it reasonable to suppose that the entire absence of analogous discipline in the case of modern journalism can result in wise counsel?

The third method of research is that known in biology as the method of comparison. Like that which we have just considered, it is, of course, only a special mode of observation, but one sufficiently distinct to be examined separately. First, the different social races may be compared. If we could see the earth at the time when man was still struggling for predominance with other animal races, we should learn more from this comparison than we can now, when, through the lapse of ages, man's superiority has become so vast. Yet even now much is to be gained from the study of family life among the higher vertebrates, carried on in the philosophical spirit which Georges Leroy, the friend of Hume, showed in his *Letters on Animals*, and which Romanes and others have continued in our own day.

A far richer and more available field for the use of this method is the study of human societies which, from racial or from physical causes, have been retarded in their growth, and which, to some extent, reproduce for us the condition of prehistoric man. This is the field to which Mr. Spencer, in the sociological part of his great treatise, has given somewhat too exclusive attention. The mass of material which, with the help of colleagues, he has gathered together in his *Descriptive Sociology* will remain of great value for future students. Unfortunately, Mr. Spencer has missed the significance of what is commonly called "History"—the evolution of Western Europe during the last twenty-five centuries. In the science of life the first business has been to gain a clear, though not complete, conception of man, as the highest and best known to us of animals, and afterwards to throw light on the details of his organization by comparing them with analogous structures in the lower races. From Aristotle to Bichat, Hunter, and Lamarck, man has been the

principal object in view. The study of the lower vertebrates and of invertebrates, fruitful as it has been, was held subordinate to this. Had the study of life begun with protozoa and protophyta, very little progress would have been made.

It is the same in Sociology. Condorcet, in 1794, struck into the right path, however imperfectly he followed it, by concentrating attention on the highest type of social evolution, that followed by Greece and Rome, by mediæval and modern Europe, during the last twenty-five centuries. Here alone can the laws of human progress be adequately studied; for only here, and here only in recent times, has progress been carried sufficiently far to make its existence undeniable. The laws of social cohesion and social movement once established in this highest division of Humanity, light is thrown at once on the more retarded societies who form the majority in our planet. We are enabled to deal with them rationally and humanely. We become convinced that attempts to force our creeds or our drugs upon them at the point of the bayonet are as grotesque as they are cruel. The action of higher upon lower civilizations, when directed by intelligible and humane principles, will lead in the future to great results.

But the first condition is that the laws which have guided the growth of Western civilization shall become known to us. The rest will follow. Till then all attempts to discover the laws of social development in savage races, or to discover how much of their condition is due to climate and how much to organic differences, are apt to lead to mere accumulations of antiquarian knowledge loosely held together by some arbitrary scheme of evolution. To begin the study of sociology with Patagonians, Esquimaux, or Australian negritos, rather than with the societies of Western Europe, is to invert the rational order of study. In all sciences we should begin with what is known best, and then pass to the less known. In the sciences of life and of society it is all-important to gain at once some grasp of the whole organism, and of the consensus of its parts; and this can be appreciated better in the highest types than in lower organisms, like polyps in zoology, or like the nomads of the desert or the tribes of the Congo in sociology. In these the relation of the parts to the whole is far less easy to discern.

It will be asked, Are we not in this way narrowing the field for comparison too closely? Concentrating our attention on one nation, or one group of nations, with what others are we to compare them? The question is important, and the answer will lead us far. Western Europe, as it now stands, contains, it is true, not a very large

number of distinct nations. If we include the populations of North and South America and the new nations now forming in Australasia and South Africa, the field is somewhat wider. But these nations in their present state form but a fractional part of the material to be considered. The present condition grows out of that immediately preceding it, and that again out of the generations that went before, and so onwards through the records of the past as far as they can be traced. In the twenty-five centuries that have passed since the times of Thales and the Persian War there have passed some five and seventy generations. These may be regarded for the purpose before us as so many distinct social organisms, having degrees of similitude with each other which admit of being assigned with great precision. Examination of the points which the first in the series has in common with the last, or of those in which they differ, supplemented by minuter examination of the likenesses and unlikenesses of any one of them to that which precedes or follows it, gives scope for the method of comparison far exceeding anything offered in natural history.

But there is yet more than this to be thought of. Each link in this long series not merely follows the link before it, but grows out of it. The present, said Leibnitz, is pregnant with the future. So it has always been, and will always be. In organic evolution the succession of life on the earth is doubtfully traced through the fragmentary remains of geologic records. Whether the process of succession be the growth of organs in response to the call made upon them, as Lamarck thought, or, as Weismann believes, the modification of germinal plasma in obedience to competitive struggle, or whether both these factors operate in combination with others not yet dreamt of—these things may long remain doubtful. But be the heredity of species as obscure as it may, of sociological heredity there can be no doubt whatever. Evidence accessible to everyone shows clearly that the combined influence of previous generations is an operative force of great and increasing potency acting on each new member of the series as it awakes to life. Thus it is that out of the method of comparison applicable to all individual and social organisms there arises, in the case of man, the new method of filiation. By its help analysis of the past may enable us to foresee the future; not in minute detail, but enough to be of great service in directing our political and social action.

RELATION TO OTHER SCIENCES

In the last paper it was pointed out that the principal field of

study in this science lay in European history during the last twenty-five centuries, and that the principal method of study was the method of Filiation—that is to say, observation of the way in which each generation in turn proceeded from the foregoing and gave birth to the following. The accumulating results of generations constitute a force to which, as the years move on, we are increasingly subject. The living are more and more under the dominion of the dead. It is needful to know the laws under which this dominion is exercised.

This to some seems a slavish doctrine, as though obedience to law were destined at last to crush out individual freedom. But which is the more free—the sailor of old times ignoring, because ignorant of, the laws of scientific navigation, now hugging the shore, now yielding himself to the mercy of the wind and waves; or the sailor of our own time conforming to mathematical and astronomical science as set forth in his *Nautical Almanac*, knowing how to find his place at sea, what at every point he passes is the variation of his compass, what the strength and velocity of each oceanic current, what the probable path of the approaching cyclone? Neither in navigation nor in any other department of man's life are law and freedom opposed. They invariably go together. It is urgent to know the laws of our social existence, that each of us may guide his own life accordingly and help as a citizen to guide the lives of his fellows.

Although the continuous life of Western Europe, Græco-Roman, mediæval, and modern, forms the principal field of sociological inquiry, it is, of course, not the only field. The study of prehistoric man, as imperfectly gathered from relics that have survived glacial periods, or from supposed similitude with the life of primitive tribes as now seen in India, Africa, America, or Polynesia, will yield subsidiary aid. Materials of greater value are supplied by Indian, Peruvian, Egyptian, and Assyrian theocracies; and again by the organized fetichism of China. But the principal outlines must be first drawn out, not, indeed, with absolute fixity, but with that probable and proximate approach to truth which in most of the affairs of life is all we have to work on, and which suffices for practical action. For this we must rely mainly on the evolution of Western Europe and its colonial outgrowths, where the phenomena can be studied in their completest form and with the greatest accuracy. Once having done this, the time comes for throwing fuller light on the details and for confirming or modifying the conclusions reached by study of societies in which, for various reasons, development has been retarded. The almost complete omission of

the study of historical continuity from Mr. Spencer's remarkable work detracts from its claim to be called a Synthetic Philosophy.

The expediency of studying the complete type first, and afterwards the types that are less complete, finds its parallel in the history of biology. Like all other sciences, biology grew out of man's practical needs—the need in this case being the cure of wounds and diseases and the discovery of herbs and minerals that were useful for the purpose. Gradually the structure of man came to be systematically studied. Aristotle, the Alexandrian anatomists, Galen, the Italians of the fifteenth century, and the great Harvey carried on the work with increasing success. All of them, and Harvey especially, gained all the light they could from study of the lower animals, without, however, losing sight of their main purpose. Hunter, Lamarck, and Bichat worked in the same spirit. Bichat, the greatest of them all, worked exclusively on human structure, finding ample scope there for his amazing powers of comparison and co-ordination, and having no time in his short life for other work.

For all of them man was the central goal of study, the standard with which the series of organisms of gradually diminishing complexity has been compared. And as it has been with the science of life, so it must be with the history of human civilization. The highest and fullest type must be the central object of study; unless sociology is to degenerate into collections of folk-lore, interesting as a pastime, but without value for the serious guidance of human life.

I pass now to the relation of Sociology with the other natural sciences. Until it has been brought into line with these, disputes will continue to be raised as to whether it can be looked upon as a science at all. Obviously the history of Western Europe, of which we have been speaking as the central field of work, is not in itself a science. The word *science* is a misnomer when applied to a mere record of events. Diaries of the weather, records of the symptoms of a sick man, biographies of Cæsar or Charlemagne, histories of the Punic War or of the Norman Conquest—all these things are useful and indispensable; but they are not science. Science deals with laws of nature. Its business is to find unity in plurality; the common feature in a mass of details otherwise diverse; the mode in which one phenomenon depends upon another, so that, one of the two being observed, the other may be predicted without observation. A law of nature is a familiar term; it is strange how few, even among philosophic thinkers, have tried to explain exactly what it means. I believe that the first complete

and coherent exposition of it is that given by M. Laffitte in the fifth of his lectures on Comte's *First Philosophy*.¹ I search the *Synthetic Philosophy* of Mr. Spencer for any equivalent explanation in vain. Nor is one to be found in the older philosophic writers, from Aristotle to Kant. M. Laffitte, here as elsewhere rendering explicit what in Comte's writings had been implicit, and therefore not clearly understood, shows the identity of a law of nature with the mathematical conception of an equation. To this I will revert in a subsequent paper.² I speak of it now by way of enforcing the precept so strenuously inculcated by Comte, from the beginning of his career to the end, on the importance of mathematical training for the discussion of social and moral problems. Than a mathematician who remains a mathematician, and nothing more, there exists perhaps at the present day no more useless personage. There was a time for pure algebraists once, but it is past. Nevertheless, it is perhaps from the want of the special discipline that mathematical training gives, more than from any other reason, that the disciples of Comte have, as a body, failed as yet to secure the influence that intrinsically belongs to the Positive school in European thought. The present writer is too painfully conscious of such a defect in his own case not to exhort those who belong to a younger generation to remedy the defect in their own training so far as they may. Once more, there can be no question of reviving Condorcet's dream of applying algebra as an instrument of research to the infinite complexity of social phenomena. It is the logical value of Mathematics that is here in question. It is only in mathematics that the meaning of the words "law of nature" can be precisely apprehended.

So much for the connection of Sociology with the most abstract and general of the sciences. A few words as to its relation, first, with Cosmology—the laws of the inorganic world surrounding us; secondly, with Biology. Under Cosmology are comprehended the sciences known as Astronomy, Physics, and Chemistry. The discoveries of the present century have done much to show the intimate correlation of these sciences; but they have done nothing to disturb the order of succession in which, as Comte showed in 1825, they can be most conveniently presented to those who wish to understand clearly man's position in the world. It is quite true that to a super-human intelligence, placed outside our solar system, its evolution

¹ See Laffitte's *Philosophie Première*, vol. i, pp. 167–96.

² The paper on "Laws of Nature" in Part II.—ED.

many million centuries ago from nebulous matter might present itself as a single physical or mathematical problem. But as our intelligence is human, and not superhuman, we have to study things as best we may with our limited faculties. Our dependence on astronomical conditions has to be looked at quite separately from our dependence on terrestrial conditions. No clear conception of human destiny can be formed without understanding how it is connected with the earth's distance from the sun, with her periods of rotation and revolution, with the inclination of her axis to the plane of her orbit, and other facts belonging to the same branch of science. A moment's thought will show us how all the arrangements of life hang on the calendar. Few are aware of the vast sum of intellectual effort expended on determining the length of the year. Perhaps one in ten thousand of those that cross the sea may know something of the genius and the toil that have gone to the making of the *Nautical Almanac* by which the ship's path is guided day after day.

The bearing on human life of gravitation, electricity, heat, light, chemical affinity, has been examined in this course of Positive education under the head of Biology.¹ Merely noting that these things need again to be called in mind by the sociologist when dealing with such facts as those of climate, or again the facts of human industry, we may pass at once to the direct relation between Biology and Sociology. Far the most important of these points of contact lies in the highest functions of life—the functions of the brain.

In the last of the biographies in the *New Calendar of Great Men*, the life of Gall, there is a reference² to Comte's purpose of combining the points of view of Gall and of Condorcet. Briefly, what this comes to is the necessity for scientific knowledge of human nature before there can be any clear insight into the past or future of mankind. Take a familiar example. Nothing is more common in the controversies of the day, or even in historical writing, than the assumption that all statesmen other than those of the writer's party are actuated by selfish ambitions; that all religious leaders other than those of the writer's faith are scheming hypocrites. Much historical writing in the eighteenth century, even when the writers were such men as Voltaire and Gibbon, is tainted with errors of this kind, springing from false conceptions as to the inherent selfishness of human nature. The *Lives of the Saints* show the opposite

¹ *I.e.*, in ch. xliii of the *Phil. Pos.*—ED.

² P. 644.—ED.

error. Men whose actions are described as springing from a wholly selfish, or a wholly unselfish, source are as imaginary as angels or mermaids. If we read a history in which men are described as living to the age of nine hundred years, our knowledge of man's physical nature tells us that we are reading fables. And so it is when we read the history of a religious movement written on the assumption that all priesthoods (or it may be all but one) are organized impostures, or, again, that all governments are systematically malevolent to their subjects. The course of civilization creates no new instincts; destroys none that existed before it began. All that it can do is to modify—to strengthen some, weaken others, and so make continual approach towards an ideal of harmony that can never be fully reached. Thus, he who would explain—*i.e.*, reduce to law—the course of history must first understand the elementary psychology which man shares with the higher vertebrates. To handle the problems of the history of civilization without knowledge of the elements of which human society is composed is as though a blind man should set himself up as an observer of the stars.

There is another point of view from which it is equally important that the sociologist should be familiar with biological results and methods. He has often to maintain the principles of his science against unreasonable encroachments from biology. The most notable instance of this is the preposterous importance given in the last half-century to racial differences—sometimes real but trifling, sometimes purely imaginary—which has been equally disastrous to historical studies and to practical politics. Events of every kind, from the fall of the Roman Empire to Protestantism, the French Revolution, or the latest Irish quarrel, are accounted for with fatal facility by imaginary organic differences between Roman, Celt, and Teuton. The sociologist may be sceptical of these conclusions, but they can only be dissipated by showing the entire absence, or at least insufficiency, of biological evidence for them. In any case, the problem of distinguishing between what is due to physical heredity and what to sociological filiation is one which the sociologist unversed in biological method will find it impossible to determine.

Such being the relation of Sociology to Mathematics, to Physics, and to Biology, how does it stand with reference to the final science of Ethics—the science of human life and conduct? This is a question not to be answered in a page or an article—hardly even in a volume. But one remark may be made with which this series of papers will close. The study of man consists of two divisions, elementary and final, between which the science of Sociology is interposed. In the

first¹ we study man as the highest of the vertebrates, in bone, muscle, and other organs resembling and not surpassing the rest; in brain superior, but with no instinct, propensity, or faculty which they do not share with him in various degrees. To have established this conclusion is the immortal service rendered by Leroy and Gall. They showed that the instincts which found the family are the same in all. The social affections of friendship, and even of veneration and pity, may be traced far down in the scale. Most of them were capable of founding rudimentary societies; though to one race only could it be given after long prehistoric struggles to establish its mastery over the planet.

To this elementary study of human nature succeeds the final study² of man as the creature of Humanity. Between the elementary knowledge of primitive man and the final knowledge of man's duty, conduct, ideals, hopes, fears, the science of Sociology intervenes, unfolding the gradual course of human destiny under the influence of religion, government, language, war, industry. *Entre l'homme et le monde il faut l'Humanité.*³

II

A SOCIOLOGICAL SOCIETY

ON June 29⁴ a small meeting was held at the rooms of the Statistical Society to consider whether a society should be founded for the scientific study of Sociology. Many schools of thought were represented at the meeting. Professor Geddes, Mr. J. A. Hobson, Mr. L. T. Hobhouse, and Mr. Benjamin Kidd took part in it, with several others, among them the present writer. Some doubts were expressed on the point whether such a society, if formed, would encroach on ground already occupied by other associations. But ultimately it was decided to proceed with its formation.⁵

The few remarks made by myself raised the question whether the conception of Sociology as a distinct science was sufficiently clear and well defined to enable us to avoid mistaking mere collections of social facts, or bundles of crude, undemonstrated opinions,

¹ Biology.—ED.

² Ethics.—ED.

³ "Between Man and the World we need Humanity."—Comte, *Appel aux Conservateurs*; 1855.—ED.

⁴ 1903

⁵ Now the Sociological Society of London.—ED.

for conclusions based, like those of biology or chemistry, on scientific laws. This, I suggested, was the question which should, in the first place, occupy the attention of such a society as it was proposed to form. A striking illustration of the need for adopting some such procedure as this is afforded by the fate of the Social Science Association, founded forty or fifty years ago, and long since deceased, after holding many congresses and carrying on its operations for a quarter of a century. Undoubtedly it did in its day much useful work. In its volumes of transactions are to be found many valuable memoirs on law reform, on criminal legislation, on trades unions, on temperance, on pauperism, on primary education, on public health, and on many other important subjects. But, whatever else this Association might be called, the last epithet which could be applied to it was "scientific." The note of science is to discover natural laws, and by means of such laws to predict phenomena before their occurrence or before opportunity for direct observation of them has been afforded. Prediction, as Auguste Comte long ago explained, is the test of science. Thus, for example, the knowledge given us by geometry of the mutual relations of the sides and angles of a triangle enables us, if one side and the adjacent angles be given, to predict the remaining sides, and thus, for instance, to determine the height of a tower while we have no means of measuring it directly. Thus the astronomer, equipped with his calculus and with the law of gravitation, can assign the position of a planet on any day and hour of a past or future year. Thus, again, the biologist, from the thigh-bone of the extinct and unknown *Dinornis*, was enabled to reconstruct, with near approach to accuracy, the entire bird. It is needless to multiply illustrations; they form the substance of all that is properly to be called science, as opposed to mere collections of facts or bundles of opinions. It is, of course, obvious that the power of precise prediction varies with the complications of the facts. If, for instance, the planets were more nearly equal to one another and to the sun in mass, their mutual gravitations would be so complex that the precise laws of their motions would be perhaps undiscoverable by man's very limited intelligence, and we should have to content ourselves with very imperfect approximations to the truth. Such approximations are all we can hope for in such complicated phenomena as those dealt with in the phenomena of biology and sociology. Nevertheless, the test of scientific treatment is the same there as elsewhere—prediction. Our aim must always be to be able to solve problems of this kind: Given a definite change in the environment of an organism (whether

it be a society or an individual), predict, so far as we can, the changes that will result in the life of that organism.

However this may be, the point on which stress should be laid is that what we want is not the piling up of masses of new material, but the search for natural laws, both of co-existence and of succession, which shall enable us to interpret the facts already before us. The first great step in this direction was made eighty years ago by Auguste Comte, who may be justly called the founder of Sociology, although no one has more clearly pointed out the debt due to his predecessors—Kant, Condorcet, Montesquieu, and others. I am disposed to think that, if a society for the cultivation of sociological science be founded, it could adopt no wiser course than to take the forty-eighth lecture of Comte's course of Positive Philosophy as a guide to its initial operations. This lecture deals with the "Characteristics of the Positive Method in its Application to Social Phenomena." It will be found in the fourth volume of Comte's *Philosophie Positive*, pp. 209–336. This corresponds to vol. ii, chap. iii, of Miss Martineau's condensed translation; here, however, as elsewhere, the condensation misses many points of the original.

My reason for the choice of this passage of Comte's works as a sort of preliminary text-book to guide the operations of a sociological society is that in it he has treated, in the most general and abstract way, and apart from special applications which would arouse immediate controversy, the two essential aspects of the science—the statical and the dynamical; in other words, the consensus of the social organism and its processes of development. Doubtless, those who regard Comte, as the present writer has for many years regarded him, as the greatest thinker of modern history will go farther than this; they will study the fifth and sixth volumes of the *Philosophie* and the second and third volumes of the *Politique*. I am merely suggesting the chapter of which I have spoken as a sort of platform on which students of sociological science may agree to meet for discussion.

To dwell thus at starting on the consensus of the social organism will ensure the scientific character of the proposed society by giving prominence to that side of Sociology on which its relation to the allied science of Biology is most distinctly visible. Notwithstanding all that has been said by Comte, and by writers more or less under his influence, much remains to be done to make the thought of this consensus sufficiently precise and certain to serve as a basis for prediction; as it has so often served in the case of individual organisms. The attempt to do this will in any case save the society

from the danger of wasting its energies on special studies of this or that aspect of social life, pursued without regard to the life of the organism as a whole, as in the case of the pseudo-science of political economy fifty years ago.

With regard to social dynamics—the study of the natural laws underlying the succession of generations of which our own is the outcome—one of the principles to be borne in mind would seem to be this. In Biology it is a habit with naturalists, and, indeed, it is almost unavoidable, to take the most complicated of organisms—man—as the standard to which lower and simpler organisms should be compared, each, of course, in its appropriate degree. So should it be with the series of successive generations that form the subject-matter of Sociology. It is on the later and more highly evolved generations that attention should, in the first place, be chiefly concentrated. The study of the earlier forms of society will, of course, throw light on the later. But we should guard against the danger, which experience has shown to be a real one, of studying primitive forms too exclusively. Under the plausible pretext of beginning at the beginning, sociological societies may drift, as anthropological societies have already drifted, into disquisitions on the life and manners of prehistoric man, in which the facts are sometimes as dubious as the conclusions drawn from them. A latent desire to avoid burning questions may lead to a dissipation of energy in the agreeable regions of folk-lore. But it may be noted that, if the science of biology a century and a half ago had begun with Protozoa, it might be absorbed in Protozoa still. Happily, the common sense of mankind saw to it that it began with Man; without prejudice, and, indeed, with great advantage, to our insight into the lower forms of life. So it must be with Sociology. The highly elaborated social life of recent centuries must be the main field of study. Practical wisdom coincides with theory in dictating this course. Those who open the great book of history should read not for amusement, but warily. Rightly interpreted, it may disclose the secrets of destiny.¹

¹ A fuller exposition of Dr. Bridges' views on this subject will be found in his paper on "Some Guiding Principles in the Philosophy of History." See *Sociological Papers*, vol. ii (Macmillan & Co.; 1906), or the volume of *Essays and Addresses* (Chapman & Hall; 1907).—ED.

III

COMTE AND SPENCER ON SOCIOLOGY.

MR. SPENCER'S *Autobiography*¹ is now before the world. Autobiography, when courageous and frank, is nearly always interesting; and where the writer has played a prominent part in life the interest is extreme. These conditions are united in Mr. Spencer's book, which, however, it is not my purpose to discuss on the present occasion. I refer to it only for the light it throws on a point which has been much disputed—the relation of the philosophy of Spencer to that of Comte.

Briefly stated, Mr. Spencer's position is (a) that his first work, published in the autumn of 1850, under the title *Social Statics*, was written without knowledge that Comte had given a similar title, though with a different meaning, to one of the divisions of the *Philosophie Positive*; (b) that when, in 1851, he was brought into close intercourse with such students of Comte as George Henry Lewes and George Eliot, and was persuaded by them to read portions of Comte for himself, the influence exercised upon him by Comte, which he admits to have been very great, was the influence, not of agreement, but antagonism.² The process of refuting Comte gave him conceptions which he would not otherwise have formed. Let us look separately at these points.

The expression "Statique Sociale" was used by Comte in the forty-eighth chapter of the *Philosophie Positive*, as one of the two divisions of "Physique Sociale," or "Sociologie"; the other division being called "Dynamique Sociale." The distinction, as Comte defines it, is analogous to that between organization and life in biology. In practical life it corresponds to the distinction between Order and Progress. In the title of the fiftieth chapter, which is specially devoted to the subject, *Social Statics* was defined as "the general theory of the spontaneous order existing in human societies."

Mr. Spencer tells us in his *Autobiography*³ that when his own treatise on *Social Statics* was written he knew nothing more of Auguste Comte than that he was a French philosopher. He tells us further that the title which he had originally proposed for the book was *A System of Social and Political Morality*. Owing to the advice

¹ *An Autobiography*. Two vols.; 1904.—ED.

² See *Autobiography*, vol. i, pp. 444-46.

³ Vol. i, pp. 358-59.

of friends, he changed the title first to *Demostatics*, and subsequently to that which it ultimately bore.

Everyone will accept Mr. Spencer's assurance that at the time of publishing this work he had no direct knowledge of Comte's writings. Moreover, a brief glance at its contents is enough to show how widely its conclusions diverge from those of Comte, especially in all that relates to the functions of government. But the conception implied in the words "Social Physics"—the conception of giving a scientific basis to politics—had been diffused by Comte through European thought for more than twenty years before Spencer began to write. In England John Stuart Mill brought it prominently forward in the final chapters of his *Logic*, published in 1843. Its influence is traceable in Mr. Spencer's own description of the subject-matter of his book, which was, he says¹: "How an aggregate of citizens may stand without tendency to conflict and disruption—how men's relations may be kept in a balanced state; my belief being that the conforming of social arrangements to the law of equal freedom, or to the system of equity deducible from it, ensured the maintenance of equilibrium." Whatever may be said of the last part of this passage, the definitions of Social Statics given by the two thinkers are not widely divergent. The problem, "How an aggregate of citizens may stand without tendency to conflict and disruption," has obviously a close connection with "the general theory of the spontaneous order existing in human societies."

In 1851 Mr. Spencer, as the *Autobiography* shows us, came into close contact with two well-known students of Comte—George Henry Lewes and George Eliot. During the next two or three years the *Autobiography* gives ample proof of the attention given by Spencer to the subject of Comte's philosophy. He held long conversations on the leading principles of Comte with these two friends, and he carefully studied the condensed translation of the *Philosophie Positive*, published in 1853 by Harriet Martineau. Mr. Lewes' rather superficial summary² had appeared a few months earlier. Mr. Spencer assures us that the principal effect produced by his study of Comte was a desire to refute him, and that in the process of refutation many of his own characteristic ideas had their origin. Thus, for instance, his endeavour to expose the fallacies of Comte's Classification of the Sciences led to his essay on "The Genesis of Science," and so helped forward his evolutionary system of philosophy.

¹ *Ibid.*, p. 359.

² *Comte's Philosophy of the Sciences*; 1853.—ED.

The fundamental distinction between Comte's philosophy and Spencer's is stated very clearly by Mr. Spencer himself in a letter to G. H. Lewes, which will be found in the second volume. Lewes (p. 111) had criticized the strictures contained in Spencer's well-known pamphlet, *Reasons for Dissenting from the Philosophy of M. Comte*. Spencer replied in a long letter, which forms Appendix B. From this I extract the following significant passage (p. 488):—

The other important point is that raised in your question, "Was not Comte the man who first constructed a philosophy out of the separate sciences—and is not that your aim also?" Here, it seems to me, is the chief source of difference between us. I venture to think that you are assimilating two wholly different things—endeavouring to establish a lineal descent between systems which are not only generically distinct, or ordinally distinct, but which belong to distinct classes. What is Comte's professed aim? To give a coherent account of the progress of *human conceptions*. What is my aim? To give a coherent account of the progress of the *external world*. Comte proposes to describe the necessary, and the actual, filiation of *ideas*. I propose to describe the necessary, and the actual, filiation of *things*. Comte professes to interpret the genesis of *our knowledge of Nature*. My aim is to interpret, so far as it is possible, the genesis of the *phenomena which constitute Nature*. The one end is *subjective*. The other is *objective*. How, then, can the one be the originator of the other?

Now, this statement of the difference between the Comtian and the Spencerian synthesis will be accepted by most disciples of Comte. Words used by the present writer of the philosophy of Descartes emphasize a similar distinction:—

The positive synthesis of Descartes was an objective synthesis, an attempt to deduce all the phenomena of the universe from a single principle by mechanical progress mathematically calculated. Though destined to fail, the attempt was of vast importance, both as an incentive to mathematical and physical speculation in the hundred years that followed, and as a proof that a future synthesis must rest on a different principle. Wholly abandoning the attempt to consider, much less to explain, the Universe as a whole, the final synthesis avowedly takes Man as the central point, grouping the facts of Nature in orderly arrangement round him. In a word, while not ceasing to be scientific, it is subjective, not objective.¹

¹ *New Calendar of Great Men*, p. 485.

How far Mr. Spencer succeeded with his cosmogony this is not the place to inquire. But the fact that his aim was to explain the universe is no proof, as he seems to think it was, that he was not influenced by a previous thinker whose more modest and more philosophical aim had been to explain man's *relation to the universe*. Descartes was helped on by Vieta, and in his turn acted powerfully on Newton, though neither Newton nor Vieta troubled himself about cosmogonies. That Spencer was indebted to Comte for the conception of sociology as a distinct science, founded on the basis of other sciences, and proximately on the science of biology, is a statement too obvious to need discussion. Mr. Spencer himself admits Comte's priority, though he denies his own indebtedness. But priority in such a matter, extending as it did over nearly a generation, is decisive.

What we have now to consider is whether the work of the later thinker shows a real and important advance over the results achieved by the earlier.

The most striking difference between the two lies, not in Social Statics, but in Social Dynamics. In the conception of human society as an organism, displaying the two characteristics of organisms—specialization of structures and functions combined with *consensus*—the two thinkers are substantially agreed. And it will be admitted by most, if not all, of those who look on Comte as the source of the fundamental principle that many of the developments of this principle due to Mr. Spencer are of much interest and value. And here special reference should be made to the collection of sociological facts instituted under his superintendence, under the title of *Descriptive Sociology*.

But when we pass from Social Statics to Social Dynamics—from the study of the *consensus* of the different parts of the social organism to the study of society considered in a state of progressive movement—the student of Spencer is impressed by a singular deficiency. The philosophy of history is conspicuous by its absence. Now, there are many people to whom the importance of this omission is not at first sight obvious. Indeed, in most historical societies and academies at the present time the mere mention of the words "Philosophy of History" is apt to cause a pitying shrug or smile. Leaving specialists, however, let us try to answer the question, What can be hoped for from the use of the historical method in sociology? This question is discussed at length in the tenth chapter of the sixth book of Mill's *System of Logic*. More than sixty years have passed since it was written, but these years

have not in any way destroyed its value. It would have been well if Mr. Spencer could have profited by its perusal.

"The proximate cause," says Mill, "of every state of society is the state of society immediately preceding it. The fundamental problem, therefore, of the social science is to find the laws according to which any state of society produces the state which succeeds it and takes its place."¹

What do we mean precisely by a "state of society"? We mean by it the simultaneous condition of all the greater social facts; the condition of the society at any given time with regard to religious belief, dissemination of knowledge, distribution of wealth, family organization, artistic culture, form of government, relations of classes, and so on. Social Statics shows us a *consensus*, a correlation among these facts; such that, when some of them have been distinctly determined, the remainder may be inferred with a certain amount of precision, in the same way that an anatomist from one or more bones of an extinct animal may infer the rest. Passing from this to the laws which regulate the succession of states of society, how are we to obtain these except from the study of history? Doubtless a standard of historical research must be set up widely differing from that of the learned specialities which at present occupy the almost exclusive attention of historical societies. Discussions of government and of political constitutions must be brought into far more intimate connection with the history of religion, of science, of art, of industry, than is usually done by academies and professors before much advance can be made in the application and development of the laws of Social Dynamics laid down by Comte. Further, it seems evident that, in the first instance, attention should be concentrated on the more highly developed communities, of which records extending through many generations are preserved, rather than on savage or primitive tribes. It can only be from the former that we can derive the data requisite for examining the laws of social filiation. Whatever may be gained from the study of nascent societies, it will throw but little light on the laws of continuity. Authentic and detailed records of the history of a savage tribe through a long period are all but non-existent. Additional reasons may be given for concentrating attention mainly, though not exclusively, on the more civilized nations, one being that their action on the rest is likely to be preponderant.

However approached, the problem is obviously one of great

¹ *Logic*, bk. vi, ch. x, § 2.—ED.

complication and difficulty. But what reason have we for presuming that the changes of states of society should be easier to analyse and predict than the changes of radium? We have to combine the statical point of view with the dynamical—we have, that is, not merely to keep in view the correspondence between each element in a given state of society, but the correspondence between the simultaneous changes of these elements. Indeed, the complexity of the problem would render it almost hopeless but for the fact that one of these elements, although perhaps intrinsically the least energetic, is nevertheless found to preponderate among the agents of social progression. This element, to use Mill's words, is "the state of the speculative faculties of mankind, including the nature of the beliefs which by any means they have arrived at concerning themselves and the world by which they are surrounded."¹ Condorcet, in his *Progrès de l'esprit humain*, was the first explicitly to expound this connection between the progress of the mind and the progress of society, and it is for this reason that Comte gave him so prominent a place among the pioneers of sociology. In any case, the fact that our intellectual functions, though far inferior to the emotions and propensities in energy, should nevertheless prove to be the most potent factor in social change simplifies the discussion of the problem, since intellectual results can be separately and clearly defined, and round them other changes can be correlated.

But what are we to say of a thinker whose conception of sociological science omits the historical point of view as hardly deserving notice; who comes, for instance, to the conclusion, best stated in his own words, that "had Greece and Rome never existed, human life and the right conduct of it would have been, in their essentials, exactly what they are now";² who, in a word, left out of his consideration the essential problem of sociological science—the laws regulating the succession of social states? What can we say but compare him to one who should write a treatise on astronomy without reference to mathematics, to a chemist who should ignore the atomic theory, or to a biologist who should dispense with the comparative method?

There is an ethical side to this matter as well as an intellectual side. The study of the laws of social filiation is one which may well occupy the strongest intellects for generations to come. But, while admitting this, we should never forget that science, here as elsewhere, is but good sense developed and systematized. The

¹ *Ibid.*, § 7.—ED.

² *Autobiography*, vol. ii, p. 37.—ED.

essential truths of the rise and progress of Humanity are accessible to the simplest and the humblest. A child, while learning to count, may be taught his debt to Arabian and Indian forerunners, and thus be helped early in his career to surmount the hateful prejudices of race. Every word he uses, every tool his father or his father's comrades use—the plough, the wheel, the forge, the boat—may serve as an object-lesson of his debt to far-off ancestors. The ship that brings him food from beyond broad oceans tells a tale of a lonely thinker¹ slain in Syracuse more than twenty centuries ago. Countless are the ways in which the child can be brought to the knowledge of Humanity, for the gifts of Humanity are countless.

But of all this the *Synthetic Philosophy* of Mr. Spencer tells us nothing. If feelings of veneration are to be stirred by any of his writings, it can only be veneration for the unknown and perhaps impersonal Power that keeps "thirty million suns" in motion. There is megalomania in philosophy as well as in politics, and the illusion of it is as complete. Weighed against the life of one saint or hero—nay, rather against one act of heroic devotion—thirty million tenantless suns are as dust in the balance.

IV

MR. HOBSON ON THE SOCIAL PROBLEM.

MR. HOBSON'S book² is the work of a philosophic Socialist, who has a firmer grasp than most thinkers of our time of the truth, on which Auguste Comte so strongly insisted seventy years ago, that the attempt to construct a science of economics apart from ethics must inevitably result in failure. A passage from the last paragraph of his volume will indicate his point of view:—

We are faced at every turn by this question: "You say that the collective action of municipalities and States must be enlarged, that their control of industries and their administration of properties must be extended. How is the municipality or the State to be made an effective instrument for such work?" Everywhere the problem drives back into the region of individual character and motive. A well-planned mechanism of democracy, with just forms of political and industrial government, may be rendered quite ineffective by the inability of the community to

¹ Archimedes.—ED.

² *The Social Problem: Life and Work*. By J. A. Hobson. (Nisbet; 1901.)—ED.

control a selfish bureaucracy. This is, in fact, everywhere the crux of democracy. It cannot be securely overcome by the most carefully-balanced series of constitutional checks. The ultimate good working of such a democracy will depend on the intelligence and goodwill which the private citizens bring to bear upon the public life, and upon the existence of corresponding qualities and sentiments in the public servants. Only in proportion as civic life is so strengthened and so informed by common conceptions of social utility that the classes which are specialized for official work remain in deep and genuine sympathy with the body of citizens—so that the welfare of the community, and not the running of an official machine, is the leading motive of their work; while the ordinary citizen directs his intelligence and his goodwill towards public affairs, so as to feel that he can truly exercise some influence upon their administration—do the moral conditions of sound social economy exist.

Mr. Hobson begins by a searching examination into the claims of political economy to supply guidance in social questions. He distinguishes economic writers into new and old: the first, including the period from Adam Smith to Ricardo and Malthus; the second dealing with the modifications introduced by various writers in the second half of the nineteenth century, from J. S. Mill and Cairnes to Marshall and others of our own time. It was no difficult matter to show that the older presentations of the science, if science it is to be called, closely knit together as they were into a "rigid, superficially consistent, intelligible set of doctrines," and admirably devised for the services of the manufacturers and merchants of eighty years ago who were fighting the battle of Free Trade, offered no solution whatever of urgent social problems, had no bearing on the organization of human life, and, indeed, deterred many of the best minds from seeking for the principles on which such organization should rest. It was a laborious and, in many ways, a successful attempt to constitute the science of the production of marketable wealth. An artificial and wholly unreal distinction of productive from unproductive consumption excluded from consideration all that made for the higher conveniences, comforts, and joys of life, all moral and intellectual culture. An abstraction was made of the self-seeking motives of human action, and a forecast was made of the conduct of an "economic man," as unreal as any impossible root in an algebraic equation, who should be guided by these and none others. Crude, imperfect, and severed from the realities of life, this strange construction, nevertheless, served its temporary purpose well. It gave us the Large Loaf, without which England, whether for good or ill,

would have remained an agricultural nation, and the mushroom growth of towns in Lancashire and the West Riding would have been impossible.

During the latter half of the nineteenth century the course of events on the Continent, the action of Carlyle and Ruskin and of the Positivists at home, brought about a new and largely modified edition of the theory. Men began to appreciate the visionary nature of the "economic man." It was felt to be impossible to exclude religion, art, literature, health, enjoyment, and generally all that made life worth living, from the list of forces acting on human conduct. None the less, however, has the attempt to construct a distinct science of economics continued. It was hoped that allowance might be made for all these moral and social disturbing forces, just as allowance is made for the attraction of the planet Jupiter in deflecting the moon from the path which she would follow under the influence of solar and terrestrial gravitation. Social science would result from an elaborate composition of forces. Separate sciences would be formed of each factor in human conduct—economic, political, artistic, ethical; the final problem being to study these forces in combination, and to indicate their resultant.

Now, one of the most valuable chapters¹ in Mr. Hobson's book is devoted to a demonstration of the futility of any such procedure. It proposes, as he truly says, a mechanical solution of what is, not a mechanical, but an organic problem. A machine can be taken to pieces, the action of each part defined, and the resultant action of the whole predicted. But human society is an organism, not a machine. The connection between the whole and the parts is infinitely more subtle. Each part doubtless may and must be successively studied; but such studies cannot form separate sciences. There is not a science of respiration, of circulation, of digestion, of nervous function; there is a science of physiology in which all these functions are correlated.

For a science of wealth to be real, we must be agreed as to what wealth is. Undoubtedly the groups of facts relating to business, to the production of marketable commodities, to industrial and mercantile processes, to monetary facts in general, can be classed together as a distinct branch of study. But this will lead us but a short way so soon as we rise from the conception of wealth as measurable by money to wealth regarded as comprehending all "social utilities" (as Mr. Hobson calls them), or "essential needs of our nature," as

¹ Chapter vi, entitled "The Transition from 'Is' to 'Ought.'"—ED.

they are called by others. This view of the matter is resented by economists as an intrusion of ethics into their science. But Mr. Hobson remarks with truth and point: "Ethics do not 'intrude' into economic facts: the same facts are ethical and economic." To exclude the moral standpoint is to stop your inquiry into the fact half-way. You sacrifice reality to an abstraction.

Thus the substitution of "social utilities" for marketable commodities is the first condition for rendering economic studies available for the solution of the Social Problem. We have to convert costs and utilities from terms of cash into terms of human life. We have to consider the kind and the degree of the efforts which go to the making of the goods: how far such efforts may be brutalizing; how far, as in the case of lead-workers in the Potteries, or of Sheffield grinders, or of phosphorus match-makers, it may be ruinous to health and life. Again, we have to see how far the effort is distributed reasonably among the workers, so that the length of the working-day shall be tolerable. Yet, further, we have to ask: How far are the commodities produced intrinsically valuable? How far are they distributed among the consumers with relation to their needs? If, for instance, a million Hindu peasants produce so many millions sterling in the shape of wheat, themselves starving on insufficient quantities of millet, a large deduction must be made from the commercial value of the product, estimated as social utility. A final question remains: Who, and what, are the consumers? Many will doubt its relevancy; but Mr. Hobson finds little difficulty in demonstrating that "you may increase the wealth of a nation far more effectively by educating the consumer than by increasing the efficiency of the producer."

Our author's mode of realizing these and similar purposes is, as I have said, Socialistic. In Mr. Hobson's forecast of the future a large proportion of the instruments of production is placed in the hands of the State; reserving for individual management only those industries which contain a certain element of artistic originality, and which, as civilization extends, will form an increasing proportion of the whole. Moreover, Mr. Hobson steers clear of the intolerable tyranny involved in most schemes of Socialism by defining in some detail a sphere of freedom for individual action, a degree of individual possession of the means, not merely of bare subsistence, but of wholesome living, with which the State shall not interfere. While repudiating the metaphysical conception of abstract *right*, he retains the word and conception of *right* socially interpreted. In this respect he is in nearer agreement with Comte

than some of Comte's disciples seem to be aware. Comte's word is, *Nul n'a droit qu'à faire son devoir*.¹ This is a distinct declaration that man *has* the right to do his duty. Yet, apart from the possession of certain means, appliances, and opportunities, he is as much incapacitated from doing his duty as any slave or serf. Comte's scheme for the remuneration of labour, as all students of his writings know, is made up of two elements: the first dependent on the special skill and energy of the workman, and on the profits of the enterprise; the second a fixed element, analogous to the "living wage" of modern trade unionists, rated somewhat higher than the average wage paid to unskilled labour. In addition to this, the labourer's dwelling is secured to him as his own. It is manifest, of course, that such remuneration is impossible under our present industrial system, when so vast a proportion of the proceeds of industry is absorbed by a superabundant army of professional men, commission agents, and retailers, by large masses of non-working shareholders in industrial concerns, by holders of land monopolies, and by organizers of Trusts. The fusion of private industries into joint-stock companies, and of joint-stock companies into gigantic Trusts which aim at a monopoly not merely of land, but of some other commodity—oil, iron, corn, or cotton—essential to life, is perhaps the most portentous political phenomenon of our time. So enormous is the danger that, to those who look beyond it, it suggests its own remedy. That remedy is that the community shall do what individuals cannot do—avail itself of its own vast resources to set itself in competition with the monopolists. Changes of this kind cannot, of course, take place without formidable conflicts, and it is probable that such conflicts will occupy the energies and tax the wisdom of the present² and the succeeding century. Out of it a peaceful solution will ultimately emerge; its main outlines being moulded by the slow and permanent extension of the Religion of Humanity. For, in the last resort, the problem is ethical, as is so clearly admitted in the paragraph quoted at the outset of this paper. It is because Mr. Hobson has so grasped this truth that his survey of the industrial problem is distinguished from that of most of those who have handled it, whether from the Socialist or from the Individualist standpoint, by superior comprehensiveness and insight.

¹ "Man's only Right is to do his Duty." From the title-page of Comte's *General View of Positivism*.—ED.

² Written in 1901.—ED.

CHAPTER IV

ETHICS

I

PHYSICAL, SOCIAL, AND MORAL PROGRESS¹

WHAT is Progress? In the first place it is organic growth—a silent, slow process, as contrasted with noisy agitation, the bitter acrimony of political dispute. These things may be necessary, often are necessary; but they are not Progress. If you are perpetually blasting the rock, or scraping the wall, you cannot expect the lichens to grow on it. Nor will the harvest come if ploughing goes on all the year round. When the land is cleared of weeds and well worked with the spade, and the right sort of seed sown, then for the first time Progress begins. No more torturing of the ground then. Leave things alone. Wait the issue. Otherwise there is no growth.

But what does growth result in? (a) Multiplication of cells; (b) Differentiation, Specialization.

(a) The multiplication of elementary cells is one of the lowest forms of Progress, needful as a basis for the rest, hurtful and destructive when exclusive. Here biological parallels are very instructive to us. Cancer is an undue multiplication of elementary cells at the expense of higher and more complicated tissues. This growth is extremely rapid. Another instance of mere multiplication is that of the rabbit in Australia. Who cannot see that the same thing holds good of men, both in overcrowded communities and in new countries; in England, since the introduction of the steam-engine, with an unbounded commerce; and in the United States with, till lately, a vast area of unoccupied land? It is easy to see that multiplication by itself—the mere increase of numbers—is not Progress.

(b) Now let us come to differentiation. The germ, whether animal or plant, is all of a piece—*homogeneous*. Presently, as cells

¹ A posthumous paper.—ED.

multiply, some of them elongate and harden and become fibres, others join themselves endwise together and become tubes, others remain simple cells. In short, *tissues* form. In animals some of these tissues receive impressions of light and of sound and of smell; others have the functions of contracting themselves, and thereby of propelling the whole animal, or part of the animal, through space. Precisely the same process is observable in every community. Division of labour was observed long ago by Adam Smith—far earlier by Plato and Aristotle. Division or specialization of trades and occupations tends always to become more and more minute. In a great town each profession is sub-divided. In medicine there are consultants and general practitioners, and the former may confine themselves to some special organ—the eye, the ear, or the chest. So in the building trade we have masons, bricklayers, carpenters, painters, etc. In the intellectual functions there is the increasing specialization of science. Division of labour, specialization of functions, is an essential feature of Progress, whether biological or sociological. Is this *the end* towards which we strive, that we should each of us be turned into a wheel or a screw or a plank in the great machine of civilization? Would not this be the most degraded form of slavery? Even the eternal inertia of Paradise would be better.

The Progress we regard as our goal cannot, then, be here. We must look elsewhere. Let us still take biology for our guide so far as it will lead us. Is there nothing that distinguishes the higher organisms from the lower except this division of labour, this differentiation of parts and of functions? Compare a tree with a mass of sea-weed. In the tree a severe injury to the roots or the bark will affect the whole. There is a continuity in the nutritive channels. Passing to higher animal organisms, the contrast is even more striking. Here, there is not merely continuity of blood-vessels, answering to the channels for sap in the plant, but innervation. Impressions of light, heat, electricity, sound, odour, touch, made on any part are conveyed to the centre, and consequent muscular reactions radiate and direct the movement of the whole. In the higher organisms there is greater specialization of parts, but also greater harmony. The parts do not grow upon the organism as mistletoe grows upon an apple-tree; they are bound up with its life. In sociology there is an obvious parallel. A primitive tribe is a loose aggregation of families. There is no census, and small account is taken of those killed in battle or murdered. In a civilized community a murder in a Somersetshire

village, a mining accident in Durham, a speech in Brighton or Midlothian, sets the whole country astir. Railways and telegraphs have hastened this. But the beacon-fires spread the news of the Armada quickly enough through the length and breadth of England, and the Queen's speech at Tilbury was known quite soon enough for all practical purposes.

Here, then, in this highest process of life, this integration, harmonizing all the vital functions into a whole, which characterizes the highest organisms, we seem to have got what we want. This is the Progress which is our goal. Herbert Spencer defined evolution as the passage from indefinite homogeneity to definite heterogeneity. Progress in the Positivist conception is evolution considered from a human standpoint.

There remains one more thing to be added. Sociology is based on biology, not identical with it. It is a characteristic of society that the units in the social state are independent. Hence the problem is to reconcile co-operation with independence. Here we leave biology altogether. The problem presents itself in this way: How to attain that social state in which each member shall freely work for the harmony of the whole? This is a moral problem. Co-operation is so necessary that in early stages of civilization it has to be brought about by compulsion, by slavery, war, conquest, despotism. "The law was our schoolmaster to bring us" to Humanity. There is much compulsion in our own time: military service in some countries; protection of life and property; taxation; compulsory education and sanitation. It is theoretically possible that none of these things should be needed. Imagine a society in which all men were honest, sympathetic, and merciful, and all moderately endowed with cultivated intelligence. Neither police nor soldiers would be needed, nor perhaps rates for the relief of the poor and for education. Government would be necessary simply to direct enterprises in the most effective and economical way.

We come, then, to this conclusion. Ethical progress is not merely the highest and most important kind of progress, but it includes all other kinds. A society of this ideal kind would be perfectly aware of the importance of material wealth, of scientific discovery, of mechanical invention as a means of economizing labour and making the Earth a better dwelling-place for Man. Moral Progress sums up every other kind. Of the four kinds of Progress—moral, intellectual, physical, material—in virtue, in education, in health, in wealth—all are good if regarded as parts and not as wholes; but the first, as we view it, sums up all.

II

ALTRUISM

COMTE'S maxim, "Live for Others,"¹ has been construed by Mr. Spencer and other critics as a condemnation of all action proceeding from self-regarding motives. If it were so, Comte's ethical teaching would be open to the charge of being not merely unreal, but positively misleading and hurtful. But it is not difficult to show that this criticism rests upon an entire misconception of Comte's meaning. Mr. Spencer enlarges copiously on the necessity for the persistence of egoism. Briefly stated, his position is that a creature must live before it can act. The acts by which each maintains his own life are, speaking generally, more imperative than any other. Healthy life, having for its consequence healthy offspring, implies intelligent care for self. By the good spirits that accompany it, it diffuses happiness all round. On the other hand, disregard of self, lowering all vital functions, creates an atmosphere of misery, and disables from the service of others. Again, exaggerated altruism, as shown in unwise and indiscriminate indulgence, promotes egoism in others.

Considerations of this kind, mostly obvious truisms, are dwelt on with what most would think needless length in Mr. Spencer's *Data of Ethics*. They proceed on the assumption that the rule of conduct laid down by Comte implies the suppression of egoism—an error which no serious student of Comte's writings is likely to commit. What Comte urges is not suppression, but subordination. How widely the two differ the following passage from the *Positivist Catechism*² will show:—

The unity of altruism does not involve, as does the unity of egoism, the entire sacrifice of propensities adverse to its principle. It aims merely at wisely subordinating them to its dominant principle. Summing up its conception of sound morality in the expression "Live for Others," Positivism sanctions a reasonable measure of satisfaction to the self-regarding instincts on the ground that they are indispensable to our material existence, the basis on which all our higher attributes are founded. Consequently it censures all practices, however respectable the motives inspiring them, which by excessive austerity diminish our energies and render us less

¹ Comte's moral formula. *Vivre pour autrui*.—ED.

² See p. 39 of the Eng. tr. (2nd ed.).—ED.

fit for the service of others. By giving a social purpose to self-regarding measures it at once ennobles and controls them, steering clear of undue attention to them on the one hand, and of dangerous neglect on the other.

In so far as this orderly discipline of human emotions has been yet realized, how has it come about? Here, as in every other vital process, we have to study the mutual action of organism and environment. In this case the organism is the individual; the environment is the social state. The social state imposes by its two forms of government, civil and religious, a long and laborious training in ethical practice. Government, in its harshness and most rudimentary forms of military and despotic rule, secures the subjection of individual to social will. In its higher forms of equitable jurisdiction, permitting the free action of each within the limits imposed by the due freedom of others, it has, in addition to its direct effects, indirect and wider consequences. Hindering overt acts prompted by selfish emotions—*theft, murder, adultery, and the like*—it tends at the same time to produce strong prejudices and instinctive aversion to the passions from which such acts proceed; prejudices founded not on legislative enactment only, but on the condemnation of fellow-citizens. Meantime religion, from its earliest to its latest phases, makes direct appeal to the most potent of altruistic emotions, reverence for the unseen powers that control human life.

We come back thus to the conclusion reached long ago by Aristotle at the end of his ethical treatise, that to maintain the continuous ascendancy of the higher affections over the lower we need the discipline and training given by a well-ordered society. Ethics are founded on Sociology. We must live by Humanity in order to live for Humanity.

Such are the stimulating influences of the environment. It has now to be remarked that they would be without effect unless a responsive organism were there to answer to the stimuli. As light, heat, electricity, gravitation, acting for boundless periods, will not create the lowliest plant or animal, so with the psychical nature of man. Did it not contain the germs of higher as well as of lower passions, no law-giver, however wise, no government, despotic or republican, could create them. In a community of self-regarding beings no action, useful or injurious, could result from any motive but fear of pain or hope of profit. Theological philosophy, maintaining the total corruption of human nature, turns morality into a paradox; since grace comes as a divine gift from without, no

spontaneous action can be other than vicious. "We doubt not," says the Thirteenth Article of the Anglican Church, "that works done before the grace of Christ have the nature of sin." The demonstration of the fact that the impulse of unselfish love is embodied in the structure of the human brain is a discovery of modern growth. It is one of the corner-stones of ethical science.¹

To Live for Others is thus the final result of the action and reaction of the moral organism and the moral environment. Recognizing what we owe to Family, to Country, to Humanity, we strive, within the limits of our powers, to repay the debt—to react on them for their good. We look on this, if not as the sole object of life, yet as the highest object; the object to which all others are subordinate.

Surveying the course of human history, we cannot but see that the first beginnings of morality are very small, its growth very slow. By what road were these first beginnings reached? By supernatural revelation? If not, how otherwise? Can they be conceived as in any way the result of positive modes of thought? Here an important principle has to be laid down. Comte's law of the three stages, according to which the facts of the world around us and of human life are at first regarded as produced by supernatural agencies, are subsequently accounted for by metaphysical entities, and are finally looked on as processes taking place according to fixed laws, has been often supposed to imply that the positive spirit is a creation of modern times, unknown altogether to the primitive ages of man. But this view is very wide of the mark. The positive spirit has existed from the first; we can trace its workings not in primitive man only, but in the higher animals. In the fourth volume of his *Philosophie Positive* Comte observes (pp. 491-92):—

Theological philosophy, even in the earliest stages of development, individual or social, has never been in the strict sense of the word universal. In every order of phenomena the simplest and most obvious facts have always been regarded as subject to natural laws, and have not been attributed to the arbitrary will of supernatural agents. It was a happy remark in the philosophical essays of the illustrious Adam Smith that in no time or country has there been a god of Weight. We may remark the same thing even in more complicated subjects where the phenomena concerned are so elementary and familiar that the invariability of relations was obvious to the most

¹ Cf. p. 73.—ED.

untrained observer. In the moral and social order, the accessibility of which to positive method is now so often denied, there must have been in every age the notion of natural laws governing the simple facts of every-day life. Without it our ordinary existence, individual or social, would have been impossible. No forecast of any kind could have been made if all human phenomena had been attributed to supernatural agents; since in that case prayer would have been the sole imaginable resource for modifying the course of human action. Indeed, it is this first vague conception of natural laws in individual and social affairs which, transported in imagination to the phenomena of the outer world, has formed, as we have seen, the fundamental principle of theological philosophy. Thus the elementary germ of positive philosophy is undoubtedly as primitive as that of theological philosophy, although its development necessarily takes place so much later. On the perception of this fact the perfect rationality of our sociological theory is dependent. Human life can never present to us any new creation; it exhibits only a gradual evolution. Consequently the final appearance of the positive spirit would be scientifically unintelligible unless we conceived its first rudiments as present from the beginning.

Applying this truth to the early stages of moral science, we shall find that the foundations of ethics, laid down by the primitive astrolatries and theocracies of China, India, Assyria, and Egypt, and handed down by them to the Western nations, were as completely the result of positive method as the more systematic discoveries effected in our own time. That they were enforced and inculcated by theological methods, that they were bound up with supernatural revelations and theories of the universe, is, of course, certain. Equally certain is it that these early law-givers, penetrated with nobly social passions, saw, with the same inductive instinct that guides a Kepler or a Faraday, that society could be held together, that human life could be raised from a bestial level, only by the recognition of such laws as "Thou shalt honour thy parents," "Thou shalt not commit adultery," "Thou shalt not steal," "Thou shalt not kill."

These truths, discerned by the positive spirit which has always been working from the beginning, were propagated and enforced by theological inspiration. The primitive law-giver, breathing the same intellectual atmosphere as his humbler followers, sharing to the full their theological conceptions of the universe, could only regard these ethical truths as flowing from a divine source; all the more that they came to him in moments of high nervous tension, accompanied by

dreams, visions, hallucinations of every kind. As such they were received by the Hebrews from Moses and Elias; by his first disciples from St. Paul; by the Arabs from Mohammed. When supernatural theories of the world gave way to positive theories, these primitive theories remained unaltered. All that is changed is the basis on which they rest. Is it to be supposed that the removal of theological scaffolding will make the house less stable? Has the sanction for moral action disappeared? It remains substantially what it was: inward peace or inward remorse, strengthened by approval or disapproval of those with whom we live and work. Supernatural terrors have played but a secondary part in the enforcement of duty. At the time of their greatest potency they were powerless to prevent duelling. The maintenance of honour unstained proved itself to be the stronger motive. When stripped of all irrelevant entanglements, and put before us in plain intelligible terms, the ethical problem, though never to be completely solved, is yet brought nearer solution. In the place of the two tables of the Law summing up the ten commandments of Moses—worship of an omnipotent and incomprehensible Power, and love of our neighbour—we have reverent acceptance of the moral and material gifts of Humanity: resolution to devote our lives to the service of others.

III

MR. SPENCER'S THEORY OF BENEFICENCE

POINTS in which Mr. Spencer's scheme of thought and life coincides with that of Auguste Comte are worth noting, since they are both numerous and important. Among the warmer supporters of either philosophy there is perhaps too strong a tendency to dwell upon the points of difference. But such a tendency should be steadily resisted. Cordial recognition should be expressed of those instances in which Mr. Spencer has either adopted Comte's solution, or has developed in explicit form thoughts of which Comte had only revealed the germ; or, finally, in which he has handled successfully problems which Comte had not touched. The points of divergence are also numerous and of great importance, and these should be discussed frankly and loyally in a spirit of which the history of science is not without examples, though these are none too numerous.

It would be discreditable to human nature if the bitterness and want of candour which accompanied the mathematical revolution conducted by Newton and Leibnitz were imported into the far greater scientific revolution which is now taking place in the world—the transference of our conceptions as to right and wrong from a theological to a human basis.

Certain salient resemblances between the syntheses of Spencer and of Comte cannot escape the most superficial reader of the prospectus circulated by Mr. Spencer previous to the publication of his work and prefixed to his volume on *First Principles*. Both begin by defining the limits of our knowledge, by distinguishing what is scientific from what is transcendental. The arrangement of scientific material is, to a large extent, identical in both. Both proceed from the outer world to man, from the macrocosm to the microcosm. If Physics and Chemistry are not formally discussed in Mr. Spencer's synthesis as they are in that of Comte, yet a place is left for them, and a precisely corresponding place. Both proceed from inorganic nature to organic. After Biology Mr. Spencer interpolates Psychology as a distinct science. But the higher Biology of Comte to a large extent covers the same ground. In both cases the synthesis ends with Sociology and Ethics. Finally—and this is a point to which special attention should be called—both philosophers agree in regarding the final part of their work as the most important, as that for which all the rest was written. "This last part of the work it is," says Mr. Spencer, "to which I regard all the preceding parts as subsidiary."¹ "Written as far back as 1842, my first essay, consisting of letters on 'The Proper Sphere of Government,' vaguely indicated what I conceived to be certain general principles of right and wrong in political conduct; and from that time onwards my ultimate purpose, lying behind all proximate purposes, has been that of finding for the principles of right and wrong in conduct at large a scientific basis."² The student of Comte's early works (written from 1818 to 1826, and republished in 1854 as an appendix to the fourth volume of the *Politique Positive*)³ will note that this was precisely the purpose with which Auguste Comte began his career as a thinker, the purpose to which the *System of Positive Philosophy* (published in successive volumes between 1830 and 1842) was subsidiary.

Thus it would appear that Auguste Comte's attempt to construct a scientific synthesis as a basis for human conduct preceded that of

¹ Preface to *Data of Ethics*.

² *Ibid.*

³ See p. 95 (note).

Mr. Spencer by more than twenty years. That there are wide differences between the two constructions need not be said, nor is it the intention of this paper to dilate upon them. As everyone knows, the principle which guides Mr. Spencer throughout his long elaboration is that of Evolution. Alike in the formation of a solar system from uniform nebulous matter diffused through space, in the development of the higher forms of life from primitive protoplasm, in the growth of a complicated civilization from rudimentary savage customs, he endeavours to trace the evolution of the complicated from the simple, and to show that with greater complexity there goes more perfect interdependence and more complete unity. Fully to discuss the points of agreement and of divergence between Comtian progress and Spencerian evolution would demand a treatise. A large part of such a treatise would be concerned with the question whether a canon is provided by the evolutionist for deciding in each case where the process of evolution ends and where that of dissolution begins; and to the further and more vital question how far human effort may be efficacious in modifying either process. But though these large questions cannot be dealt with here, it seems worth while to note that in the two final portions (parts v and vi) of the ethical treatise,¹ dealing with Negative Beneficence and Positive Beneficence, Mr. Spencer himself appears to have some doubts how far the theory of Evolution is any longer of practical service as a guide. In the preface to vol. ii he remarks that "these new parts are less definite in their conclusions than I had hoped to make them." After explaining that in part iv, which deals with Justice, the conclusions are in large degree definite, and that in dealing with "right relations between individuals, irrespective of their natures or circumstances, there enters the ruling conception of equity or equalness—there is introduced the idea of *measure*," and that "the conclusions reached acquire a certain quantitative character which partially assimilates them to those of exact science," he goes on to speak of the remaining divisions—Negative and Positive Beneficence. "Here," says Mr. Spencer, "we enter a region in which the complexities of private conduct are involved with the complexities of relations to the no less complex conduct of those around, presenting problems for the solution of which we have nothing in the nature of measure to guide us, and must commonly be led by empirical judgments." He still thinks, however, that the doctrine of Evolution helps us "in general ways, though not in special ways"; especially

¹ *The Principles of Ethics.*

in this—that, “for certain modes of conduct which at present are supposed to have no sanction if they have not a supernatural sanction, it yields us a natural sanction; shows us that such modes of conduct fall within the lines of an evolving Humanity, are conducive to a higher life, and are for this reason obligatory.”

It is time, however, to describe Mr. Spencer's theory of Beneficence more in detail. Beneficence is, in his view, the second of the two great divisions of altruistic conduct, the first and more important division being Justice. “Justice implies a sympathetic recognition of others' claims to free activity and the products of free activity.” Beneficence “implies a sympathetic recognition of others' claims to receive aid in the attainment of these products and in the more effectual carrying out of their lives.”¹ Mr. Spencer points out with overwhelming force, though sometimes in too sweeping a way, the importance of keeping these two spheres of action distinct, and the modern danger of confounding them. “On the one side the many eagerly expecting good, and on the other side the few anxious to do good to them, agree in practically disregarding the line of demarcation between things which are to be claimed as rights and things which are to be accepted as benefactions; and, while the division between the two is being obliterated, there is ceasing to be any separation made between means appropriate to the one and means appropriate to the other. Hot-headed philanthropy impatient of criticism is, by helter-skelter legislation, destroying normal connections between conduct and consequence.”²

The first broad distinction to be made between the spheres of justice and beneficence is that the enforcement of the first is a public function; of the second, a private function. State beneficence—beneficence enforced by the collector of rates and the policeman—entails evils which most thoughtful people recognize. No one has pointed them out with greater clearness than Mr. Spencer, though, as most thoughtful people also agree, with some exaggeration in the details. State-managed charity, he says, discourages the energies alike of the charitable and of the needy; it tends to deterioration of the community by giving the worthy and the unworthy the same chance of perpetuating their stock; by leading men to regard government as responsible for every kind of misery, it promotes discontent and disorder; finally, it has not the moralizing effect of true beneficence, blessing him that gives and him that takes.

We are reminded in this part of Mr. Spencer's work of the

¹ *Ethics*, § 389.

² *Ibid.*

distinction which is so fundamental a principle of Comte's social philosophy—the distinction between the temporal and the spiritual sphere; between the pressure of public opinion acting on each individual will, and the pressure of legal obligation enforced by the magistrate. To draw a sharp line between these two spheres is not always possible. When the spiritual power, the power of opinion, is at a low ebb, it becomes needful for the temporal power to supply its place and to do the work in a clumsy, inadequate, often mischievous, way. Many people before Mr. Spencer have pointed out that the relief of suffering should, in principle, be effected by private rather than by public agencies. But in practice to dispense entirely with the latter has been found impossible. Mr. Spencer himself, who is for reducing State action within the narrowest limits, admits a plea for the English Poor Law on the historical ground of the "entire usurpation of the land by the landlord and entire expropriation of the labourer." And he goes on to remark: "Not improbably the relative stability of English institutions during later times has been indirectly due to absence of that disaffection which results where the classes having no property are wholly at the mercy of the classes who have property."¹

A like relativity seems called for in dealing with State education; though the evil results which are likely to follow from the usurpation of spiritual functions by the temporal power are in this case even more dangerous and subtle. It would be hard to say whether Comte or Mr. Spencer has insisted on them with greater emphasis. Nevertheless, most people remain of the opinion that, in the present state of social evolution, the State must intervene both in primary and in technical education; were it only as a matter of police in the one case, and of mercantile self-preservation in the other. The teaching of Comte in this matter is more relative, and therefore more real, than that of Mr. Spencer.

Beneficence in Mr. Spencer's treatise is dealt with under two heads, Negative and Positive, occupying respectively parts v and vi of the work. By the first is meant "that species of beneficent conduct which is characterized by passivity in deed or word at times when egoistic advantage or pleasure might be gained by action."² Under the second "are dealt with all actions which imply sacrifice of something actually or potentially possessed, that another or others may be benefited."³ Abstinence for the sake of others from the use of advantages which fortune or nature may have put within our power

¹ *Ethics*, § 453.

² *Ibid.*, § 394.

³ *Ibid.*, § 394.

comes in the first class. Charity, in the common use of the word, or, again, endeavours to reform laws and manners, would come under the second head; always provided that such action or abstinence from action be consistent with justice and conducive to the well-being of Humanity. Perhaps the distinction between these two modes is less fundamental than Mr. Spencer thinks. Both seem included in Duclos's description of ethical conduct: *un effort généreux contre soi-même en faveur des autres*.¹ This, however, is a criticism of no great importance. Let me hasten to offer grateful recognition of the clear and forcible illustrations of moral conduct with which the chapters of each division are filled. No attempt can here be made to do justice to them. Under the head of Social Beneficence, Mr. Spencer deals with many of the minor moralities of life—such as irrational conventions or frivolous expenditure on superfluous and unmeaning decorations. Readers may smile at the homeliness and apparent triviality of some of the examples given, but the smile will be followed by acknowledgment that "the rationalization of social observances" is very far from being unimportant. On far graver matters—on the treatment of weaker races by the stronger, and on the aggressive war in which we are now engaged²—it is well to feel that Mr. Spencer and the Positivists are entirely at one.

Of especial importance is the final chapter of the treatise, entitled "Beneficence at Large." Much of it reads like a commentary on Comte's well-known maxim, *Remedies for social evils cannot be at once immediate and radical*. We must have before us, says Mr. Spencer, as a guiding principle the conception of an "evolved Humanity," and our aim must be to further this evolution. Auguste Comte, in even clearer and stronger language, has said the same thing. In the details of Mr. Spencer's forecast of evolution, in his appreciation of the history of Western Europe, there is certainly room for serious difference. But surely there can be none in these words, taken from the concluding paragraph:—

Hereafter the highest ambition of the beneficent will be to have a share—even though an utterly inappreciable and unknown share—in "the making of Man." Experience occasionally shows that there may arise extreme interest in pursuing entirely unselfish ends; and, as time goes on, there will be more and more of those whose unselfish ends will be the further evolution of Humanity.

¹ Duclos, *Considérations sur les Mœurs de ce Siècle*, 1751, ch. iv. "A generous effort over oneself in favour of others."—ED.

² Written in 1901.—ED.

We share the hopes expressed in these noble words; though to some of us it may seem that the teaching of Comte points to them in clearer words, and in a less vague and remote future.

IV

RIGHT AND WRONG

A BOOK recently published by M. Lévy-Bruhl, with the title *La Morale et la Science des Mœurs* (Ethics and the Science of Conduct),¹ raises the question how far, and in what sense, Ethics can be regarded as a science. M. Lévy-Bruhl, as readers of the *Positivist Review* may be aware, has done much to stimulate the study of Comte's philosophy in France, not merely by his edition of the Correspondence of Mill with Comte,² but by a special work devoted to the subject.³ In the present work there are many points of agreement with Comte; there are many also of grave divergence. The following remarks will not aim at presenting a full description of the author's principles, for which the limitations of the *Positivist Review* would hardly supply space. All that can be attempted is to call attention to certain fallacies which, if accepted, might affect Positivist action injuriously.

On one fundamental principle M. Lévy-Bruhl is at one with Comte. There can be no rational Ethics apart from Sociology. Ethics deals with the conduct of an individual relatively to the social organism, be it a family, or a tribe, or a State. Apart from the society to which he belongs, a man's conduct has no meaning—indeed, no existence. Remove a plant or animal beyond the limits of the atmosphere, it ceases to exist; its very elements are scattered into space. So it is with moral life. Duties imply a person, or a collection of persons, to whom they are due. As the social state changes, so will the nature of the duties change. The most elementary knowledge of the history of the human race reveals to us a wonderful variety of changes in the structure of society at different periods. Equally obvious are the variations in contemporary societies. In the Australian tribes, in the negroes of the Congo valley, in the highly-organized societies of Brahminical India,

¹ Paris: F. Alcan; 1903.—ED.

² This work is reviewed in the paper on "The Correspondence of Mill with Comte" in Part V.—ED.

³ See *The Philosophy of Auguste Comte*, by L. Lévy-Bruhl. Tr. by K. de Beaumont-Klein. (Sonnenschein; 1903.)—ED.

of China, of Mohammedan nations, of Eastern and Western Christendom, we see the widest differences of social structure; and corresponding with these differences in the social organism are differences in the standard of individual obligation. Tradition, religious belief, custom, law, institutions of every kind, modify the sense of obligation in countless ways. Even in the same community it may be changed from one year to another. In a time of war the duties of a citizen are not the same as in a time of peace.

Considerations of this kind have led M. Bruhl, as they have led many others (among whom the present writer would wish to be included), to a keen sense of the barrenness of most disquisitions on the principles of morality in the abstract. From Plato and Cicero down to the present day, men have disputed whether the test of right conduct was the greatest happiness of the greatest number, whether man was endowed with an intuitive sense of right and wrong, whether virtue constituted the highest happiness, and so forth. Very little fruit so far seems to have come from such discussions during the last two thousand years; nor does there seem much promise of better results in the future. Eloquent literary essays we may have in abundance, as we have had before; but very little practical guidance. What is wanted, as Comte pointed out in his earliest writings, is that the study of moral questions shall take its place among the "sciences of observation," among the inductive sciences; that it shall not depend on people examining their inner consciousness, and saying: "By an introspective process I have examined the workings of my own mind, and I find it says, So and so"; that it shall depend rather on observation of conduct, individual and social, directed towards the question: "By what line of action shall I best serve the community of which I am a member?"

Now, it is abundantly evident, as we have seen, that the standard of obligation for the individual varies with the variations of the community to which the individual belongs. This being so, it follows that, if our knowledge of right and wrong is to have a scientific foundation, we must know something of the laws regulating the formation, preservation, and growth of social organisms. In a word, there must be a science of Sociology.

So far, then, we are able to proceed in almost complete agreement with M. Bruhl. But at this point we find we are compelled to part company. His view is that Sociology is at present in so infantine—nay, in so embryonic, a condition as to be quite incapable of helping us to a scientific standard of right and wrong. It is for him a science of the future, which at some extremely distant

period may, and probably will, result in great advantage to mankind, but which at present should be cultivated, like geometry, physics, or biology, in a spirit of entire detachment from any social or political aspirations. We have not, he considers, nearly completed the preliminary process of collecting materials for it. The work is so vast that it will need even minuter division of labour than already exists. It must be taken up in detachments. Religions, languages, traditions, institutions of all kinds, must be examined by their own set of specialists. The domain of social facts (*la réalité sociale*) is as vast as was the domain of physical facts when Galileo, Descartes, and Newton began to subject it to scientific treatment. To find the scientific laws by which this mass of facts is co-ordinated will need the efforts of many men and of many centuries. When the principal laws have been found it will be time enough to begin thinking of their application to human uses. Science is disinterested; she does not consider what ought to be, but what is and will be. A time will doubtless come when applications of sociological laws to human action will present themselves, just as we have found to be the case with the laws of geometry, mechanics, and physics. But we are not in a condition at present to foresee what such applications will be, or how they will be effected. That is for a distant future.

Here M. Lévy-Bruhl is at once confronted, as he fully admits, by the question, What is to happen to the moral and social interests of mankind while this assemblage of specialists is thus engaged in preparing the ground for the scientific ethics which, in the course of the next few centuries, may perhaps dawn upon the world? This question he does not shirk. Our present social state, he explains, has its own standard of moral obligations, as have all other social states in the past or present, European, Asiatic, or African. During the long period of incubation which must elapse before the laws of sociology have attained such fullness of maturity as to admit of useful application to practical conduct, we shall go on living with the morality appropriate to our existing stage of social development. *Notre société continuera de vivre avec la morale qui lui est propre.*¹ There is no danger, he thinks, of this morality being weakened, at least for the present. The social forces which tend to maintain it are too strong.

Words are not needed to show that M. Lévy-Bruhl's point of view implies a very different conception of life and of duty from that which, for the last half-century, has held the Positivist Society

¹ Lévy-Bruhl, p. 290.

together. Without for the present discussing it further, I pass to a few considerations which may induce us to believe that Positive Ethics—in other words, a scientific basis for judging of right and wrong—is not a far-off ideal to be reached in some dim and distant future; that it exists already; that it supplies guidance for the action of men and nations in this twentieth century.

Facts relating to man's moral life have been accumulating from the earliest ages of which we have any knowledge. A wrong inference is often drawn from Comte's discovery of the law of the three stages—theological, metaphysical, and positive. These stages refer, not to man's knowledge of facts, but to the theories or general conceptions by which man sought to correlate the facts. In one sense, and that a very true one, as Comte has been careful to point out, man has always been a Positivist.¹ The prehistoric maker of a flint weapon acquired a large stock of knowledge as to the choice of suitable flints, and the direction of their cleavage. In pursuit of game, or of an unseen foe, the savage draws inferences from bent twigs, or crushed grass, that would do honour to a detective. A meteorologist might have many things to learn from him as to the signs of the weather. Examine the origin of what science you please (geometry, astronomy, biology), you will find it in the practical arts of life—field-measurement, brick-work and mason-work, regulation of festivals, care of diseases—each and all of which implied the working of the positive spirit through all the phases of fetichist or theocratic belief.

And so it was with moral facts even more evidently than with physical. They forced themselves on the notice of primitive man from the beginning; they formed, indeed, the earliest foundation of his physical theories. Within the narrow range of his family or tribe, the savage discerns character, infers inward motive from outward sign, discerns which man will be brave in battle, who will shirk the struggle, who will endure, who will be the true friend or the disloyal traitor. Superposed on all this practical knowledge is the tangle of fable, traditional customs, wild beliefs, terrors, and hopes that govern his life. Such theories of the world around him as he frames are based on what he knows and feels of his own passions, or his own inward experience of sleep and dreams. Thunder is the sign of wrath in a being mightier than himself; bountiful and fertilizing rain is the marriage of earth and sky; sleep and nightly visions bring him into touch with a spirit-world.

¹ See pp. 124-25.—ED.

But always the positive spirit has been at work gathering in facts; what his theory of nature did, whether it was fetichist or theological, was to put them together, co-ordinate and explain them. When the great theocrats, whether kings or priests, or both in one, revealed the will of gods to men, they gave authority and consistence to the views which their own clear insight into moral and social relations had revealed to them. To look on these ancient law-givers as more or less benevolent impostors is the profoundest of misconceptions. They believed in the gods as fully as the humblest of those around them, and uttered the outcome of their insight into the facts of life as the will of the gods. Indeed, this is an under-statement of the truth. I take it that no one believed in the gods so devoutly as those who proclaimed themselves to be the revealers of their will to their fellow-men. It is the best and the wisest of men who have been the subject of these sublime hallucinations. No one has ever had such faith in the Christ as St. Paul. Allah was more to Mohammed than to any of the followers of Islam. Let us be very sure that the fabric of morality growing from age to age has not been built upon imposture.

What is the ethical problem actually before us in this twentieth century? Morality exists; it has been brought before us, pressed upon us, by the teaching of Moses, and by teachers many centuries older than Moses, set in a framework of beliefs and customs which has varied with social changes and has undergone many revolutions. The problem for us is not how to create it, but how to enlarge and strengthen it. We cannot feel satisfied, as M. Lévy-Bruhl advises, with the prospect of living on *avec la morale qui nous est propre*. That seems a slender reed to lean upon. But we may well take that morality as a starting-point. To quote from Pierre Laffitte's manual of Ethics, of which I spoke in the March number of the *Positivist Review*¹:—

Following the advice of Descartes, we may take the existing standard, as recognized by sensible men, for our point of departure. We accept the habits and prejudices which have come to us from the series of our ancestors, and which have served in the bringing up of countless generations. It will be our pride to preserve from injury no less than to increase this moral inheritance, which is the most precious and the rarest portion of our wealth. Respect for continuity, especially in the process of innovation, being the most fundamental condition, the moral problem presents itself as the work of co-ordinating,

¹ See the last paragraph of the paper on "Pierre Laffitte's Teaching" in Part V.—ED.

and at the same time of developing, the rules which already exist, and which have been empirically consecrated by the good sense of men.¹

We have seen that positive truths have been hitherto held together and gathered into a controlling system by theological faith. That faith having served its time and undergone spontaneous decay, its power to govern the souls of men has diminished year by year. Through a gradual process of growth due to many minds in many ages, and culminating in the genius of Auguste Comte, we are brought face to face with a new controlling influence based on the actual realities of man's nature and of his position on the planet. Men of science, from Thales and Pythagoras to Galileo and Newton, have shown us where he stands in the world around him. Other inquirers have disclosed his physical structure. Yet more essential has been the knowledge gained of his moral nature. By thinkers of the eighteenth century—Hume, Leroy, Cabanis—it was shown that man was spontaneously a moral being. Hume, in his essays on the principles of morality, proclaimed the great truth that unselfish love was innate in man and in the higher animals. Admitting, as was evident, that it was feebler than the passions of vanity or greed, it existed, he maintained, universally; and we must look to it as the foundation of morality, of every system of regulating human action.

With Hume and those round him these views were vague because they were not incorporated into the science of living bodies, which was founded fifty years afterwards by Bichat. Bichat's work was followed by that of Gall, who, in his studies of the nervous system of man and the higher vertebrates, proved these unselfish affections of friendship and love to be functions of the brain. All the hazardous scaffolding of craniology by which Gall forced his principles on the notice of the world may be swept away. What survives is the deep and pregnant truth that altruistic instincts enter, along with self-love, into the nature of uncivilized and pre-historic man. To the facts accumulated by Gall have been added in after years stores of similar facts by Darwin and other naturalists.

Comte has told us that his aim from an early period in his career was to combine the teaching of Condorcet with the teaching of Gall; the conception of the gradual growth of Humanity with that of the social nature of the element of which Humanity was compounded. We have, in the first place, primitive man, first of the vertebrates, with social and intellectual attributes somewhat

¹ *La Morale Positive*, pp. 68-69, or p. 67 of the Eng. tr.—ED.

higher than theirs, but dormant and undeveloped, entering into communities little better—sometimes it may be even worse—than those of other races, but gradually handing on, through the institution of language, an increasing stock of skill and knowledge as time went forward. We have, in the second place, the gradual rise and unfolding of Humanity prepared and personified by collective beings of narrower range—the tribe, the country, the Roman Empire, the Church, and, finally, by the great conception of the West, the community of advanced nations handing down the tradition of Græco-Roman civilization—art, science, law—to the modern world.

As the final result we have Man, at once the creature and the willing servant of Humanity, receiving the tradition of right and wrong doing from the family into which he is born, the country in which he lives and acts as a citizen, and repaying the vast benefits which he receives by such willing service as his lot in life may make it possible to render. He lives at once by, and for, his Family, his Country, and Humanity. We thus reach the positive meaning of the word *duty*—a social function performed by a free organ. *Nul n'a droit qu'à faire son devoir.*¹ A man's sole right is to do his duty. This is not, as some supposed, a denial of the existence of right. What the saying implies is that there must be a sufficient margin of independence to make it possible for the citizen to render free service. In the absence of such independence he is but a slave. A sempstress bound to intolerable hours of work in order to save herself and her children from starvation cannot be called a free agent. She is a slave as much as if she worked in chains or under the lash. And if we willingly acquiesce in the existence of such a class among us, we are subsisting to that extent upon slave labour; we are in a true sense slave-holders. So long as such a class is to be found, the time is out of joint, and needs setting right. As the social order evolves it becomes more complicated, more differentiated. Every year the need becomes greater of an integrating function; of a process which shall restore the balance, and recall us to our dependence on and our duty to the whole. That process is the work of religion, whether it be called the service of God, as in times past, or the service of Humanity, as in times to come, bringing about convergence of individuals to a common purpose, and harmony of contending passions in each separate life. Like every other function, it needs a special organ. Hence the position assigned in Comte's scheme of society to a body of moral and intellectual teachers

¹ See p. 118 (note 1).

standing wholly apart from the official world, and occupied in maintaining the level of comprehensive thought and generous sympathy on which the order and progress of society will in every age depend. Positive principles are by this time very largely accepted when presented in the abstract. What is needed to make them valid is that they should be applied to each social problem as it arises by men of intellectual and moral competence, prepared for the analysis of social facts by training in the less complicated facts of the physical world. They must not be, like Catholic priests, set apart as a separate class from early youth. They must have reached maturity, and have given proof of civic and domestic worth and upright character. They must renounce wealth and official position, and be content to depend for support on those who accept their teaching. In the establishment of such a body lies the principal hope of making the Religion of Humanity a practical reality in the world.

There seems little in common between a body of men animated with these hopes and purposes and the academic specialists from whose passionless investigations M. Lévy-Bruhl hopes that in the course of centuries a scientific ethic will result. He remarks, indeed (p. 253), as a strange fact that Comte himself found it possible to maintain at the same time the religious and the scientific attitude. But with Comte's followers, he says, the case has been otherwise. "The adepts of his religion have taken little interest in the progress of sociology. Students of sociology, the inheritors of his scientific thought, have shown themselves wholly indifferent to the Religion of Humanity." This remark is unhappily true of many students of Comte, but not of all. It is eminently untrue of Comte's principal disciple, Pierre Laffitte. In his ethical writings, in his careful analysis of Chinese civilization, in his remarkable treatise on the *First Philosophy*, still so strangely ignored by his countrymen, the religious and the scientific spirit are as intimately combined as they were in Comte himself.¹ In the interests of truth and of progress, it is to be hoped that a sufficient number of men will arise to follow his example.

V

ORDER

WHAT is meant by Positivists when they repeat the second clause of their formula,² *l'Ordre pour base*—the foundation or basis of

¹ See the paper on "Pierre Laffitte's Teaching" in Part V.—ED.

² See p. 39 (note).

their system is Order? Do they mean something arbitrarily established by the society to which they belong; or are they speaking of something having an independent existence outside them, whether they will or not? Perhaps both of these meanings are intended; and in that case it may be profitable to inquire the way in which each is related to the other.

A similar doubt arises as to the analogous word *law*. Here, too, we have on the one hand the expression of the will of a supreme ruler, and on the other the statement of a process followed by the facts of the world around us—a uniform, orderly sequence.

The thing meant, apparently, is that our conduct should conform to law. And thus the first aspect of the problem before us is that we should find out what this law is and the grounds upon which it rests. In other words, we have to find a scientific foundation for moral action. The first condition for this result is that we should become possessed of a scientific theory of human nature. Such a theory must include the principal truths of man's physical, biological, and sociological environment. We are tied to a single planet, and to a special portion of that planet's surface. We share with the higher animals a definite physical organization. We are born members of a special political society, and grow up with the beliefs, customs, and traditions with which that society endows us. We find ourselves under the dominion of a moral code; of a moral standard of duty accepted by current opinion to which we give assent. It changes with the course of ages, but in its essential features remains the same. We have to examine the roots from which it springs; we have to take our part in promoting its growth, in removing superfluities and obstacles.

On inquiry we find that this code, like all other human conceptions, has passed through various stages of evolution. It began with supernatural beliefs, it issues at last in positive beliefs, and the intermediate stage has been occupied by various metaphysical abstractions. We find the origin of the moral law in the ancient theocracies of Egypt and Assyria. Its precepts, not to kill, not to steal, not to violate the marriage bond, not to treat others as we would not ourselves be treated, were revealed to the practical wisdom of men whose mental powers and vigour of character raised them above their fellows.

But, though these theocratic precepts may be looked at as so many scientific discoveries reached by prolonged observation and thought, they would have missed their mark unless those who laid them before their fellow-citizens had regarded them as emanating

from the great superhuman powers that governed the world. St. Paul and Mohammed were discoverers of moral truth. But they shared the belief of those around them; they had even a more profound conviction than others as to the government of the world by supernatural powers. Their own high thoughts were conceived by them as issuing from these powers as revelations. From insincerity and hypocrisy these men were wholly free. On Positive truth, then, regarded as revelation, the Christian Church was founded.

With the downfall of the Church at the close of the thirteenth century the metaphysical stage of morals began—the stage of private judgment, of the law of nature. The revolt of the Templars, issuing from the contact of Mussulman and Christian creed, marks its first period; it was promoted by the interminable discussions of the Schoolmen; it was continued and expanded by the Protestant insurrection; it ended with the revolutionary deism of Voltaire and Rousseau.

But throughout this revolutionary and destructive process the germs of reconstruction were everywhere penetrating. Moral rules once regarded as of divine origin were beginning to be consecrated, if not in the name of Humanity, yet on human grounds and from human motives. Precepts of personal hygiene, rules of temperance, of cleanliness, laid down in old times under sacerdotal and theological sanction, became inrooted prejudices, practices of common observance, without any guarantees other than those of kindness and of duty of man to man. The worship of the tomb, the most ancient of human institutions, has again shown itself as the elementary basis of universal religion. The marriage bond has survived all attacks on the theological safeguards with which it was once surrounded. Reverent gratitude is shown to the great benefactors of our race, to those who have striven against its dangers, who have uprooted injustice, who have loosened thought from trammels, who have established tolerance, who have brought down to men the illuminating fire of new knowledge or beautiful imaginations. What is all this but to say that the reign of Humanity has begun?

Humanity represents for us the Order of the world which we speak of as the foundation of our faith. The laws of matter, the laws of life, the laws of social cohesion and succession, are summed up in the great Being that governs our individual life. Man, like many other animals, is a social being. Isolated man is an imaginary and unreal entity. There is no such being in existence. "I have seen," said Joseph de Maistre, "Frenchmen, Italians, Russians—Montesquieu has told me of Persians; but as to the being called

Man, I have never met him ; if he exists it is entirely outside my knowledge."¹ Apart from some mode of social life, be it a family, a tribe, or a nation, there can be no conception of duty. What do we understand by the word *duty* ? A function performed by a free organ. By the word *function* is implied an action or series of actions which co-operate in maintaining the existence of a collective being. It has been said that the Dead acquire a constantly increasing dominion over the Living. But it is only through the living that they can act. These co-operating actions or functions are of various kinds and degrees ; they imply inequality ; they imply willing subordination of directed to directing actions. As social life evolves these inequalities become more marked. Until some one or more of them become preponderant, and until this preponderance is willingly accepted, there can be no social force. Consequently, in the performance of every duty the social instinct—love in its widest sense—must be at work. Love must be the principle. But love, feeling, social enthusiasm, does not suffice. There must be a frank recognition of the necessity of inequality, of the different lots that fall to each fellow-worker, determined not so much by intrinsic fitness as by the accidents of birth, of clanship, of fortune, of experience. To place each member of each generation as he grows to maturity in the precise niche for which his natural powers adapt him, to subject each and everyone to a competitive examination and regulate the position of each by the number of his marks, is a wild and hopeless chimera.

We come, then, to this conclusion. Man's duty consists in working for the maintenance of a series of collective existences—the family, the fatherland, and Humanity. Between each of these come intermediate stages. Between the family and the country there is the village or township. Between the fatherland and Humanity there is the Occident—the group of Western nations which, in spite of many conflicts, have shared a common destiny, and to whom it has fallen to take the leading place in guiding the destinies of our planet. By the Order which we speak of as the foundation of our moral life we mean the establishment of harmony between these living aggregates. Such a purpose implies the restriction of the monstrous accumulations of territory commonly called empires. It implies a metropolis surrounded by a sufficient territory on which live a number of families and groups of families

¹ This was written with reference to the *Declaration of the Rights of Man* issued by the Constituent Assembly in 1789.—ED.

with common antecedents working for a common posterity. It implies complete uprooting of the pride and greed of Imperialism, incompatible with individual freedom, ruinous to the patriotism of surrounding nations. Such fatherlands exist already around us. Denmark, Sweden, Norway, Holland, Switzerland, afford us examples. Scotland, Ireland, Sicily, many provinces of France and Germany, are approaching the same goal in a more or less distant future. Vast aggregations like the Canadian Dominion, like the Russian Autocracy, like the Bureaucracy of Hindostan, are not destined to endure. Nor, again, is there any hope of realization for the fantastical dreams of gathering into one dominion those who look on themselves as belonging to the same race, or who speak the same language. Pan-Germanism, Pan-Slavism, Pan-Anglicanism, Pan-Latinism, are hopeless hallucinations.

Order as the foundation of life implies peaceful industry, implies an education through which we shall gain clear insight into our position as members of Humanity. The first condition involves a multiplication of centres; the practical activity of many free republics. The second implies the union of all round a common ideal, the Religion of Humanity. For this latter purpose multiplicity is not necessary. The most effective way of fulfilling it would be for those engaged in it to rally round a single centre. Whether this mode be adopted or not, whether the groups who take part in it be united in a single organization or otherwise, the essential point is that the principle which they propagate should be one. There are not two religions of Humanity. What is needed is that there should be a class of men devoted to the study of the Order of Humanity; engaged in the discovery of moral and social laws, our knowledge of which will never be fully equal to our practical requirements. Such a corporation will concentrate itself on theoretical and moral questions. "It can only maintain its position as the recognized organ of social sympathy by invariable abstinence from political action"—*i.e.*, from the details of political controversy. The primary condition of the authority of the future spiritual power is exclusion from political power, as a guarantee that theory and practice shall be kept systematically apart.

In building up the universal Order such men will avail themselves of the resources of Art no less than of Science. What Art could do in the brightest days of ancient Hellas is but a faint foreshadowing of the splendour of its future, when it has been dedicated to the Religion of Humanity. The material power of Humanity, and the successive phases of her physical, her

intellectual, and, above all, her moral progress, will each in turn be depicted. The history of universal Love, the soul by which this Great Being is animated—the history, that is, of the marvellous advance of man, individually and socially, from brutish appetite to pure unselfish sympathy, is of itself an endless theme for the poetry of the future.

Not until the Order of our world has been seen to be beautiful as well as true, until it rouses our enthusiasm, as well as enforces our intellectual submission, can it become the foundation of our moral life.

VI

PROGRESS

NEARLY fifty years ago there appeared in the *Westminster Review* an article on "Progress: Its Law and Cause,"¹ which roused the attention of many thoughtful readers. It contained one of the first instalments of the philosophic system of Mr. Herbert Spencer. Its main purpose was to indicate that in every department of nature, inorganic or organic, there was a continuous tendency to pass from a state of simplicity, uniformity, and homogeneity to a condition of complexity, multiformity, and heterogeneity. In the organic world this tendency had been already recognized by philosophic naturalists in Germany, notably by Goethe and von Baer. Tracing any plant or animal to its origin, it was easy to see that its earliest condition was uniform and almost structureless; that, as the vital process went on, different parts took on distinct functions; reception and assimilation of food, circulation of nutritive fluid, excretion of useless material, locomotion, response to incidence of external forces, were each connected with appropriate organs, and in this way what was originally simple became highly complex. All this was recognized early in the nineteenth century. Mr. Spencer went on to demonstrate that the same tendency was perceptible throughout the universe. At some far-off time the space now occupied by the solar system was pervaded by a nebulous and homogeneous fluid. By the mutual gravitation of its particles rotation of the mass began—the outer layers gradually separated from the inner, and gradually shrunk into spherical bodies revolving round the central mass. The outer crust of these,

¹ 1857

losing heat and shrinking, caused mountain-chains, valleys, seas, and rivers, and step by step the earth's structure assumed the varying forms which geology describes. If from geology we pass to the other end of the scale of being, we again find in sociology a similar transition from elementary and simple forms of social life to highly elaborate and complex forms. The passage from the primitive tribe, in which each individual performs nearly identical functions, to the fully-formed nation with its various classes, occupations, institutions, and authorities, presents obvious analogies to the passage from the primitive and nearly structureless germ to the fully-formed plant or animal composed of multiform tissues and organs. This process of differentiation from simple to complex constitutes what Mr. Spencer, in the article referred to, defined as Progress.

Evidently this process of spontaneous evolution going on independently of man's activity, impossible to define beforehand, and ending in an infinite ramification of change, does not bear any very close relation to what Comte, in common with most men, understands by the word *Progress*. When Comte speaks of Order as the foundation of man's life, and Progress as the end to be kept constantly in view, he implies a definite goal towards the attainment of which man should concentrate his energies. Supposing, for instance, it should be proved that the natural tendency of civilized human society is towards a more and more minute division of labour, each workman spending his life in making the fractional part of a pin, it would hardly be maintained that such a result, hopelessly degrading as it would be to those engaged in it, narrowing, stupefying, and enslaving to every moral and intellectual faculty, is an ideal end towards which to strive.

It is well for man to know the external fatalities in the midst of which he has to live and act. To resign himself to them so far as they are insurmountable, to modify them to his advantage so far as they are amenable to his agency—here lies the sphere of his duty. He cannot control the sun's path round its sidereal centre, nor the path of his planet round the sun, nor the velocity of its rotation, nor the inclination of its axis to its orbital plane, nor the rate at which it cools. He has no power over the currents of air and water that move over its surface, over the moisture of its clouds, over the electricity with which they are charged. All these things he may foresee, and he may so guide his action as to receive the good they bring and avoid the evil. In the world of life he can do more than this: he can adapt the soil to the seed sown upon it,

he can supply the growing plant with food and water, he can select the most hopeful variations and permanently improve the stock. He can subdue the nature of animals to his service. By the foundation of societies he multiplies his force; by storing up the results of each generation in language, in industrial products and constructions, in institutions and laws, he creates a Providence which sways the lives of men with ever-increasing power.

To direct the agency of this Providence towards the elevation and perfection of his own nature—in other words, to bring man under the control of Humanity, to render him more reverent of what is highest, more sympathetic, more social, more loving—this it is which, in the true sense of the word, constitutes Progress. In this sense, and in this sense only, can it be said that Progress is the end of life. Progress is not a spontaneous process of evolution that will come of itself as the inevitable outcome of mutual strife, as the survival of the fittest, as an automatic result of natural selection. It implies continuous effort, long-enduring struggle with self for the sake of others. Ours is not a world in which all is of necessity for the best. It is well that from time to time we should look upon ourselves as in imminent danger of moral decay and death. The record of the past is not merely a story of brave and heroic deeds. It tells another tale sometimes—a tale of dissolution, decadence, cowardly self-abandonment, of sons degenerate from their parents, of the torch of noble tradition well-nigh extinct and snatched from hands unworthy to bear it by those who knew better how to nurse the fading sparks and fan them into flame.

How did the conception of Progress first originate? We find no trace of it among the thinkers of antiquity. Aristotle's treatise on *Politics* offers us profound observations and thoughts on the Order of society, on its permanent features and institutions. In his discussions of the family, of the division of labour, of government, he laid down the fundamental conditions of social equilibrium. But we see no recognition by him of any tendencies in Greek society towards attainment of a higher standard than that which he saw around him. He found war and slavery established as social institutions, and apparently he saw no prospect, however distant, of a transition to a social state of peaceful industry and free labour. His survey of the past history of mankind was too limited to admit of any far-reaching thoughts of the future. He saw the marked superiority of the Hellenic race to the barbarous tribes that bounded it to the north and east, or to the effete theocracies of Asia. He had, so far as we can see, no conception of a time when Greek

thought and culture would permeate the non-Hellenic nations and lift them to a higher level. During the three centuries that followed, Greek language and literature were widely spread through the Western world. But, though the area of civilization was enlarged, and though a splendid Order was established from east to west through the Mediterranean coasts, yet the conception of Progress did not even then arise among men. The various nations of the Empire were knit together in a *genus humanum*—the thought of a *polis*, a *civitas*, was enlarged into the thought of mankind. But mankind remained stationary, unprogressive—in danger always of decay and destruction, unkindled by any principle of growing life.

It is to the mediæval Church that mankind owes its first conception—vague, but very real—of social progress. Augustine's *City of God*¹ revealed to men a higher stage of life than had been reached by Greek, Roman, or Jew. Feudalism, with all its barbaric shortcomings, opened a prospect of energy and freedom of far wider scope than peaceful but barren subjection to imperial bureaucracy. Compared with the past, then, Catholic Feudalism was preferable; but what of the future? In the earthly horizon no prospect of a nobler future was visible—nothing but death, the day of judgment, and celestial life for those who had earned it. Then came the fatal decay of mediæval belief, and a violent and blind reaction against all that it involved. The higher life seemed for a time to lie behind men, and not before. Growth indeed there was in science, in art, in industrial invention, in knowledge and mastery of new continents. But none of these things sufficed to give sure promise of a nobler standard of life.

For a clear conception of Progress three terms are needed; as yet there were only two—the Græco-Roman and the Mediæval. In the eighteenth century the dawn of a new epoch slowly appeared. Men began to be conscious of the coming of a time when the tyranny of both temporal and spiritual government should disappear, when men should act for themselves and think for themselves, and when the reign of justice should arrive. This was the work of the audacious band of thinkers who, availing themselves of the science and philosophy of the previous century, of Bacon, of Descartes, of Hobbes, Spinoza, and Newton, prepared the way for the French Revolution. Though the name of that mighty crisis is identified with a single country, because it was in that country that the most strenuous efforts were made to translate theory into practice, ideas

¹ *De civitate Dei*, composed A.D. 413-426.—ED.

into realities, it must never be forgotten that the spiritual force which underlay these efforts was common to the whole Western world. Among the impulses at work one of the most prominent came from beyond the Atlantic. Nowhere has the ideal that captured the souls of men been so vividly portrayed as by our own poet Wordsworth:—

Bliss was it in that dawn to be alive,
But to be young was very heaven!

Nevertheless, a further step was needed. In the spasm of revolutionary fervour the second term in the progressive movement of Humanity—the Middle Age—had been forgotten, or, rather, it had been wholly misinterpreted, and denounced as a time of stagnation, reaction, and darkness. Until the violent onslaughts on Catholic Feudalism had been resisted, until mediæval society could be seen with other eyes than those of Condorcet, and regarded, not as an unloosing of the powers of evil, but as an essential in the evolution of mankind, the very principle of Progress fell to the ground. Hence the paramount importance of the counter-revolutionary school of thinkers that arose when the destructive fury of the revolution had spent its force. De Maistre, the retrograde defender on philosophical and historical grounds of the mediæval system, must take rank with Diderot, Voltaire, and the Encyclopædists as the contributor of thoughts indispensable to any sane theory of progress.¹

The doctrine of the revolutionary leaders implied a rupture of human continuity. It was based on a theory of Progress disconnected altogether from any pre-existing Order. We must remember that the retrograde doctrine traced back to its origin was no less incoherent. Catholicism implied a similar breach of continuity. It was an attack on pre-existing polytheism. St. Augustine's denunciation of Greek and Roman divinities may be set against Voltaire's denunciation of the Catholic creeds. "The rational view of human affairs," says Comte, "is to look on all their changes not as new creations, but as new evolutions. And we find this principle fully borne out in history. Every social innovation has its root in the past, and the rudest phases of savage life show the primitive trace of all subsequent improvement. Progress, then, is in its essence identical with Order, and may be looked upon as Order made manifest."²

¹ See *New Calendar of Great Men*, p. 532.—ED.

² *General View of Positivism*, 2nd ed., p. 77.—ED.

Viewed thus, we begin to understand in what sense Progress is set forth as the end of human effort. "The one great object of life, personal or social, is to become more perfect in every way—in our external condition first, but also and more especially in our own nature."¹ Progress presents itself to us not as an external process which we stand by and watch, and which will go on spontaneously whether we will or not; it is recognized as a definite system of human effort, in which each one of us is called on to take part. Evidently it is a word with many meanings—as many meanings as there are different characters among men and different fields of energy. They fall under one of two heads—improvement of our surroundings, improvement of our own nature. With the first, unsatisfying though it be, we cannot dispense; it is the starting-point for the second. Cheap travelling, cheap printing, are not culture, but they bring the highest thoughts within reach of the humblest; they enable the poorest to visit the shrines of heroes and the scenes of great events. In themselves cheap trains and cheap books are neither good nor bad; the passengers and the books may be alike worthless. So, for the end of action, we have to turn to the other division of Progress—the progress that concerns our nature. This may be physical, intellectual, or moral. That health, temperance, freedom from painful or enervating disease, are blessings far surpassing all material luxuries or comforts would be admitted by all. Nor would there be much difference of opinion in regarding intellectual progress as even more important than physical. Intellect reveals to us the Order of the external world, and, when our conception of that Order is completed by the laws that govern the growth of human society, intellect takes its proper place as the servant of the social sympathies. Here we come at last to the central mode of Progress, that to which all lower forms are subordinate. The end we set before us—the end which constitutes Progress—is the permanent preponderance of social feeling over self-love. Progress means that we live by, and for, Family, Country, Humanity.

¹ *Ibid.*, p. 78.—ED.

The first part of the paper is devoted to a general
discussion of the problem. It is shown that the
problem is of great importance in the theory of
the differential equations of the second order.
The second part of the paper is devoted to a
detailed study of the problem. It is shown that
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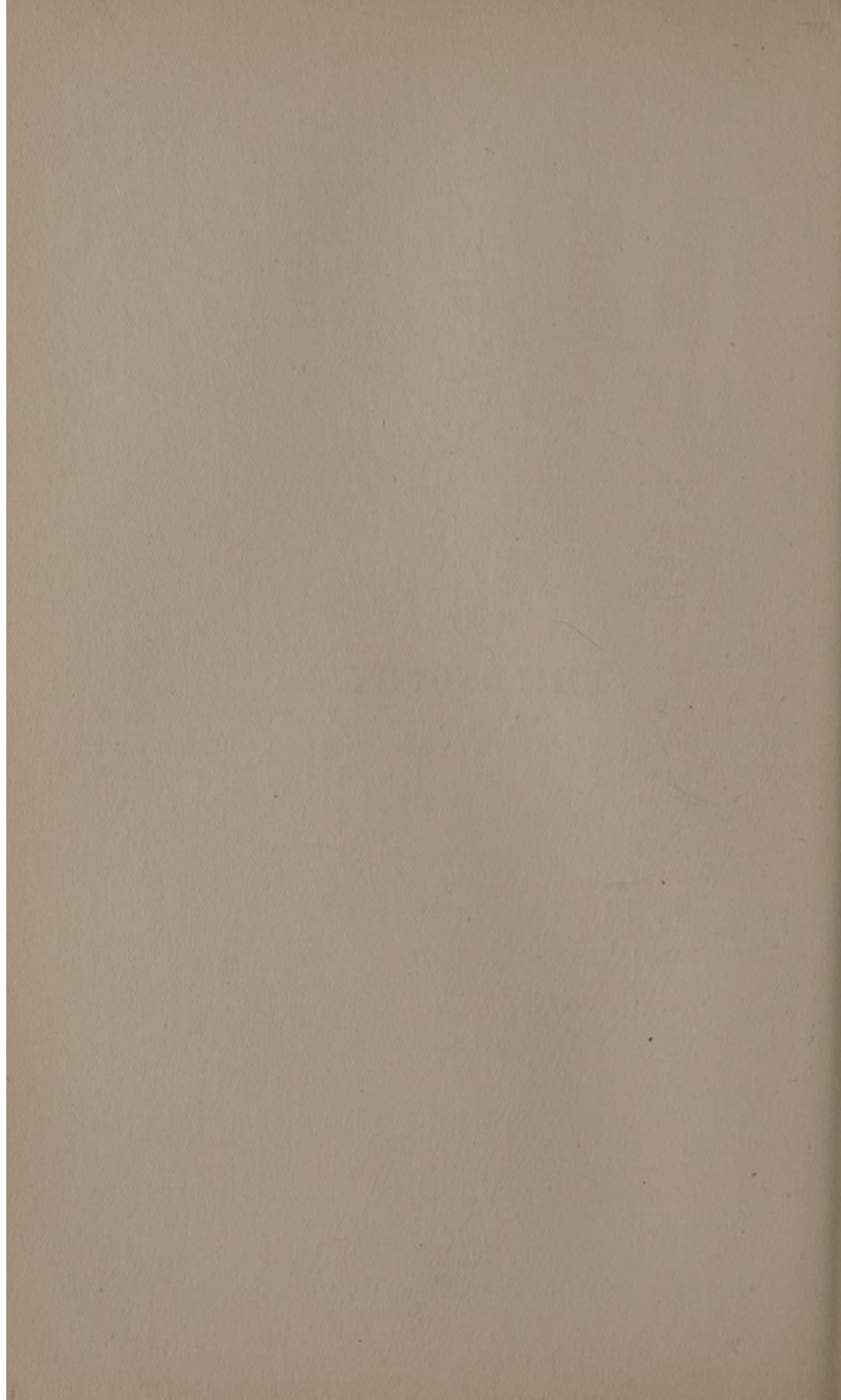
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of the differential equations of the second order.

PART II

PHILOSOPHY



CHAPTER I

SCIENCE AND PHILOSOPHY

I

FACT AND THOUGHT IN SCIENCE¹

IT is one of the principal laws of mental health that inward workings of the mind, what we may call ideas, should be subordinated to outward impressions. A man who mistakes day for night, who has visions of armed men or dragons in his house, who hears voices in the room when all is silent, is said to be of unsound mind. It is clear enough that if men are to work together the same outward impression must affect all of them alike, or at least nearly alike, or their working together will be impossible. The man who differs so widely from his fellows in these matters as to be unable to work with them is rightly said to be of unsound mind. In the French language such a man is called *aliéné*—alienated from his fellow-men, standing apart from them. It is most essential to recognize at the threshold of this subject that mental health cannot be looked at apart from citizenship and fellowship. For observe that there is no absolute unchanging standard of accuracy in this adjustment of inward mental working to outward impression. The standard has undergone profound though very gradual changes from century to century. It has altered with the growth of society.

Some few centuries ago, if a man said, "Last night I saw a bright golden dragon fly across the sky," he would not have been held out of his mind; on the contrary, the chances are that several other men would at once have said, "We saw it also." The passage of a shooting star larger than common was enough to set their minds at work in this way. The conviction that there were such things as dragons being deeply rooted in their minds, the impressions of brightness and swiftness printed upon their retina very easily formed themselves into the shape and fashion of this airy prodigy. Let us put ourselves in the state of society painted by Homer. If Achilles or Ajax, or any other of his heroes at any important

¹ A posthumous paper.—ED.

moment of their lives, said that Pallas, Athene, or Hera, or Poseidon had come to warn them of some danger that was coming, or to tell them of victory in to-morrow's battle, he would not have seemed to anyone to be wandering in his wits. Others would at once have believed him, and some would have said they saw a stranger of more than mortal stature in converse with him. Call back to mind, and try to realize, the times in which every casual event that happened in a time of crisis—the flight of a bird, the organs of an animal killed for sacrifice, a voice suddenly heard on the high road, the position of the planets in the sky—was all full of meaning, of divine monition to men. It is quite clear to anyone who looks at what we may call the mythological or theological stage of civilization that the subordination of the inward mental working to the outward impression was very much less complete in earlier times of human life than it is now. The judgment formed of the order of the world was widely different. All *phenomena*—i.e., all visible, audible, or tangible facts, at least all those that were at all startling or out of the common way—were looked at as resulting from emotions or caprices of beings of like passions with ourselves. At the present day we are content simply to watch how these events happen; to gather together as well as we can all the general facts or regularities that we can observe in them; to see where it is that two facts always go together, or always follow one another; and in this way we arrive at the possibility of foretelling whenever we see one of the two facts that the other will follow. In other words, the scientific, or positive, state has followed upon the theological.¹

But here lies the danger of a vast and mischievous error to which our age is peculiarly prone. It is commonly said the business of the scientific thinker is to leave off theorizing and betake himself entirely to the collection of facts. In other words, of the two factors of human knowledge—the mind working within, the impressions pouring in from without—he should as far as possible suppress the first and recognize the second only. But a little thought will show us that to do this is to reduce ourselves to the condition known as idiocy. The idiot is a being in whom the senses are as active as in other men. Impressions of sight, sound, touch, smell crowd in upon him from birth to death, leave perhaps some trace of themselves on his imperfect brain; but there they remain undigested, unworked, without the least influence on his life or actions, like so much raw material brought into a cotton-spinner's warehouse,

¹ See p. 90 (note 1).

which, because the machinery was out of order, or the spinner was idle, or his men refused to work, was allowed to rot there unused. Now, this really is the condition into which a certain part of the scientific world is at the present time tending to lapse. They think they are doing something good and satisfactory by simply heaping up huge masses of observations of facts, quite regardless as to whether any use is to be made of them. Those piles lie one upon the other, and the lowest are so deeply buried by those that have been thrown over them that they will require as much labour to unearth when they happen to be wanted as though they had never been discovered at all. It is as though the colonists who go out to a new country and fix upon the site for their capital city should all turn themselves into brickmakers and cover the whole ground with such vast piles of bricks that the builder has no room to build on. As though observations were not accumulating fast enough, observing machines have been devised which act automatically, so that the force of the wind, or the movement of the mercury in a barometer or thermometer, or the motion of the heart in some animal, shall register itself on a roll of paper moving forward by clockwork. Now, these things are good and useful just so far as there is some mind at hand to make use of them, *and no further*. Otherwise they may be not merely useless, but worse than useless, by cumbering the ground and bewildering the investigator.

It is not difficult to see that, if observing power very greatly outruns thinking power, the progress of discovery will be, not promoted, but rather hindered. Suppose, for instance, that just while Kepler was making his wonderful discoveries of the motions of the planets round the sun, that they moved in ellipses, that the sun was in one of the foci, that they described equal areas in equal times, and that the squares of their periods of revolution were as the cubes of the mean distances—suppose that some minute and accurate observers had shown that none of these things were precisely true, that the orbits were not precisely elliptical, and so on, what would have been the effect of this but to retard discovery? All great discoveries imply a certain setting aside of irrelevant facts, subject, of course, to taking them up afterwards if need be. In pure mathematics the elimination of such irrelevancies is of the essence of the highest and most fruitful methods. Newton had to work out his mechanism of the solar system without taking into account the influence of the planets upon one another, which would have interfered with his own discoveries, and which he had to leave to his successors.

I take the mind of the scientific discoverer as the type of the healthy mind working on a large scale. Mere reception of impressions will carry us no way at all. There must be a choice; a reaction of the mind upon those impressions. Consider it again; there are men who devote their lives to the discovery of new planets. But we know now that the solar system is stuffed full of planets, large and small, and even professed astronomers are now beginning to think that they have had enough of them. Leaving the solar system and passing to the Universe, we find that, beyond the myriads of stars visible through our largest telescopes, photography reveals to us countless multitudes hitherto invisible; and some improved process of research perhaps may uncover yet more, the whole count of which are yet, mathematically speaking, *nothing* compared with Infinity. We come back, therefore, to this, that among all this labyrinthine wilderness of impressions there must be a choice, and a principle of choice.

I have been speaking of scientific discovery—of the infinite universe without us, of the limited human faculty in which little parts of that universe are mirrored. To come to any practical result, I say, we must be guided by some instinct or principle which will impel us to look at some things and to pass other things by, to dwell upon one or two of the myriad impressions that crowd in upon our senses, to allow one or two of these to reproduce themselves in memory as ideas, and to leave all the rest alone.

II

ORDER AND PROGRESS IN SCIENCE

DOES Comte's well-known motto, Order and Progress,¹ hold good of science as well as of politics? Many will doubt; some will scoffingly deny, and will sniff the taint of obscurantism. "As if science needed any restraint on its growth," they cry; "as if its progress could ever be too rapid." And then they let fall a word or two of satire at the Positivist who, as some of them think, is striving to stop the dial of time and let the world sink into mediæval darkness.

Positivists, in their turn, would hardly think it worth while to

¹ Comte's political motto—*Ordre et Progrès*. See *General View*, pp. 76, 281.—ED.

refute so foolish a charge. The founder of their school gave a meaning and a purpose to science that had never been recognized before, from the days of Archimedes and Galen to those of Harvey, Newton, Lavoisier, and Helmholtz. Building the new science of sociology upon the science of life, which, in its turn, rests upon the inorganic sciences, he showed that man's life and conduct, when based on positive knowledge, had a firmer foundation than could be found in the quicksands of theological controversy. If the list were drawn up of the new researches which he suggested in almost every department of science, it would be a very long one. The last work¹ of his life he did not live to complete. The first volume of it—the only volume published—was a mathematical treatise.²

Brushing these cobwebs aside, let us see precisely what the words *Order and Progress* mean. They mean, among other things, growth in accordance with law, as contrasted on the one hand with stagnation, on the other with anarchy; they mean evolution, as distinct alike from revolution and from dissolution. Progress, Comte was wont to say, was the development of Order³—the continuous growth of something that had substance and life already. He remarks, in the opening sentence of the third volume of his *Positive Polity*, that "the distinctive feature of the present age will be the importance it assigns to History: by the light of which philosophy, politics, and even poetry, will be henceforth pursued." History is used here in its broadest sense as synonymous with evolution—a word which some students of Darwin and Spencer may be surprised to find that Comte used frequently, in opposition to the theory of special creation, long before the appearance of *The Origin of Species*. Comte's whole work, indeed, was an Evolution-Philosophy, though doubtless differing in many fundamental respects from that of Mr. Herbert Spencer, which in other respects owed so much to it.

Science, then, like other departments of human life, presents, on the whole, and when looked at broadly, a continuous growth from the days of Thales and Pythagoras to those in which we are now living. Even with the qualifying words here used, this will sound paradoxical; there are such apparent breaks in the continuity, such "faults" (to use the geologist's word), such shuntings of the train

¹ *Synthèse Subjective*.—ED.

² *Système de Logique Positive ou Traité de Philosophie Mathématique*. 1856. The Introductory Chapter of this work, tr. by R. Congreve, was published by Messrs. Kegan Paul, Trübner, and Co., in 1891.—ED.

³ See *General View*, p. 77, and *Positivist Catechism*, p. 162.—ED.

from one set of rails to another, so many stoppages, so many retrograde motions. But astronomers know well—and knew it centuries before Copernicus—that motions of the planets which seem retrograde are not so in reality. And so it will be found here if we look into it closely, and if we follow Comte in that wider and deeper conception of science that he was the first to teach. During the darkest of the Dark Ages the science of human life, wrapped, like all nascent sciences, in the needful shelter of theological husks, was making that kind of marvellous progress that the leaf-bud makes in winter. Such men as Benedict, Gregory, Bede, Boniface, and Isidore were as truly the representatives of progress as any thinker or statesman of ancient or modern times. And even if we take science in the unhappily narrow acceptation in which it is still used by Academies and Royal Societies, we shall find two things which are well known to the few who have cared to study the subject, and which would be known universally if history were not studied in so narrow a spirit. The first is that in the Christian world from the sixth to the twelfth century, to say nothing of the splendid burst of intellectual life in the thirteenth, there was somewhat more scientific culture than is commonly supposed. Boethius in the sixth century, Isidore and Bede in the seventh and eighth, Alcuin in the ninth, were possessed of much mathematical and astronomical knowledge of which Pliny, the great Roman encyclopædist, was probably quite ignorant. But what is more important is the far deeper and more progressive culture of science carried on from the eighth century to the twelfth in the Arab schools of Bagdad, Cordova, and Toledo, which in the thirteenth shed its full lustre on the Western world. The current that transmitted Greek science to the Benedictine monasteries, though at no time wholly arrested, was always sluggish. The living waters of progressive thought were supplied by such men as Tobit ben Korra, Avicenna, Albategnius, Alhazen, and Averroes.

Continuous, then, the history of science from Thales onward has undoubtedly been. But in this continuity we find very varying degrees of vigour and vitality. Like other organic growths, it is liable to disease: it is susceptible of modification for good and for evil by human action. Are there any features of scientific culture at the present day that indicate the evil and suggest the remedy?

Both were indicated by Comte when he began, more than seventy years ago,¹ the famous course of lectures which resulted in his

¹ Written in 1899.—ED.

System of Positive Philosophy.¹ The danger to science lay, he said, in the increasing mass, and the increasing speciality, of scientific research. And, nevertheless, division of labour was as needful in science as Adam Smith had shown it to be in industry. Without it all progress was impossible. Comte's words may be quoted here with advantage:—

While we recognize the amazing results of this division of labour, while we feel it to be the foundation on which the organization of the scientific world must henceforth rest, it is impossible not to be struck by the serious evils following from it in the present day owing to the extremely small range of ideas with which each individual mind is exclusively occupied. Doubtless, up to a certain point this result is inevitable. We cannot put ourselves back in the position of the scientists of antiquity; their advantages even in this respect were simply due to the limitation of their scientific field. But I believe that measures may be taken which will remove the worst evils of exaggerated specialization without injury to the stimulating influence of individual research.

"The evil," he goes on to say, "should be remedied at once, before it becomes more serious. There is a real danger lest man's intellect should end by losing itself in a mass of detail. Let it not be forgotten that here is the one weak side on which Positive Philosophy may still be assailed by theologians and metaphysicians with some hope of success."²

What the measures to be taken were is well known to students of Comte. Dismiss from your minds, he said, the idle and mischievous dream that you can repress research. Instead of attacking the division of labour in science, carry it one step further. Let there be one more speciality—the study of the leading principles of each science, and the relations of the sciences to one another. From this starting-point the whole Positive Philosophy followed as a corollary. It was seen that the most natural classification of the sciences was that which ranged them in relation to the science of Humanity and Man. For further remarks on this subject I may refer to the paper on "The Ladder of the Sciences."³

Few have any conception of the waste of effort that goes on continually in the scientific world for want of some general guidance of this kind—guidance, be it understood, of principles

¹ *Cours de philosophie positive*, 6 vols. ; 1830-1842.—ED.

² *Phil. Pos.*, vol. i, ch. i, pp. 26-27 ; p. 31 of the *Fundamental Principles*.—ED.

³ See the next paper.—ED.

rather than of men, though men also are indispensable; the world will never grow so wise that ready-made philosophers will spring up from the ground without the need of teachers. It is in abstract science rather than in concrete that the evil is most prominent. In applied science the practical object aimed at, be it the invention of a new explosive, the improvement of electrical communication, or a new treatment of disease, is itself a controlling influence, implying, as it does, concentration of purpose and admitting of rigid tests. But in abstract science researches are carried on without any thought of immediate application. These may either be the most valuable of all or the most valueless. Here it is that waste of intellectual force is most liable to occur, and here it is that a wiser economy would reap its richest harvests. For want of such economy the self-love of each explorer leads him to overrate the value of his own discovery and make little of those who have gone before him. Bystanders eager for novelty applaud; the latest result is taken as necessarily the truest; and thus it not seldom happens that important truths are forgotten and have to be re-discovered many years after. For want of due guidance, again, wrong applications of new knowledge are frequently made. The passage from the abstract to the concrete is always beset with dangers. In no field of knowledge, if politics be excepted, have these dangers been so disastrous as in the art of medicine. During the nineteenth century biological science has been pursued separately from the practice of medicine, which, nevertheless, aims more and more distinctly at securing a sound biological foundation. The separation was needed; but it has its own special dangers. The latest outcome of the biological laboratory is hastily applied to the treatment of disease, often with ludicrous, sometimes with pernicious, results. Stores of practical knowledge gained from the life-long study of disease in man are hastily set aside for new conjectures founded on a few doubtful experiments on a dog or a rabbit. Of all the witnesses called by the Vivisection Commission of 1876 few spoke more to the purpose than G. H. Lewes, an experimental biologist and a trained thinker. His conclusion was that, of the influences retarding the growth of science, the most injurious was the multiplication of experiments made by men of slender capacity and wholly untrained in the art of thinking. A striking illustration of what may be called the laboratory fallacy may be found in the Harveian Oration given in 1898 by Sir Dyce Duckworth:—

Of some laboratory experiments it may be said that they fail *primo visu* to commend themselves to our common sense.

I will support this assertion by a reference to some recent laboratory researches undertaken in America. With a view to determine the influence of alcohol in morbid conditions certain rabbits were inoculated with streptococci and other microbes, and then kept daily in a state of acute intoxication by alcohol. These animals showed the effects of the inoculation earlier and more severely than animals that were similarly infected but not alcoholized. On the strength of these and similar phenomena we are gravely warned from the laboratory that it must be disastrous to employ even moderate doses of alcohol in inflammatory conditions of disease in the human subject..... The practitioner who could allow the teaching of such experiments as I have quoted to influence his bedside treatment of patients suffering from acute disease would in my opinion possess neither clinical instinct nor knowledge.

Quoting from Professor Kanthack, the lecturer adds :—

Paracelsus is not yet dead. He snatches incomplete researches out of the laboratories, and applies them in the treatment of diseases the pathology of which he does not understand, and his influence makes itself felt in laboratories to the discredit of medicine.

Think of the solemn and pedantic folly of the whole proceeding ! How utterly wanting in the most rudimentary principles of reasoning the experimenter must have been who, from the effects of an *intoxicating* dose of alcohol or any other drug upon a rabbit, could infer the effects of a *moderate* dose upon a man ! Where was the need of this ignorant display of learning ? Had it not been known for centuries, not merely to doctors, but to every man and woman of common sense, that excessive doses of alcohol were hurtful to bodily tissues ? It will be noted that it is no opponent of experimental research who calls attention to this case, but a scientific physician anxious to promote such research, and convinced that the practice of his art should be modified by it.

The foregoing illustrations have been taken from applied biology. But the same truths hold good in other departments of science, from astronomy to politics. General principles of the kind that Comte called for are urgently needed in sociology and ethics no less than in biology, not for the discouragement of exact research, but for its wise guidance, to ensure that the passage from the abstract to the concrete is made with full knowledge of the complications of the problem, and to avoid that confusion of plausible conjecture with positive knowledge which in our time has often been carried so far as to make science a byword for uncertainty.

III

THE LADDER OF THE SCIENCES

WHAT is the relation of the lower, simpler, and more general sciences to the higher, more complex, and more special? On this primary principle of Positive Philosophy, the social and ethical bearings of which are fully as important as its intellectual aspects, a few words of explanation may be usefully subjoined.

Sciences are said to be lower, more simple, and more general when they deal with properties common to all facts or objects known to us, or with a large proportion of the whole. They are called higher, more complex, more special when they relate only to a small proportion of objects. Thus Geometry, dealing with the laws of magnitude, is the most general of the sciences; for all objects possess magnitude. It is the simplest, since the magnitude of an object can be considered independently of its heat, gravity, electricity, vitality, or wisdom; and it is the lowest, in the sense of being the foundation on which the other qualities rest. The various branches of Physics, again, dealing with the phenomena common to all matter, dead or living, are more general and less complex than the study of bodies possessing life; and they are lower than Biology in the sense of forming its foundation and starting-point. And in the same way, proceeding up the scale, we find in certain classes of animals the phenomena of social life which in the case of one species have become so prominent and preponderant as to form the subject of a distinct science—Sociology. This rests on Biology, as Biology on Chemistry and Physics, but requires its own separate inductions and methods of treatment. Finally, the study of the institutions and evolution of social life prepares us for the most special and complex study of all¹—that of the effect of the social state on each man's life and his duties and responsibilities with respect to it.

Now, this Scale of the Sciences,² as Comte called it, using the word *scale* in Bacon's sense as a ladder for the understanding, does not pretend to offer any complete picture of universal truth. Mr. Herbert Spencer has found fault with it because, as he says, the

¹ Ethics.—ED.

² Comte's scale of the *abstract* sciences is as follows: Mathematics, Astronomy, Physics, Chemistry, Biology, Sociology, Ethics. For further details see Table B in the *Positivist Catechism*.—ED.

sciences in their rise and progress do not follow one another in a straight line, but branch out from a common stock like the branches and twigs of a tree. But the truth is that Mr. Spencer and others have wholly misunderstood Comte's purpose in bringing forward this ladder of the sciences. They have supposed that he wished to present a complete picture of the evolution of truth. They pointed out truly enough that the growth of knowledge is like other evolutions. Like the sprouting seed, like the fertilized germ in the egg, it begins from something very simple and goes on getting more and more complex till it becomes the collection of academies, universities, publishing offices, laboratories, and scientific memoirs that we now see around us. All this is true enough, though perhaps not very useful. But it has very little to do with what Comte proposed to himself in arranging the sciences. Comte was not trying to present a complete picture of nature or of the evolution of ideas, as though we were superior beings standing on another planet and looking down upon this. His purpose was more humble and more practical. He wished to make it easier for man to understand his own nature and to guide his own life. As a help to doing this he constructed a ladder leading from the lower and simpler truths to the higher, or from the higher; for men go down a ladder as well as up. All constructions of this kind, when efficient, rest on a natural order, though not blindly conforming to it. The position of the sciences in the scale corresponds in general, though not in detail, to the order in which they appeared as bodies of abstract truth dissociated from immediate practical utility. Geometry and Astronomy were fully recognized as abstract sciences by the Greeks; Physics not till the time of Galileo; Chemistry in the middle of the eighteenth century; Biology at the beginning of the nineteenth; Sociology not for a generation later. But this is only true in a general way. The secondary reactions between each science and any and all of the rest are very multifarious and intricate.

Now, in studying the history of any science we note two distinct and opposite errors that are often made. Men have tried to deal with it by the methods of a science higher in the scale or by those of a lower science. Biology supplies many instances of both errors. Thus at one time life was explained by a vital principle; or an animal or vegetative soul, or both, were supposed to pervade the bodily frame and to regulate digestion, circulation, muscular motion, and sensation. These principles were imported into biology from metaphysical theories of the constitution of human nature. The opposite error, that of explaining the facts of the higher science by

the laws which have been found valid in the lower, is even more common. An instance of this is Condorcet's singular attempt to explain social and political events on mathematical principles. After Harvey's discovery of the circulation of the blood systematic efforts were made to explain all the functions of life as matters of mechanical arrangement; and a rich crop of errors resulted, which it took a long time to uproot. In the century after Harvey chemical science arose under the hands of Priestley, Cavendish, and Lavoisier; and again there was a tendency to explain the facts of life by chemical methods. Many years passed before it was seen that, though without chemistry the first step could not be taken towards giving a rational account of life—since each act of life is accompanied by a chemical process—yet that in the sum of events taking place in a living organism there was something wholly different and apart from what takes place in a laboratory.

And as with Biology, so with the science that follows it in the ascending scale—Sociology. As the growth of the plant or the feelings and motions of an animal cannot be accounted for by any play of the electrical, thermal, or chemical forces, though they rest upon these and have no existence apart from them, so it is with the instincts, desires, passions, laws, language, traditions of such a society as man has established on this planet. These involve problems for the solution of which the naturalist supplies valuable and indispensable material, but which the methods used in his own sphere of study are wholly powerless to solve. The wants and passions of animals underlie the whole fabric of human life. But the foundation of a fabric is one thing; the superstructure is another. It is very possible—it quite accords with what we see going on around us in the animal and plant world and among the rudest tribes of man—that human progress began with competition and internecine struggle among rival races. It may be admitted that the tendencies which led to this life-and-death competition will never wholly disappear. But these biological facts do not account for the chain of events that we call human civilization. This has to be studied independently, like the facts of mechanics, the facts of chemistry, the facts of life, by direct observation and induction.

In the course of civilization—that is to say, in the process of converting man from a wild beast to a citizen—principles have to be reckoned with of a totally different kind from those considered by Darwin. To go no farther back than the time of Cicero, we find throughout his writings the conception of *Genus Humanum*, of

Mankind, into which all tribal differences were to merge. With the later Roman Stoics this conception of a common Humanity, a corporate existence of which all were members, became far more prominent. It was emphatically enforced by St. Paul and by other leaders of the Christian Church; though in this case partly neutralized by a narrow doctrine which has left a fatal legacy of prejudice behind it, that Christian nations have a natural and prescriptive right to domineer over nations and races of other creeds. With many drawbacks, many counter-currents, many relapses into the old competitive piracy and savagery, the world has nevertheless been continuously tending towards an ideal of universal peace, to be attained not by the predominance of a single race—be it Anglo-Saxon or any other—but by the establishment of friendly relations between all. Observe that this ideal is something quite different from the vague philanthropy which just now is very popular. Such philanthropy has often been in the past a cloak for aggressive purposes, and now more so than ever. Under the specious veil of pity for the subjects of a Government not more imperfect than our own was in the Middle Ages, ambitious crusaders, with ends of their own to serve, have been able to drag their countrymen into schemes for depriving backward nations of their freedom and keeping them in perpetual tutelage. The ideal here spoken of is the adoption of the principle that the weaker tribes of men as well as the stronger should be maintained in their own corporate existence, and that patriotism should not be the monopoly of those who can defend it by the engines of scientific warfare.

Such an aim may seem hopeless amid the scramble for the newly discovered continent which is now stimulating the rapacity of every Western nation.¹ But we may remember that it was in the worst time of the religious wars that Henry IV of France and Grotius put forth, each in his own way, their schemes of international obligation, and that the atrocities of the Thirty Years' War ended with the great treaty² which for the first time laid it down that the weaker Powers of Europe should be placed under the protection of the strong. We who live in the light of that great truth can defend it to better advantage, seeing it to be in conformity with scientific law, a component part of the universal order which rules our planet. Above the brute forces of inorganic matter and organic life, resting upon them but rising above them, we see the social order, common to men of every creed and every colour, and

¹ Written in 1894.—ED.

² Treaty of Westphalia, 1648.—ED.

framed of the three stages of collective life—the Home, the Country, and Humanity.

IV

LAWS OF NATURE

IT is very commonly said and thought, even by those who look favourably on Positivism, that, although Comte speaks of his system of principles as a philosophy, yet in no part of his works does he touch on the points which are commonly regarded as specially distinctive of philosophy—namely, those most general and abstract truths which apply equally to all departments of thought, and which form at once the frontier and the foundation of our knowledge. There is a popular impression that all such questions were regarded by Comte as falling into the shadowy and evanescent region of metaphysics. And since in his law of the three stages¹ the second stage is commonly spoken of as metaphysical—a temporary and equivocal transition between the theological stage in which speculation commonly begins, and the positive stage in which it ends—inquiries into the foundation and limits of knowledge have been supposed to be discouraged by the Positive school of thought. Young minds of great power and promise have been, I believe, frequently deterred from the serious study of Positivism by the belief that it gave no assistance or encouragement to studies which yet have occupied the mental energies not merely of the greatest thinkers of antiquity, and especially of Aristotle, but of almost every speculative intellect of modern Europe, notably of those whom all regard as specially imbued with the Positive spirit—Descartes, Hobbes, Locke, Hume, Kant, Mill, Spencer.

Had those objectors studied Comte's writings with more attention, they would have found that the gap which they have been deploring has no existence. It must always be borne in mind that Comte died prematurely, leaving much projected work undone. The work which absorbed the greater part of his life was the creation of the science with which his name is specially identified, the science of sociology, and the application of it to the most urgent problems of our time. At the time of his death he was meditating his treatise on Human Nature, to be followed by a treatise on

¹ See p. 90 (note 1).

Education, by which he meant the management of life appropriate to each of its seven stages, from the cradle to the grave. In the first of these two treatises, of which we possess the division into chapters, and the title of each chapter, the problem of man's intellect would have been fully treated.¹ Meanwhile we are not left in doubt as to the general lines of that treatment, and as to the importance attributed to it by Comte in his system of education. In the third chapter of the fourth volume of the *Politique Positive*, Comte lays down the universal principles, fifteen in number, on which the Positive doctrine rests; summing up these principles under the title of *First Philosophy*.² Before laying down those principles he insists on their abstract character. A few words, therefore, on the question of abstraction.

Every object that we contemplate is a collection of various attributes. A stone has a certain shape, a certain colour, weight, temperature, chemical constitution, and so on. The distinction between objects and their attributes is called by Comte the distinction between beings and events. We may either consider the mass of events—i.e., actions or attributes belonging to any being—or we may dwell on some special event or attributes common to many distinct beings. The former process is called concrete contemplation; the latter is called abstract contemplation. These correspond, as Comte considered, to entirely distinct functions of the brain; and in his table³ of these functions he has allotted to them distinct organs. What takes place is of this kind: Impressions received by the organs of sense from the outer world are stored up in the nervous ganglion situated in the base of the brain connected with each sense-organ. The organ of concrete contemplation collects those impressions and combines them into the image of a being or object, this or that particular stone, tree, or dog. The images just formed are dealt with by the organ of abstract contemplation. They are taken to pieces, analysed, and each property common to several objects is regarded separately. Both kinds of contemplation go on in every stage of human development. Both, indeed, may be observed in animals. Obviously, animals, like children, soon learn to distinguish one being

¹ See *Pos. Pol.*, vol. iv, pp. 203–216. The plan of the treatises will be found in the following pocket edition of Positivist tables: *The Positivist Calendar and Other Tables*. (London: William Reeves; 1905.)—ED.

² See p. 47 (note).

³ This table occurs in the Appendix to vol. i of the *Pos. Pol.*, and in the *Positivist Catechism*. It will also be found in *The Positivist Calendar and Other Tables*.—ED.

from another. But not less certainly do they soon become capable of abstraction—that is, of distinguishing different events or attributes common to various objects. It was pointed out more than a hundred years ago by Georges Leroy that a dog warned off a field of corn will, supposing him trained, avoid in future similar fields. He has formed in his own way the abstraction of the cornfield. Similarly he has formed a clear and definite abstraction of the odour of game, and of many other facts connected with his daily life. From Leroy's immortal *Letters on Animals*, which are a storehouse of facts relating to animal intelligence, a single quotation may be made: "Animals, like ourselves, are forced to make abstractions. A dog which has lost his master runs towards a group of men by virtue of a general abstract idea which represents to him the qualities possessed in common by those men with his master. He then experiences in succession several less general, but still abstract, ideas of sensation until he meets the particular sensation which he seeks."¹

The foregoing remarks will prepare us for considering the subject of this paper. What do we mean when we talk of a Law of Nature? There is a sense in which the thought is old as well as new. There has never been a time when men failed to recognize certain uniformities and regularities in the world in which they lived, and in their own souls, and the souls of those about them. Long before the life of men began, such things have been recognized by organisms far lower in the scale. The succession of day and night, of summer and winter, the qualities of water and grass, the odour of friendly or hostile races—these and countless other things, that made up the environment of their lives to which they had continually to adapt their actions, were implicitly recognized by them as constant. Any marked departure from the uniformity was a source of surprise and terror.

We have got so much into the habit of regarding Positivism as a new thing peculiar to the last few centuries that we forget the very real sense in which man has always been a Positivist. The common course of daily life was a continual compliance with laws instinctively perceived and obeyed. To hurl a stone or a javelin against his foe he must nicely adjust his muscular force to a given weight, a given distance, a given direction. To prepare his food he must choose the seed of a certain plant in faith that

¹ *The Intelligence and Perfectibility of Animals*, p. 107. This is the Eng. tr. of Leroy's *Lettres*, which was published in 1870.—ED.

it will reproduce after its kind—must place it in given conditions of soil and moisture and sunlight. In building a house, stone must fit itself to stone in conformity with the laws of geometry; wall and pillars must be adjusted to continuous downward pressure; in sailing a boat near the wind the play of the wind on the sail and the water on the keel are arranged in conformity with the law of equal action and reaction; and so onwards through each one of the arts of life. No arts could be learnt, no life maintained, except by constant obedience to mathematical, mechanical, astronomical, and physiological laws. And it is not merely in things outside man that uniformities are taken into account. Men soon find out that there are uniformities in character as well as in stone and timber. A brave man will be brave always, and may be trusted. A coward will always act like one, and may be thrust aside. Mankind has not waited for the science of sociology to arise before forming societies. The institutions of Religion, the Family, the Government, Property, arose thousands of years before men set to work to observe and analyse them.

It was when man stepped out of the region of practical life, when he began to form ideals, to construct theories about his position in the world, that the reign of fiction began. Two classes of facts called it into being—events that were uncommon and terrible; events that were inaccessible to human action. When men living on a mountain-side felt the ground shake, heard rumbling underneath them, and saw flames issuing from the summit, these things had to be accounted for; and there was no way so simple as to endow the mountain with human passions, and thereon followed the appeasing its wrath by sacrifices and prayers. Again, when men looked at the vault of heaven revolving round them daily, bearing with it bright bodies, some of which shifted their places from week to week in ways apparently capricious, the simplest hypothesis was to attribute human feelings and volitions to the sky and the planets; and thus side by side with the positivism of practical life grew up the theism of religious life by which all the critical periods of man's destiny were governed. As man's powers of abstraction grew so did his deities multiply, until, as we see in the religion of ancient Rome, there was hardly an attribute or a quality that was not provided with its special god. So the religions of the world arose. In every department of life that rose above the commonplace dead level in which daily wants were satisfied, in all dangers and perplexities, all meetings of the ways, all struggles of duty with passion, those higher powers intervened.

Such was the mental condition of Greece when Thales, Pythagoras, and a few others, brought into the world the new and momentous conception of abstract Laws of Nature. Let us try to define this conception more precisely. We may define a law of nature as the way in which the variations of one phenomenon, or event, are governed by the variations of another. Mathematically speaking, a law is an equation. Thus, when two variable quantities, x and y , are connected by an equation, if we make x vary in any way we please there will follow certain variations of y . In mathematical language y is said to be a function of x ; the equation takes the form $y = fx$. Now this is a perfect representation of what we mean by a law of nature. Take as an illustration the relation between the radius of a circle and the circumference. Whatever length we may choose to assign to the radius, the circumference will always be equal to this length multiplied by twice the quantity known as π . Similarly, the spaces described by bodies falling in a vacuum vary as the squares of the times, $s = \frac{gt^2}{2}$: g standing for the final velocity acquired in unit of time, a quantity which has to be found by experiment, and which varies at different points of the earth's surface.

A Law of Nature may be described in another way. We may speak of it as the discovery of constancy in the midst of change. Take, for instance, the law of Thales: the sum of the angles in any triangle is equal to two right angles. The variations in triangles are infinite: the sum of their angles is constant. This second form can, in simple cases, be reduced to the first: thus we may say any angle in a triangle is equal to the difference between the other two angles and two right angles. But this reduction is not always or often possible in practice. The two important points to bear in mind are: first, that laws deal with phenomena, or, as Comte expresses it, with events, and not, in the first place, with beings. A being, or object, is far too complicated, is the meeting-point of so many attributes or events, that it cannot form the direct object of scientific treatment. Each attribute must be considered singly. The second point is that each phenomenon may, and usually does, depend not on one, but on many others. In other words, the dependent variable is a function not of one independent variable, but of many. In this case what is done is to suppose all but one of these to be constant, and to solve the equation—*i.e.*, to find the law with regard to each in turn. A striking instance of this, pointed out by M. Laffitte in his admirable discussion of this subject,¹ is to be

¹ *Philosophie Première*, vol. i, p. 172.—ED.

found in Cabanis's treatment of the relation between the moral and physical nature of man.¹ Moral ideas are influenced simultaneously by age, by climate, by sex, by temperament, by disease, by the mode of living. To consider these simultaneously would lead to inextricable confusion, and would be utterly barren of result. Each variable has to be dealt with separately, the others meanwhile being supposed to be constant.

The lesson to be drawn from all this is twofold: the extreme importance of the discovery of Laws of Nature and also its extreme insufficiency. We have seen that to find a law of nature we have to leave the ground of reality, the region of concrete things, and find relations between abstractions. Fortified by the discovery of those relations, we have to pass back to the land of concrete reality with all its infinite complexities. Something more than science is needful here. We need the art of life. *Pour compléter les lois, il faut les volontés.*²

¹ *Rapports du physique et du moral de l'homme*, 1802.—ED.

² Comte, *Appel aux Conservateurs*. "To complete laws, we need wills."
—ED.

CHAPTER II

COMTE AND SPENCER

I

MAN AND THE UNIVERSE

LORD SALISBURY'S address to the British Association at their meeting in 1894 raises the question by the answer to which Comte's philosophy will stand or fall: Can we know the universe, or must our scientific knowledge be for ever limited to man and his environment? Comte maintained not merely that the universe was unknowable, but that the conception denoted by it was futile and incoherent.

His point of view is best explained by a familiar instance. We know that the law of gravitation holds good throughout our own solar system. If we ask ourselves how we know this, the reply of ordinary men is that the position of the moon and the planets as indicated by this law is predicted a year or many years beforehand in almanacs, and that no complaints are made by sailors and others to whom the accuracy of such almanacs is a matter of great importance. If there be an error in the statement of the law or in the calculations founded on it, men have the strongest possible interest in finding it out; but no such error is observable. So much for our own solar system. During the present century a slight knowledge of a few neighbouring systems has been attained. So far as it goes, that knowledge is consistent with the supposition that the bodies composing them gravitate in accordance with the same laws that prevail in our own world. But the evidence is hardly such as would have satisfied Newton, who, it will be remembered, set aside the theory of gravitation for many years on the ground that the data for it were mathematically inadequate, and that mere probabilities were worse than useless in such matters. As to the physical constitution of sidereal systems, considering that the nearest of them, if we take the solar distance as unity, is a hundred solar distances away from us, and that our knowledge of the constitution of the sun is still of the most rudimentary kind, it does not seem probable that we shall know much for many centuries

to come; possibly never. Assuming, however, that we possessed the data for calculating with mathematical precision the motions of many thousands of double stars; assuming that by methods as yet inconceivable we gained some knowledge of the numerous bodies which have ceased to radiate light; assuming that we could determine exhaustively their chemical elements; assuming, as an extreme hypothesis, that we could achieve this result for all the stars which photography could reveal to us—the obvious fact would remain that our knowledge of the universe would be mathematically overstated by regarding it as a wineglassful of water compared with the Pacific Ocean.

Observe that no attempt is being made to discourage the study of sidereal astronomy. Man is by nature curious, and he will strain his powers of knowing to the utmost. There will always be a small number of men who, having wealth and leisure, and not being pressed by urgent social sympathies, will devote their lives to travelling in untrodden paths; *Avia Pieridum peragrant loca, nullius ante trita solo*.¹ It is conceivable that some of their pursuits may be found a thousand years hence to throw unsuspected light on some problem affecting man's welfare. Others, perhaps most, will be barren. Yet the most fruitless need not be valued lower than the insatiate pursuit of comfort and enjoyment which engrosses the lives and thoughts of the unoccupied rich. All that is here contended for is that, if the study of sidereal astronomy is held up in popular scientific lectures as a stepping-stone to the comprehension of the universe, a fraud is committed on the public. The universe is unknowable, as unknowable as the Athanasian Creed.

Some centuries ago the universe was looked on not as infinite, but finite. It was regarded as a vast sphere containing other concentric spheres, the central kernel being the earth. From Aristotle to Galileo this view was held by the large majority of educated men. Dante's *Vision* shows how real the belief was. Beatrice leads Dante from the earth to the sphere of the moon, thence to those of Mercury, Venus, the sun, Jupiter, Saturn, and the fixed stars. Beyond this last there is nothing; space and time cease to exist. God is described as a luminous point radiating force and motion throughout the universe. Giordano Bruno and Galileo impressed on the European mind what Lucretius and his teachers had dimly suspected, that the universe was not finite, but

¹ Lucretius, *De rerum natura*, prologue to bk. iv. "[They] traverse the pathless haunts of the Muses, never yet trodden by the foot of man."—ED.

infinite. The discovery gave a shock to the Catholic faith from which it has never recovered. But, apart altogether from this momentous consequence, the acceptance of the Copernican system opened out two paths of scientific thought between which a definite choice had to be made.

One was the path chosen by Descartes. His celebrated theory, which dominated European thought for nearly a century, was an attempt to explain the universe on scientific principles. Given the elementary laws of motion, given a homogeneous ethereal substance pervading space, Descartes endeavoured to show that, by a gradual process of differentiation and evolution, the world must have come to be something very much like what we now see that it is. This was a very high mountain to climb, and it is needless to say that Descartes never reached the summit. But the effort was stimulating and bracing, and it had for a time the great advantage of co-ordinating intellectual effort and of showing the unity of method by which nature was to be investigated. In the hands of Descartes it yielded great results.¹

The second path taken was to abandon all attempts to explain the universe, and to deal specially with each class of phenomena as it came under review, with much concern for its relations to other classes. This was the course followed by Sir Isaac Newton and the other founders of the Royal Society and by many similar institutions with such splendid success. These societies have achieved great things. Almost all scientific discoveries, if not made by their members, are at least published through their agency. They form a channel through which inquirers into nature may communicate with each other; and thus they prevent the waste of time and energy which comes from doing the same thing twice over. What more can be wanted?

Yet it has been felt with increasing force during the present century that something more is wanted. The multiplication of scientific memoirs has been such as often to produce darkness rather than light. No one in any branch of science can possibly acquaint himself with all that has been done before him; for his purposes, therefore, it is often the same as though the work had not been done at all. In some cases it would seem to be the main object of the investigator to upset what has been done before him, repeating an observation of small importance with some slight

¹ See Dr. Bridges' biography of Descartes in the *New Calendar of Great Men*, pp. 482-85.—ED.

addition of accuracy. The sense of proportion is lost. The attempt to estimate the relative importance of discoveries is abandoned, with the inevitable consequence that immediate application to the industrial arts becomes the sole test of their value.

Yet, if science is to play the part which early in the nineteenth century Comte and others had assigned to her; if she is to supply the foundation on which human institutions are in future to rest; if she is to supersede theological faith as the source of those common thoughts and convictions by which men are henceforth to direct their common action—something more is needed than the heterogeneous medley of scientific memoirs which are poured forth every year in the proceedings of academies and of scientific congresses. There must be some binding, co-ordinating principle, something in the nature of a synthesis towards which all this analytical work, however freely and spontaneously conducted, shall be seen to converge. The question is, What form shall such a synthesis assume?

There are two kinds conceivable, though one only can effect the purpose. First, there may be a renewal of Descartes's attempt to present a picture of the universe. Humboldt's *Cosmos* and the first volume¹ of Mr. Spencer's *Synthetic Philosophy* are examples of what can be done in this direction. Humboldt's work is little more than a picturesque description of external nature by a man of vast knowledge; it is now nearly forgotten. Mr. Spencer's effort is more ambitious and far-reaching. He lays down, like Descartes, principles of action which have operated from the beginning of time, and which continue to the end—such as the persistence of force, the passage from the homogeneous to the heterogeneous, and so on. He undertakes to show that on these principles gradual differentiation and integration of a homogeneous medium pervading space would proceed, and would result in the solar and sidereal system that we see around us, and that the continuous operation of the same forces will result in final dissolution—that is to say, in reversion to the uniform ethereal medium from which evolution originally started. This alternation of evolution and dissolution is to go on for ever. Few, or none, are the recognitions to be found in this series of speculations that it lies hopelessly beyond the sphere of our knowledge. Constantly it is repeated that beyond the sphere of the Knowable lies the sphere of the Unknowable—a sort of passive Deity, who, like Atlas, bears the world on his shoulders

¹ *First Principles*.—ED.

without interfering with it. But the speculations I have been speaking of are regarded by Mr. Spencer as falling within the sphere of the Knowable.

This, then, is the first kind of synthesis, technically called Objective. The thinker stands outside the universe, looks on it as it were from a distance, and informs his fellow-men how it arose and grew and how it will one day disappear. Unhappily this implies such an approach to omniscience as we do not appear likely to obtain. Take, for instance, one of the simplest facts in nature—the fall of a stone to the ground. How it falls Galileo and Newton have told us; why it falls we are as ignorant as in the days of Aristotle. Physicists are unwilling to believe in forces acting at a distance, in a pulling force exerted by the earth on the stone, or by the sun upon the earth. A force of pressure from without is the only alternative; and this was the supposition of Descartes in the seventeenth century. It may be so, only we are not in a position to measure this pressure. We cannot get outside the world so as to test it. And if we cannot understand so simple a thing it is not surprising that we should not understand how it was that life came upon the earth, or what were the forces which in a million centuries transformed a speck of jelly into a fish, a bird, or a man.

It would seem beyond the power of the physicist or the biologist to frame a synthesis of scientific conceptions except by the use of suppositions as hazardous and undemonstrable as the cosmogony of Moses or the Brahmins. It remains to be seen whether a better co-ordination may not be effected on a wholly different plan—the plan of regarding man's social and moral life as the central object of intellectual effort, and of ranging other branches of knowledge—biological, physical, or mathematical—in relation to this centre. Cosmic Evolution as it is called—the attempt to conjecture how the universe came into being and what will happen to it a million centuries hence—does not offer any principle of coherence. Such conjectures are the fireworks of what is sometimes, though wrongly, called the scientific imagination; they occupy a sort of mid-region between science and poetry, in which the best qualities of both are usually lost. The test of poetry is that by choice words, rightly ordered, it shall widen and deepen our sympathies, that it shall lift us to a higher spiritual atmosphere, and thus make us fit to discern those fine shades of character and circumstance which mark the difference and also the kinship between man and man. The test of science is that it shall enable us to predict, within certain limits, the natural course of events, with the ultimate purpose of modifying

these events when modification may be possible, of wise adaptation to them when it is not. Measured by such tests, the cosmogonies of Haeckel, Spencer, and other imitators of Descartes seem to me failures, whether as poems or as scientific memoirs. They neither stir man's soul nor guide his judgment.

In contrast with attempts to explain the origin of the universe or of life, which may be conveniently classed as *Objective* syntheses, is the *Subjective* or human synthesis proposed by Comte. Assuming the knowledge of man as the central field of inquiry, and the service of man as the highest object of desire, it ranges the truths of science according to their nearer or more distant relation to man's social and moral life. Comte's meaning and purpose may be best grasped if this synthesis is regarded as a scheme of education framed with the view of rendering intellect subservient to the highest interests of man.

The only valid objection to such a synthesis is the doubt felt by many whether, if adopted, it might not be too restrictive of scientific research. It is an objection of grave moment. If sustained, it would be fatal to all hopes of rallying the best intellect of Europe to the cause of social regeneration. If exact science were to be thrust into the background, if the only intellectual pursuits held in honour were the more or less useful collections of historical or industrial facts dignified with the title of economic and social sciences, physicists and biologists might well shrink from a scheme of higher education which led to such a result. Let us see if this be so.

The first condition to be fulfilled by a Synthesis is that it shall rest on a satisfactory groundwork of Analysis. An impression has been widely spread that the acceptance of certain principles at which Comte arrived dispenses his disciples from following in his footsteps, from patiently examining the laws of nature for themselves, from closely scrutinizing the methods followed by the great masters in each leading branch of science, and from making any attempt at further progress along the same or similar paths. Honestly examined, the whole tenour of Comte's writings from first to last is alien to this view. A bare reference to his political maxim¹ should be decisive. Order without Progress is as inadmissible in science as in politics. And Synthesis dissociated from Analysis means Order without Progress.

Of course, there is another side to this matter. The ethic of

¹ *Ordre et Progrès*. See p. 156 (note).—ED.

Comte, like the ethic of Jesus which it embodies and supplements, may and will be adopted and practised by thousands to whom his philosophy will remain for ever a sealed book. "Better be a poor ploughman who serves God than a proud philosopher who knows the courses of the stars and cares not how he lives." So says the author of the *Imitation*, one of the choicest of Comte's choice books,¹ and so have said, each in his or her own dialect, all sane men and women from the foundation of the world. None the less true is it that the proud philosopher may give to his fellows something more rare and precious even than the ploughman's wheat; for man does not live by bread alone. And if the school of thought, feeling, and action to which we give the name of Positivism is to continue as an operative force during the twentieth and succeeding centuries, it is needful that there should be a sufficient number of men within that school who have trained themselves with some adequacy in the manner which I have attempted to describe; that is to say, who are prepared to ascend and descend the ladder of the sciences from Mathematics to Ethics with the steadiness and precision necessary to keep them in touch with the general current of intellectual progress in their time.

In physics, in biology, in sociology, the field remaining untilled is inconceivably vast, and division of labour in working it is carried to an extent that defeats its own object. Yet what Positivism has here to do is not blindly to decry and discourage the numberless researches that are being made by specialists. The work of Positivists is what Comte set forth in the opening lecture of that immortal course of lectures on Positive Philosophy to which men like Humboldt, Fourier, and Blainville listened with admiring sympathy. What was needed, he said, was that to the long list of bewildering specialities which enrich but which often fatally distract the intellect of our time, one more speciality should be added, consisting of systematic and continuous effort to bring new truths into harmonious relation with truths already reached; regard being always had to the proportionate importance of each in the education of the intellect for the highest service of man.² That speculations as to the origin of the universe and of life would be discouraged by such a scheme is true; not because some might consider them useless, but because they violate every canon of

¹ *The Imitation of Christ* is included in the last section of the Positivist Library.—ED.

² See *The Fundamental Principles of the Positive Philosophy*, pt. i, § 42.—ED.

scientific method. They are excluded on the grounds which exclude theological speculation, and on no other. They dissipate intellectual energy, of which the world has none too large a stock.

If any still fear that a body of teachers organized on the Positivist model might work in too narrow a groove, let them be reassured by another consideration. It formed no part of Comte's ideal that philosophy should be even in the most distant future the dominant factor in human affairs. The practical life of man, be it war or industry, will always absorb the larger part of his thoughts. Men will occupy themselves in the future far more systematically than in the past with the development of the physical resources of our planet. No one who has followed the recent course of chemical and electrical discovery can be in the least alarmed lest insufficient attention should be given to the scientific researches needed for the manipulation of the earth's elements, for the conservation of its mechanical energies, or for the rooting out of pestilent diseases. The fear is rather that, amidst the engrossing care for all that serves man's material progress, the studies that minister to his social and moral welfare should be thrown into the shade. What Positivists have to do is to see that in an age occupied, and rightly occupied, with the arts of Commerce and Industry, sufficient prominence shall be given to the Art of Life.

II

MR. SPENCER'S THEORY OF EVOLUTION¹

THE principle which permeates Mr. Spencer's philosophical treatise, and on which its claim to be called a "Synthesis" is founded, is the process called "Evolution." Not in living bodies only, but throughout the entire universe, this principle is, according to him, in constant operation. The first volume of the *Synthetic Philosophy* is in great part occupied with the proof of its universality. It seems worth while to examine the foundation on which so vast a superstructure has been imposed.

What is Evolution? According to Mr. Spencer, it is reducible to two elementary principles—1. The Persistence of Force; 2. The Instability of the Homogeneous. Of the first of these I will say little in this paper, merely remarking that under it are embraced

¹ November, 1895.

two things not usually associated—(1) the generalization reached by observation and induction of the conservation of energy; and (2) the fact that objects occupy a certain space—the fact spoken of by older writers as the impenetrability of matter. It is the second principle—the Instability of the Homogeneous—which will be here considered. In *Evolution* “matter passes,” says Mr. Spencer, “from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity.”¹ Of the principle that the condition of homogeneity is one of unstable equilibrium several illustrations are given. Scales, however evenly poised, tend after a time to lose their balance. A mass of matter heated to a given temperature tends to cool unequally. A lump of metal exposed to air oxidizes. Certain rock-formations show in their interior successive coats indicating weather-action. The atoms of a precipitate diffuse themselves unequally throughout the liquid from which they have been precipitated. Shellac varnish poured out on a sheet of paper soon exhibits a form of structure of a cellular kind. The stars are unequally distributed throughout space; in the Milky Way there are more than in the rest of the sky. In one part of the heavens there are more nebulae; red stars are more numerous in another part, blue stars in a third. As the earth cools from the state of primordial vapour, chemical compounds show increasing heterogeneity. (This last illustration is, of course, highly conjectural.) Such, in the inorganic world, are some of the instances of this principle. Passing to the organic world, we find it exemplified in the whole course of its development. A tree, consisting originally of a few simple cells, unfolds itself into branches, roots, leaves, and clusters of flowers. Hardly any structure can be discerned in a fertilized egg, yet it passes into the form of full-grown bird or beast.

Nevertheless, in view of the immense importance attached to this principle in Mr. Spencer's system, it seems well to ask whether it really holds good of the vast mass of natural phenomena. Is it a universal or even a general truth that “the condition of homogeneity is a condition of unstable equilibrium”?² It would seem that some of Mr. Spencer's instances hardly go to prove his case. When a surface of metal oxidizes under exposure to air, we have instability, not of the homogeneous, but of the heterogeneous. At the points where contact between two dissimilar bodies, air and metal, takes place we find instability and change. The interior

¹ *First Principles*, § 145.—ED.

² *Ibid.*, § 149.—ED.

of the metallic mass remains homogeneous and stable. Similarly the shellac, while enclosed in its vessel, fails to exhibit the changes which exposure to the air induces. It is the complicating circumstances of mechanical division and atmospheric action which develop the cellular structure. Take, again, the case of a nebula that may be supposed to have condensed into a meteorite. Its internal motion is dissipated; its temperature has fallen to absolute zero. Its composition we may suppose to be iron, or a mixture of iron and nickel. In that condition it may remain aeon after aeon. The equilibrium of its molecules will be disturbed by incident forces, as by radiant heat from the sun and stars falling unequally on various portions of its surface; but the equilibrium is stable, not unstable. After disturbance it is restored. In such a condition, apparently, the moon is now, has been for countless ages, and will remain, so far as we can see, for millenniums to come.

If we were asked to specify an instance of homogeneous matter, we could hardly do wrong in taking a sample of gold. Gold ornaments were dug out by Dr. Schliemann from the plains of Troy. Into the quartz rock or alluvial deposit whence the old miners took the metal we cannot go back; but from that time onwards how numerous and diverse have been the incident forces that have played upon it. The hammer and file of the primitive goldsmiths, the bodily temperature of those who wore the bracelets, the torchlight of Priam's palace, the heat of burning Troy, the forces of heat and moisture which have acted on them underground for three thousand years—all these things have disturbed the equilibrium of its molecules. But the equilibrium has been stable. The ornaments remain pure gold still, just as the lump of platinum, ordered by Act of Parliament to be deposited in the office of the Exchequer as the standard of a pound weight, remains a pound still. The crust of the earth consists of aggregates of matter, not absolutely, but relatively, homogeneous. Most of them are comparatively simple compounds of two elements, as in the case of silica, or of three, as carbonate of lime, and the like. Now, supposing that the St. Gothard mountain had been pierced by the ancient Romans or by the earliest races of pre-glacial man, is there any reason to think that the borings so extracted would have differed from those removed from the tunnel a few years ago? Passing from the earth's crust to its gaseous and liquid envelopes, we find two substances not absolutely homogeneous, but still of extremely simple composition and of uniform structure, which

have been exposed for countless ages to the play of very varied forces—gravity, heat, light, electricity, and the like. Yet here also the conclusion is the same. There is no reason to suppose the constitution of the atmosphere or of the sea to have materially altered during the time that man has lived upon the earth.

It thus appears extremely doubtful whether the doctrine of the Instability of the Homogeneous, one of the two pillars by which the philosophy of Evolution is supported, be a true one. That the equilibrium of homogeneous matter is subject to continual disturbance is, of course, certain. Every incident force disturbs it. But that the equilibrium is unstable is a far more disputable thesis. It would be hard to show that masses of heterogeneous matter are more stable than masses of homogeneous matter. Many facts could be adduced to the contrary. Contact of dissimilar substances gives rise to disturbances that would not have taken place had the substances been similar. Though some alloys are extremely stable, yet many metallic mixtures are far less stable than the metals composing them would be if left unmixed. It might be maintained, with considerable weight of evidence, that masses of matter are stable in proportion to their homogeneity, and inversely as their heterogeneity. But it is not needful, for the purpose in view, to advance any contrary thesis of this kind. The view here expressed is one of scepticism as to the possibility of summing up the facts of the cosmos in any single formula whatsoever. The vast superstructure raised by Mr. Spencer on so very slender a foundation has made it worth while to examine this foundation. It turns out to be not only slender, but unsound.

The aim of the *Synthetic Philosophy* is somewhat ambitious. Its final problem, in the words of its author, is "to seek a law of composition of phenomena, co-extensive with the laws of their components."¹ "We want," he says, "the law of the continuous redistribution of matter and motion,"² the "history of the appearance of things out of the imperceptible, and of their disappearance into the imperceptible."³ "We have not acquired all the information within the grasp of our intelligence until we can, in some way or other, express the whole past and the whole future of each object and the aggregate of objects."⁴

Again we ask the question, Is this aim attainable? Does it lie within the scope of human faculty to write the story of the sum of things, from the beginning to the end? In other words,

¹ *First Principles*, § 92.

³ *Ibid.*, § 93.

² *Ibid.*, § 92.

⁴ *Ibid.*, 2nd ed., § 93.

is an Objective Synthesis possible? To a student of the history of thought the rise, progress, decline, and fall of Cartesianism supply the answer. Descartes, two centuries and a half ago, attempted to construct the law of the "continuous redistribution of matter and motion." He tried to tell the "history of the appearance of things out of the imperceptible, and of their disappearance into the imperceptible." Like Mr. Spencer, he began by conceiving a homogeneous medium pervading space. He introduced the finger of God to implant a single simple motion within this medium. This given, he sought to prove that by a process of evolution, by the play of natural forces, all the phenomena of nature, from the solar system to the conformation of plants, animals, and men, would follow in due course. During the middle of the seventeenth century this conception reigned supreme, and it supplied an extraordinary stimulus to mathematical and physical discovery. Then came Newton's great discovery, which broke up the unity of the synthesis. The force of gravitation, and the demonstration of the way in which planetary motions were governed by it, would not fit into the Cartesian hypothesis. The progress of physics and chemistry during the eighteenth century made it more and more clear that each department of science had its own distinct methods, requiring its own observations and inductions, and was not to be spun out in a philosopher's study by any monistic principles. Some labour was expended by Laplace in bringing the facts of chemical attraction within the range of the law of gravitation. But the effort failed utterly. In chemistry we have to study separately seventy different kinds of matter, availing ourselves, no doubt, not merely of directly chemical methods of research, but of the biological methods of comparison which in recent years have thrown light on chemical science.¹ But vague principles like the Instability of the Homogeneous do not help us forward an inch. So far as we know, all the seventy elements are stable. Some are more ready to enter into combination than others; some are more indifferent. But, so far as we know, they have remained the same throughout the earth's history. The qualities of each one of them have to be determined by special researches. No convenient generalization will dispense us from this duty.

¹ Dr. Bridges refers to the work of Newlands, L. Meyer, and Mendeléeff on the natural classification of the elements.—ED.

REMARKS OF MR. SPENCER ON THE FOREGOING PAPER¹

Dr. Bridges says that, "according to Mr. Spencer, Evolution is reducible to two elementary principles"—"the persistence of force" and "the instability of the homogeneous."

1. The persistence of force is not represented by me as an elementary principle of Evolution, but as an elementary principle underlying all physical changes whatever—Dissolution just as much as Evolution.

2. Among several *derivative* principles which determine the order of physical changes, there are two which are directly concerned with Evolution—the Instability of the Homogeneous and the Multiplication of Effects, the last of which Dr. Bridges does not mention.

3. But neither of these is the primary principle of Evolution, as will be seen on reading the definition given on p. 396 of *First Principles*²: "*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.*" The first clause of this definition, marked by italics, which is ignored by Dr. Bridges, is that which expresses the primary and universal trait of Evolution; while the remaining clauses express secondary traits, which, though extremely general, are, for reasons shown, not universal. In the chapters on "Evolution and Dissolution" and "Simple and Compound Evolution" this truth is variously set forth.

4. The definition states that the change (not from homogeneity to heterogeneity, but from *indefinite* homogeneity to *definite* heterogeneity—an all-important distinction) is one which takes place "*during*" the integration of matter and dissipation of motion. No other increase of heterogeneity than that which accompanies progressive integration is said to be a part of Evolution; other increases of heterogeneity (always *indefinite*, however) often form a part of Dissolution (pp. 362-4).

5. In the chapter on "Equilibration" it is shown that the process of Evolution, as above defined, ends in equilibrium, and that an evolving aggregate, having reached this state, thereafter continues without further change until there is set up the counter-process of Dissolution; which may commence in a few days, as in an

¹ *Positivist Review* of January, 1896.—ED.

² Second edition.—ED.

organic body, or may be postponed for millions of years, as in the inorganic components of the earth's crust (p. 526), or may be postponed, as in the case of celestial bodies, for probably billions of years, if we accept the views of Lord Kelvin and others. But, in any case, the hypothesis implies that, when the transformations accompanying the integration of matter and dissipation of motion have been gone through, no further changes of structure are to be looked for till Dissolution commences.

The objections raised by Dr. Bridges result from overlooking one or other of these propositions set forth in *First Principles*.

REPLY TO MR. SPENCER¹

It was no part of my purpose to deal *in extenso* with the complete theory of Evolution propounded in Mr. Spencer's philosophical treatise. Such an attempt would have been futile within the limits of a paper, or of a series of papers, in this *Review*. I had been dealing, not with Mr. Spencer's general theory of Evolution, but with that special part of it designated as the "Instability of the Homogeneous." This Mr. Spencer speaks of as one "among several *derivative* principles which determine the order of physical changes," and one of "two which are directly concerned with Evolution." I am not quite clear in what sense this principle is called "derivative." But it is certain that much is derived from it. Readers of *First Principles* are well aware of the prominent position which it occupies. The purport of my paper was to inquire how far this principle can be regarded as well founded. It must rest, like every other physical law, upon inductions from facts. It appeared to me, and still appears, that facts do not support it. The whole science of chemistry seems to me to show that heterogeneous matter is, on the whole, less stable than homogeneous. Binary compounds are less stable than elements, and more stable than quaternary compounds. So complex a substance as albumen, consisting of some hundreds of atoms, is even more unstable.

To inferences from such facts as these an answer is suggested by Mr. Spencer. The stable substances of which I spoke may be regarded as having arrived at a state of equilibrium. "An evolving aggregate, having reached this state, thereafter continues without further change until there is set up the counter-process of Dissolution." In the case of the inorganic components of the earth's

¹ *I.e.*, Dr. Bridges' reply to Mr. Spencer's criticism of his paper.—ED.

crust, this latter process may be postponed, Mr. Spencer goes on to say, for millions of years. But does not this way of looking at the matter remove the question altogether from the domain of scientific observation? Our knowledge of what may have happened millions of years ago, of what may happen millions of years hence, is not likely to be other than shadowy. We can only examine to any fruitful purpose matter as known to us within the few thousand years of man's recorded experience. To say of homogeneous matter, when shown to be stable, that this is because it is in a state of equilibrium, strikes me as little more than a verbal escape from the controversy. We can only speak of matter as presented to us within the range of man's knowledge. Is the homogeneous matter which we see around us more or less unstable than the heterogeneous matter? That, and that only, was the question to which I attempted a reply.

Consideration of this question suggests a further and a larger one—How far is the process of Evolution rightly attributed to the inorganic world? The hypothesis of Descartes, that at some time a homogeneous medium filled space, and that from this medium the universe as we know it has been gradually evolved, has been put into mathematical shape, at any rate so far as the solar system is concerned, by Laplace;¹ but it remains a hypothesis still. It is not amenable to proof or disproof.

With the organic world, how striking is the contrast! There, in every animal born into the world, in every germinating seed, in every bud of every tree, the process can be watched and traced at all stages. Ontogeny, the growth of individuals, throws light on phylogeny, the succession of species. In one case, as in the other, the motive forces may remain long hidden from us, perhaps may never be fully revealed. The Newton of organic life may be long in coming. But the work done by Kepler for the solar system, the tracing of the path followed by life upon our planet, has already in great part been accomplished.

III

CLASSIFICATION OF THE SCIENCES

"A TRUE classification," says Mr. Herbert Spencer, in his well-

¹ In his nebular hypothesis.—ED.

known criticism of Comte's philosophy,¹ "includes in each class those objects which have more characteristics in common with one another than any of them have in common with any objects excluded from the class. Further, the characteristics possessed in common by the colligated objects, and not possessed by other objects, are more radical than any characteristics possessed in common with other objects; involve more numerous dependent characteristics."

Accepting Mr. Spencer's proposition as a starting-point, it seems worth while to examine whether the classification proposed by him fulfils the object in view more effectually than that set forth by Auguste Comte. Mr. Spencer arranges the sciences in three distinct groups. Group A includes Logic and Mathematics under the head of Abstract Science. Group B, termed Abstract-Concrete Science, takes in Mechanics, Chemistry, and Physics commonly so-called, including the sciences of Heat, Light, Electricity, and Magnetism. Group C, spoken of as Concrete Science, includes Astronomy, sidereal and solar, Mineralogy, solar and terrestrial, Biology, and Sociology. The science of Ethics finds no place. It will be seen that Astronomy is entirely separated both from Mechanics and Geometry, and is placed in the same group with Geology, Mineralogy, Biology, and Sociology; that Logic and Mathematics hold an equal rank in the first group, and that Geometry and Mechanics are placed in totally distinct groups. It seems questionable whether the canon of placing together those objects which have more characteristics in common with one another than they have with objects excluded from the class has been complied with.

In contrast with this scheme of classification we find that the method adopted by Comte is serial: the terms are consecutive, following each other on the principle of increasing complexity and diminishing generality.² In examining the series, therefore, we may begin at either end. And in the first place we may find it convenient to begin with the most special and complex term, that which is the final goal of our intellectual efforts, the study of the conduct of civilized man, commonly called Moral Science or Ethics. The advantage of beginning at this end is obvious. No object of research can possibly be so important to man as that which promises guidance to his life and action. Classification, let us always remember, is not knowledge; it is only an instrument

¹ *The Classification of the Sciences: to which are added Reasons for dissenting from the Philosophy of M. Comte; 1864.*—ED.

² See p. 162 (note 2).

helping the acquisition of knowledge. And be it further remembered that knowledge is not an end in itself. Right action is. Fixing our eyes in the first place on the summit to be reached, we shall be the better able to estimate the steps needed for reaching that summit.

Now, it is evident that Man, considered as a moral agent, is dependent on civilization which surrounds him, and which supplies the framework of his life. The land he lives in, the nation into which he is born, its laws, its habits, its religion, fix certain limits to his action which he cannot pass any more than he can jump off his own shadow. Within those limits he may act well or ill on the impulse of noble ideals or enslaving passions. So that Ethics is not a mere branch of Sociology; it has a sphere of its own. Man is not the *slave* of his surroundings. He is a free agent within the limits which those surroundings determine. But, though Ethics is distinct from Sociology, it is largely dependent on it. Our life and action is moulded for good and for evil by the life and action of the community to which we belong.

Sociology, containing the laws governing the collective action of human beings, is evidently something more than a branch of Biology. It has data and inductions of its own. It has in the first place to consider those elementary relations of family, of government, of property, of language, which render the simplest community possible and permanent. And, in the second place, it has to deal with the force exerted upon each generation by the accumulated actions of the generations which have gone before it. It is therefore a distinct science. On the other hand, the collective action of human beings cannot be adequately defined without preliminary knowledge of the constitution of the beings who are acting in common. Sociology is a higher mode of vitality dependent on the laws common to all vitality. Underlying the relations of man with man are the instincts, passions, capacities, and needs shared by man with other animal races. The social history of man depends on the natural history of man. Sociology rests on Biology.

Few words are needed to show that the laws governing organized beings are incomprehensible apart from knowledge of the inorganic world. Every act of a living body is a physical or chemical phenomenon. The very essence of life is the series of actions and reactions between organism and environment. Regarded as a series, it is entirely distinct from any sequence of actions seen in inorganic nature. It is therefore the subject of a distinct science. Nevertheless, till chemistry was founded by Lavoisier and his

contemporaries, till the composition of air and water was known and combustion became intelligible, no scientific study of life was possible. Biology is thus dependent on the sciences summed up in the word Cosmology; the laws of the inorganic forces in the earth around us, the arrangements of the solar system governing the distribution to the earth of pressure, of light, of temperature.

And finally the study of these forces is subordinate to the laws of number and space, which alone constitute complete knowledge. A law of nature, when perfectly determined, implies that the relation established by the law is defined with numerical precision. Given the height from which a body falls to any given point of the earth's surface, we are able to predict the precise duration of the fall. Given the diameter of a sphere, we can assert its area and its content.¹ Laws of this kind are types of ideal perfection in science, only to be reached when the phenomena between which the relation is established are of the simplest and most general kind. In other cases certainty is attainable, but precision is not. Biological laws are not inferior in certainty to those of solar astronomy. It is as certain that each one of us will die as that eclipses of the sun will occur as set down in the almanac. But the time of the eclipse can be predicted within three seconds; not so the time of our death.

To pass, as we have been doing, from the final and most complex term of this scientific series to its simplest initial term facilitates the reverse process by defining from the outset its directly human purpose. Following now the order from simple to complex, from general to special, we begin with the phenomena common to all objects without exception—those of number, space, and motion. We come next to the analysis of the facts of the world we live in, including the facts of our planetary system so far as they affect that world; each class of facts or properties becoming the subject of a distinct science. We pass finally to the facts peculiar to living inhabitants of the world. Beginning with those common to all living bodies, we pass to those distinctive of animal life, rising from the lowest grades of the scale to the highest; in this last, considering further the facts peculiar to combinations of lives,² and ending finally with the facts of individuals as moulded by collective life.³

In this serial arrangement of the sciences, the first point to be

¹ Cf. p. 170.—ED.

² The facts of Sociology.—ED.

³ The facts of Ethics.—ED.

noted is its orderly and homogeneous character, and the simplicity of the transition from each term to that which follows. The series is discontinuous; each science has inductions of its own, while each depends on the deductions received from that which precedes it in the scale. Especially in the transition from Cosmology to Biology is the discontinuity to be noted. No arrangement of inorganic forces that we can devise will produce life; though each act of life involves the play of one or more of these forces. A second and more important point to be noted is that the laws of which the arrangement is considered are abstract, not concrete. We are dealing not with objects, but with properties common to groups of objects. In the case of Mathematics this is obvious. Nor is it less so in the case of Physics. Here what is examined is not this or that mass of ice, this or that burning body, but the laws of heat; similarly in the case of weight, sound, electricity, chemical affinity. But we are met here by the objection that between Mathematics and Physics Comte interposes the science of Astronomy; the examination of bodies other than our earth. Evidently, if Geology, Mineralogy, Meteorology are concrete sciences, each of them dealing not with a single inorganic force, but with a complex result of many of them, the same must be the case with the natural history of the stars, their distribution in space, their evolution from an undifferentiated or slightly differentiated nebula to the complex of numerous chemical components of which we are beginning to have some vague and imperfect knowledge.

There would be no answer to this objection unless we made it quite clear what we understand as the content of the science of Astronomy. If we mean by it the study of all the bodies visible in the heavens, we are obviously embarking on a vast abyss of composite researches to which no limit can be assigned, and which leads to regions infinitely remote from human interests. But sidereal astronomy forms no part of the *scala intellectus*—the ladder of the sciences constructed by Comte as an instrument for bringing scientific method to bear upon human life. Considering that with regard to all but an infinitely small fraction of the stars visible through the telescope or through the far-reaching process of photography we have no adequate ground for asserting that their motions are regulated by the law of gravitation, it is plain truth to state that they lie beyond the scope of science. Nor can we conceive them brought within this scope except on the condition that the same scientific process which should achieve

such a triumph should, at the same time, reveal new series of worlds yet more numerous, remote, and inaccessible.

Astronomy, as understood in the Comtian scheme, is limited to the humble sphere of the solar system, in which those few celestial bodies which most nearly influence terrestrial life illustrate the laws of form and motion which we have learnt in mathematics, uncomplicated by the phenomena of temperature, atmospheric pressure, and the like, which in terrestrial physics render each problem so refractory to exact solution. Looked at from the mathematical side, astronomical laws form a series of illustrations of geometrical laws. Looked at from the human side, they throw indispensable light on the conditions of human existence, which any considerable change in the inclination of the earth's orbit, in the velocity of its rotation, or in the size and distance of its satellite, would modify or subvert.

In Mr. Spencer's classification laws of Motion are placed in one of his fundamental groups, laws of Physics in a second, Astronomy being ranged with Biology and Sociology in a third. It is difficult to see what purpose is served by such a scheme. To say that the sciences of the third group are concrete, those of the first being abstract, and those of the second partly abstract, partly concrete, is not satisfying. The Biology which in Comte's plan forms the link between the study of the World and the study of Man is abstract biology, not concrete. It is the study of life as found in all organisms, not the study of the life-history of any particular organism. Abstraction admits of degrees. Admit that the simplest fact of life implies the combined play of many physical forces, it remains none the less desirable to abstract the conception of life as found in all organisms from the study of a special form of life as seen in any one organism. In this sense Biology may be as abstract as Physics or Chemistry. The analysis, for instance, of organs into tissues implies the abstract consideration of the vitality of each tissue—an abstraction which corresponds to no concrete reality.

It is the same with Sociology. The complexity of the simplest social fact is far greater than anything met with in Biology. None the less is it possible to abstract from the phenomena presented by various actual communities the characteristics common to all in every phase of their evolution; and again, from studying the concrete evolution of many, to arrive at the abstract laws of evolution which all tend more or less completely to follow. Here, as in Biology, we have to analyse the organism, and make

a separate study of each tissue composing it. Family life, property, language, the rise of spiritual and temporal government, have all to be examined separately, though obviously they have no separate existence. The history of man or of any nation does not reveal the laws of evolution. All that it can do is to supply the material from which, by abstraction and generalization, these laws are to be inferred. To predict the action of any particular nation, or even to explain its past action, is a problem of vastly greater complexity usually transcending human powers. Considerations of race, climate, external circumstances, intervene, just as atmospheric resistance interferes with the prediction of the path of a cannon-ball.

At the summit of the scale¹ we find the meeting-point of abstraction and reality, of practice and theory, of art and science. It is only in a qualified sense that we can speak of the science of human conduct, although it is certain that, with every advance towards perfection, man's action becomes more and more capable of prediction. If we conceive as a Utopia a society of perfect men, conduct would at once become free and certain.

On the whole, then, it would seem that Comte's purpose in framing his classification of the sciences was not to present an explanation of the Universe, but the aim of rendering the sciences more and more amenable to the service of Man.

IV

THE PHILOSOPHY OF COMTE²

POSITIVISM is an attempt to systematize human life upon the basis of such knowledge as is available to Man. The Positive Philosophy presents that basis. The word *philosophy* implies the *ensemble* of the methods of inquiry, and of the most general of the results arrived at. Philosophy and science are not separate departments of thought. They are but different ways of regarding the same thing. The streets and houses of a city may either be regarded as separate objects or as parts of a whole. The former point of view corresponds to the scientific, the latter to the philosophic standpoint. Philosophy is an *ensemble* of scientific truths. What is

¹ Ethics.—ED.

² A posthumous paper read before the Aristotelian Society in 1881.—ED.

unscientific is *ipso facto* unphilosophic. A city is made up of streets, houses, and men, not of clouds, fogs, and haloes. Of discussions about the "*absolute ego*" it may be doubted whether they are entitled to the term philosophical, since they do not correspond to any scientific truth.

Positivism is then in the first place phenomenistic, as opposed to ontological. It deals with appearances; not merely with what appears to the eye, to the ear, or to the fingers, but with inward appearances also. A dream is an appearance; hunger is an appearance; a fit of anger is an appearance. These things form matter for scientific inquiry, therefore for philosophical discussion, no less than a flash of lightning, or a fossil skeleton, or a language. The order in which these appearances present themselves, the ways in which they coexist, or succeed one another, form the subject-matter of science, and therefore also the subject-matter of philosophy. For, to use my former simile, if houses are built of bricks and stones, so are cities.

Many schools of philosophy have said: These things are appearances, shadows of realities merely; your business is to go behind, and see the real things of which these are the shadows. Go still farther, Plato would have added, and see what the light is which casts the shadows.

To this the Positivist has but one answer: We have tried, we find we cannot; therefore we do not try any longer. Do not accuse us of denying the reality of these underlying things: we neither deny them nor assert them; we simply say that we have no means of finding out anything about them; this being the case, we think it an idle waste of words to talk about them. Our predecessors tried to find out something about the matter during a long course of centuries. It is for us to profit by the experience of their failure.

Other schools of philosophy say: We, like you, are Phenomenists. We give up the discussion of underlying substances. We, like you, limit ourselves to appearances. What causes these appearances may be God, or Force, or Will, or anything you choose to imagine. But we abandon the inquiry into these things because our powers are entirely insufficient to deal with them. In this respect you and we are at one.

But—they continue—these appearances, whether hunger, or thirst, or love, or anger on the one hand, or sticks and stones, trees and houses on the other, are reducible to feelings; to facts of consciousness. The business of the philosopher, then, is to analyse consciousness.

To this the reply of the Positivist is: Yes, certainly, provided only you can do it. But you must allow us to be somewhat sceptical on this point. There is a peculiar difficulty which meets us at the outset, which is this: It is hard to be at one and the same time the analyser and the thing analysed. If I devote the whole force of my mind to meditating on some difficult problem, I cannot at the same time be thinking how I am meditating. If I am to think how I am thinking, the subject-matter of my thoughts must be of the most elementary kind, as that two and two make four, or that the whole is greater than its parts. So that this self-analysis of thinking fails me just at the times when it is most wanted.

You are thrown back, therefore, on the memory of past processes of thought. And there can be no doubt that such memories, carefully recorded, like careful records of dreams, do form valuable material for scientific thought. But in the Positive Philosophy they occupy a somewhat secondary and subordinate place. The process of analysing, not consciousness, but memories of consciousness, has not shown itself so fruitful, so fertile in result, as to warrant the very high claims sometimes made for it. And one reason amongst others is that by far the larger part of mental processes are performed unconsciously. In very many great discoveries, in very many great poetic creations, in the strongest storms of passion, in the most strenuous exercise of will, there is no consciousness, therefore no memory of consciousness: therefore nothing to analyse.

Relegating, then, the criticism of consciousness to a subordinate place, Comte considered it more profitable to investigate the laws of Mind by examining the results which mind had achieved. And this is to be done, not by taking any individual mind, but by considering the whole procession of minds throughout history. Hence the frequent identification, which has puzzled so many of Comte's readers, of intellectual laws with sociological laws. An intellectual product, a scientific discovery of any kind, is a sociological fact. It is the result of slow evolution, of the working together of many minds in a sufficiently-adapted set of circumstances, throughout many generations. Taking a broad view of the facts presented by history, Comte was led to the conclusion that the mind dealing with the facts presented to it changed its point of view according to a definite law.

That law was the well-known law of the three stages: this tendency of the mind to resort in the first place to fictitious

explanations of phenomena derived from the attribution of its own internal emotions to outward objects; to limit itself in the last place to finding out laws, or general facts, of coexistence and succession; and, between the first stage and the last, to pass through a set of intermediate stages called by Comte metaphysical, in which abstractions and long, obscure words were made to do duty for facts and realities.¹

Here, then, is an attempt at presenting a law of Mind: a law of the evolution followed by Mind. But observe that this law is only to be discovered in the collective mind of the race. In individual evolution it is only traceable after the evolution on the grander scale has opened our eyes. So that in the Comtian philosophy the study of mind is inseparably bound up with the study of the social evolution. It cannot be separated from it. Mind, in all its higher manifestations, is a social phenomenon.

To take another illustration. In attempting the problem which Gall had previously attacked with such very indifferent success, of defining the separate and distinct functions of the brain, the newest part of Comte's work was his description of the intellectual functions.² Of these Comte distinguished five. For my present purpose I will only mention two of these: the function of induction, or generalization; the function of deduction, or co-ordination.³ To these, as to all other elementary brain functions, Comte allotted, provisionally and hypothetically, distinct regions of the brain as organs. Now, I am not about to discuss Comte's hypothesis of cerebral organs and functions. I pass it with the bare remark that recent discoveries of science tend rather to confirm than to invalidate the conception of a possible phrenology. But the point to which I wish to call attention is this: These two functions of induction and deduction are far too slightly marked in animals or in the great majority of individual men to be appreciated, at least in the first instance, in them. To discover and distinguish them we need the examination of the greatest intellectual work done by a long succession of great thinkers: we need to study the history of Discovery, as presented in a long series of generations.

Thus the conception of Humanity enters into the Comtian method of thought no less than it forms the centre of the Comtian theory and practice of social and moral life. The set of phenomena

¹ Cf. p. 90 (note 1).

² See *Pos. Pol.*, vol. i, pp. 571-84.—ED.

³ *Ibid.*, p. 581.—ED.

which we call mental are to be studied in the collective organism with far greater profit than in the individual organism. To attempt a solution of the highest intellectual problems by analysing individual consciousness is like attempting to define the physical character of the Thames river basin by looking at a bottle of water filled at London Bridge.

This point of view disposes of one of the objections which I have heard made against Comte's philosophy—namely, that it is partial, that it is not sufficiently comprehensive. It devotes much consideration, the objector says, to one set of facts—the facts concerned with the collective evolution of mankind. But, important though these facts be, they form a very small fraction of the sum of things.

Certainly they do so. But I had supposed that the attempt to acquire a comprehensive knowledge of the sum of things was generally abandoned by modern thinkers as chimerical. I am writing from the point of view of one who believes theology to be impossible, and also ontology to be impossible—that is to say, that we have no knowledge, and can have no knowledge, of the ultimate causes that have brought about the sum of things that we call the World and Life. We are reduced, then, to the study of Man and his Environment; and whether we study Man in the first place on the larger scale of Mankind, or whether we analyse the consciousness of an individual, in either case we are dealing with a small fraction of the sum of things. Outside the most distant star that sends a glimmering ray to man's retina there lie immeasurable universes—only we have no means of studying them.

To sum up these few remarks, which, of course, deal, and that in the most cursory way, with one or two leading aspects only of the Comtian philosophy. It is, as it has been often described, to this extent a completion of the Baconian philosophy, that it is an attempt, and it is the first systematic attempt ever made, to apply the inductive method to moral and intellectual phenomena. It is no less iconoclastic than Bacon was, of the four idols of the understanding: those of the Tribe, the Den, the Market, and the Theatre. Bacon's description of these in the first book of the *Novum Organum* forms perhaps the best introduction to the study of Positive Philosophy.¹

As good an illustration as can be given of the spirit of Comte's

¹ Cf. pp. 45-46.—ED.

teaching in these matters is his way of regarding the principle of the uniformity of Nature—*i.e.*, of the existence of Law in every branch of phenomena from arithmetic to moral action. Now, Mr. Herbert Spencer attempts to deduce this uniformity from an *a priori* axiom, the contrary of which is unthinkable. That principle, with Mr. Spencer, is the Persistence of Force, including under the word *Force* space-occupying Force, or Body, as well as change-working Force, or Energy. "The sole truth," says Mr. Spencer, "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 organization of experiences. To this an ultimate analysis brings us down, and on this a rational synthesis must build up."¹

Now, Comte's mode of treating this principle of the uniformity of Nature is simply to regard it as an inductive generalization, slowly reached by the human mind after a long course of observation and meditation carried on for centuries, and only just reaching completion in our own time. We hardly realize how recent the conception really is. When I was a boy at Oxford, prayers for fine weather or for rain hardly moved a smile. The existence of Law in spiritual phenomena was being defended by a theological lecturer in the University pulpit; but the lectures caused considerable scandal through the University. Now, the thesis has become such a commonplace that the contrary of it, according to Mr. Spencer, is not thinkable. In this use of the word *thinkable* there lies the opposition between Mr. Spencer's philosophy and Comte's.

To the Positivist the contrary of the doctrine seems perfectly thinkable. And, indeed, the majority of the human race still think it. We are content to say that observation and induction, carried on through a long course of generations, show to us the existence of uniformity in every department of phenomena. We accordingly take it for one of our fundamental axioms.

Comte calls his work a Synthesis. Mr. Spencer calls his work a Synthetic Philosophy. The contrast between the two systems may be best understood by asking what is, in each philosophy, the keystone which holds the arch together? What is the unifying principle of the Synthesis?

With Mr. Spencer it is the Principle of Evolution and Dissolution. All things in the universe, from the smallest organism to the

¹ *First Principles*, 2nd ed., § 62.—ED.

vastest sidereal system, undergo a gradual change from indefinite homogeneity to definite heterogeneity. All things ultimately undergo the reverse process, and pass through a retrograde cycle of changes back again to primitive uniformity. Throughout the infinity of Time go on these successive alternations of Evolution and Dissolution. Such is the synthetic principle underlying and pervading Mr. Spencer's philosophical system.

The principle of Comte's Synthesis is, it need not be said, profoundly different. Abandoning all attempt to comprehend the sum of things as an effort wholly beyond our powers, it is content to regard human life in relation to its environment. But it maintains that human life can be best understood by study of the collective life of Humanity.

Entre l'homme et le monde, il faut l'Humanité.¹

Between Man and the World, we need Humanity.

¹ See p. 104 (note 3).

CHAPTER III

THE POSITIVE PHILOSOPHY

I

THE MEANING OF THE WORD "POSITIVE"¹

SURPRISE has been expressed that Comte should have used the word *Positive* to denote his doctrine. Would not *Humanist* have been a better choice? Indeed, almost any word would have been more suitable, it is thought, than one implying dry dogmatic assertion, or solid utilitarian comfort, rather than ideal aspirations for the good of mankind.

1. The paradox seems worth explaining. Let us begin by taking the more usual acceptations of the word, and let us see what follows from them. And first it will be clear that by *Positive* we mean what is *real* as opposed to what is imaginary or miraculous. "Real" comes from the Latin word for "thing," and it is used for all thoughts about things built up from material supplied from our own experience. If we are told of salamanders living in flame, or of a man being in two distinct places at the same moment, we say the tale is unreal. A man living in a hot climate, when told for the first time of solid water, thinks it a falsehood; he has no experience of such things. For him it is unreal till repeated testimony has supplied the place of experience. It may be said that a great part of our science deals with abstractions which are not real; such as length without breadth, length and breadth without depth, perfectly rigid bodies, perfect fluids, and so on. Here we take one phenomenon or fact from the bundle of facts in which we find it, and examine this fact and others like it so as to discover their laws or the properties which they hold in common—the laws of space, of weight, of heat, and so on. When we say that a

¹ This paper is an exposition of the seven meanings attached by Comte to the word *positive*. See the *Discourse on the Positive Spirit*, Eng. tr., pp. 65-70; also *Pos. Pol.*, vol. i, p. 45, or *General View*, pp. 41-42; and *Appeal to Conservatives*, p. 46.—ED.

straight line is the shortest distance between two points, or that two sides of a triangle are greater than the third, we are evidently talking of something real. Though a straight line, in the strict sense of the word, length without breadth or depth, has no independent existence, yet it is a real fact or phenomenon found associated with others, and taken away, or, as we say, abstracted from those others for the purpose of scientific research. If we took a brick and considered all its attributes at once—its length, breadth, and depth, its weight, hardness, colour, conductivity of heat and electricity, chemical composition, and so on—we should make no way at all. All these things, in turn, are objects of so many different branches of scientific speculation. Each of these branches deals with something real, though our plan of abstracting each in turn from the complex whole to which it belongs is an artifice rendered necessary by the feebleness of our intellectual powers.

On the other hand, many of our abstractions are unreal, and lead to much vain and frivolous expenditure of intellectual energy. This comes from the need of using symbols to describe them, and from having no image to give vividness to the symbol. In the case of the concrete object—the brick, for instance—the word we use is, of course, a mere sign or symbol; but along with the word goes a mental picture or image of the thing which keeps our thoughts from wandering away from it and from confounding it with slates, tiles, and other building materials. But no such image helps us with the abstraction. Here the symbol has to stand alone. We have no picture of its weight, its chemical composition, its cohesiveness, and other qualities. It is in dealing with symbols pure and simple that unreality creeps in. A few instances will make this clear. In English grammar, as taught in our elementary schools, the child is taught that in such a sentence as this, "The bird builds a nest," the word *nest* is in the *objective case*—an abstraction totally incomprehensible, not only by the child, but by any intelligent person. In an inflexional language like Latin or Greek the word for *nest* would have a special termination indicating to the reader or hearer that some action was being performed on it by the bird. This termination receives, very naturally, a name in such languages. It is called the accusative or objective case ("case" meaning "accident," something which happens to the word). But to extend this abstraction to an English sentence, where the word is left unchanged and nothing whatever happens to it, is an instance of an unreal abstraction, a symbol corresponding to nothing symbolized;

and it is a peculiarly mischievous instance because it is presented to very young children, and, along with many other equally glaring unrealities, it habituates them to use words without attaching any meaning to them.

Whenever we use symbols without images we are liable to lose hold of reality. Many philosophical discussions remind us of juggling with the shares of speculative mining companies on the Stock Exchange. The shares represent no silver or gold—nothing but the hope of selling them for a higher price than they were bought at. Many scholastic and theological debates, whether in the Middle Ages or in modern times, correspond to no realities whatever—are due simply to the hope of winning fame by triumphant dialectical skill. Certain algebraists of our own time, starting from the fact that an equation with three unknown quantities— x , y , and z —corresponds to the length, breadth, and depth of a portion of space that is being examined, bethought themselves of adding a fourth unknown quantity, and thus of discovering the properties of a new kind of space which was to have four, or indeed any number whatever, of dimensions. Unreal speculation could hardly be pushed farther. But the whole domain of theology and metaphysics abounds with similar examples. By *Positive*, then, we mean, in the first place, *real*.

2. The number of possible inquiries into truth being infinite, and human faculties being finite, we have to choose to which we shall devote our attention. Evidently some are more important than others. In the early ages of man this was too obvious to need thinking about, since every energy was absorbed in hunting for food and in attack or defence against foes. But as soon as the formation of capital made it possible for a leisured class to live at ease on the labour of others, without making any return for it, to avoid a life of this kind has been one of the first obligations of morality. A life of pure speculation, held by thinkers of antiquity to be the highest, implies that a certain number of hewers of wood and drawers of water spend their lives in supplying the philosopher with food, clothing, and lodging. To impose legal trammels on thought would be fatal to intellectual progress. But morally the thinker lies under the same obligations as any other citizen. His energies ought to be spent in such ways as will, in his judgment, promote, directly or indirectly, the welfare of man. Archimedes was called away from his geometrical speculations to invent military engines for the defence of Syracuse. This he did, but reverted as soon as possible to his proper work of measuring the sphere and parabola—work

which, though of no immediate practical application, was of momentous importance to future generations.¹

It is clear that truths ascertainable by man are infinite, and that some are better worth ascertaining than others, some not worth it at all. To begin at the lowest end of the scale, no limits can be set to the number of possible problems in arithmetic and geometry. Who would maintain that they should all be solved? There are, perhaps, twenty or thirty million stars accessible, in some degree, to human observation. It would be absurd to say that each one of them should absorb an astronomer's lifetime. Every science offers the like examples of barren superfluity. Science aims at generalization, so as to predict things about a given object without directly observing it. But if everything is to be noted and recorded about each individual object, the occupation of science is gone. Elimination of superfluous truth is of the very essence of science. On it stands, for example, the whole fabric of the Differential Calculus. No one would have discovered the earth's shape except by leaving out of account the trivial irregularities of surface which yet, viewed from the geographer's standpoint, are important as mountain-chains. In biology the distinction between genus and species, between species and variety, is now known to be less absolute than was formerly supposed. As each individual is a variety, complete knowledge would mean a minute description of each living organism. I was told once by an eminent historian that before a perfect history of England could be written we should possess a monograph on the history of every English village. This is the *reductio ad absurdum* of history. But enough of this. The second meaning of the word *Positive* is *useful*.

3. To deal with real things, and with important things, is not enough, unless we deal with them in the right way; unless we are able to say about them what is true and certain. We may have left off thinking about gods and fairies, or about the "universals" and "substantial forms" of the scholastics; we may be devoting our whole attention to the facts of human life and its surroundings; but we may not be able to understand these facts; we may be in a state of complete uncertainty about them. So far, then, the Positive stage of thought has not been reached. We have reached the point of believing, as the result of our experience, that things stand together or follow one another according to definite and

¹ See Dr. Bridges' biography of Archimedes in the *New Calendar of Great Men*, pp. 123-25.—ED.

ascertainable rules which we call laws of nature. But until we have established these laws in each department of inquiry we can make no statement which is certain. Prevision is the test of our scientific certainty. Knowledge of a law of nature—knowledge, that is, of the way in which one phenomenon depends upon another—enables us, when we observe one of these phenomena or facts, to foretell the second without direct observation of it. Knowing, for instance, in the case of falling bodies, the law connecting the space passed through with the time of transit, we are able to foretell the space if we know the time, or the time if we know the space.

In a very large number of questions relating to real things certainty, as we are here defining it, is denied us. Especially is this the case in all that relates to origins. We can explain wind, tide, the motion of the moon and planets, by gravitation. But on what fact does gravitation itself depend? The origin of the chemical elements, again, the origin even of the Greek race—these things, whether from the weakness of our faculties or from the destruction of evidence, are inaccessible to us, and are perhaps destined to remain for ever uncertain. Discussions about them can lead to no result. They are not within the range of Positive thought. The third meaning of *Positive* is *certain*.

4. A further feature distinguishing scientific knowledge from common knowledge is that it is not only certain, but also *precise*. The simplest instances of this contrast are supplied by the science of arithmetic. Of two armies or two flocks of sheep untrained observers may be certain that one is more numerous. A trained observer will tell more or less accurately the precise degree of excess. That this town is healthier than that may be a certainty reached by practical experience. Statisticians collect the death-rate, and change a rather vague assertion into a fact of number. Scientific progress consists to a large extent in changing assertions of quality into assertions of quantity. A biologist, for instance, is not satisfied with knowing that the blood is hotter at some times than at others, that vital action is accompanied by chemical change, that sensations travel quickly from the outward termination of a nerve to the brain. He defines the blood temperature by his thermometer; he finds out what chemical compounds are formed and dissolved, and how much of them; he ascertains at what number of feet per second sensation travels. Such inquiries may be followed up pedantically, and may sometimes accumulate unmeaning detail so as to obstruct progress. The true scientific spirit shows itself in knowing what to ignore as well as what to

attend to. There is a degree of precision attainable and appropriate in each inquiry, and this it is that the man of scientific genius aims at. Astronomers measuring the earth's shape ignore its mountain-ranges.

5. We have now discussed four meanings of the word *Positive*—*reality, utility, certainty, precision*. But we shall find that other meanings yet remain. One of these is that Positive teaching is *organic*. Organic is opposed on the one hand to what is destructive, disorganizing; and on the other to what is dead, motionless, insusceptible of change and growth.

If we review the political and religious movements of the last five or six centuries in the Western world, we find that a large proportion of the energy involved in them was directed towards the demolition of institutions or doctrines previously existing. During the fourteenth and fifteenth centuries there were constant onslaughts against the Papacy, which had united the populations of the West under one spiritual government. The rivalry of the civil law with the canon law resulted in the ascendancy of the former. Kings gathered into their own hands many functions that had been held previously by bishops and popes. National spirit asserted itself, and refused to tolerate the intrusion of priests of alien race and language. Attacks were made on the central doctrine of Catholicism as embodied in the Eucharist. All this went on in a silent and unsystematic way until the times of Luther and Calvin, when revolt took definite shape, and the Western nations ranged themselves in the two rival camps of Catholic and Protestant. After an inordinate waste of social forces for more than a century a truce was effected by the Treaty of Westphalia.¹ But the destructive movement, instead of ceasing, was transferred to the Protestant camp itself. Bossuet's treatise on the *Variations of Protestantism*² describes vividly what took place. Efforts were made to replace priests by presbyters, a government in which clergymen were more or less controlled by laymen. Presbyterians were attacked by Independents. The infallibility of the Bible, which had been substituted for the infallibility of the Church and the Pope, became an object of criticism. Private judgment, systematized by the philosophy of Descartes, was carried to its natural conclusions by Hobbes and Spinoza. And thus, by the close of the seventeenth century, all was in readiness for the wide diffusion of scepticism in the eighteenth

¹ 1648

² *Histoire des variations des églises protestantes*, 1688. In the last section of the Positivist Library.—ED.

under the leadership of Voltaire. On the political disintegration that went side by side with the disintegration of religious belief it is needless to dwell. The Dutch revolt, the English Commonwealth, the American Republic, the French Revolution, are obviously links in the same chain. Other links have been added in the century that is now ending.¹ No article of any creed, no institution, however ancient, whether Christian or pre-Christian, has escaped assault.

It is not needful for our present purpose to expend either blame or praise upon this critical and destructive process. Looked at largely and apart from incidental aberrations, we can see that it was necessary in both the meanings of that word; it was fated to come, and it supplied a real want. What is to be observed is that the process by which the Positive doctrine has been built up stands wholly apart from this critical or revolutionary process, and is to be carefully distinguished from it. The Positive doctrine began when Thales and Pythagoras isolated the truths of geometry and arithmetic from the practical arts in which they were incorporated, and elevated them into distinct objects of speculation. This nucleus of Positive truth, enlarged by Aristotle, Archimedes, Hipparchus, and the Alexandrian school, and handed on by the schools of Bagdad and Toledo to Western thinkers of the thirteenth century, has been gradually growing amid the revolutionary turmoils of modern history, and has been surrounding itself with fresh departments of truth, until at last, under the influence of Comte and of those who preceded and followed him, the facts of man's social and moral life have been brought within its range. Silently, continuously, and without violence, this work has been going on. To say that its progress has not affected the work of revolutionary change would be an exaggeration; but it has gone on independently of that change, and not seldom in opposition to it.

In another sense also, allied to though distinct from the foregoing, Positive doctrine is *organic*. It is living, not dead, not stereotyped, not immutable. Contrast the body of truth of which any science consists with the Westminster Catechism² or the Articles of the Church of England. Of these it is the boast that they are handed down from age to age without the alteration of a syllable. The two little words³ which divided the Greek Communion from the Roman in the early Middle Ages divide them still.

¹ Written in 1896.—ED.

² The standard Presbyterian catechism approved by Parliament in 1648.—ED.

³ *Filioque*, "And the Son," added to the Nicene Creed by the Roman Church, and repudiated by the Eastern Church.—ED.

But scientific truth is in course of perpetual evolution. Not that growth interferes with continuity. Through the times of most startling and rapid change the earlier state is continuous with the later. Very few changes were made in the procedure of astronomical observatories by the discovery of the earth's rotation and movement round the sun. Naturalists, again, still go on speaking of new species of plants and animals, just as though Darwin had never speculated. And so in other fields of science we find this orderly growth, this organic change, contrasting alike with the endless oscillation of metaphysical controversy and with the silent stagnation of theological dogma. Cardinal Newman, indeed, made a bold attempt to apply the principle of development to Catholic doctrine.¹ He showed that for a few centuries it grew. But what of Catholicism since the Council of Trent?²

6. I pass to the sixth characteristic of Positive truth. It is *relative*, not *absolute*. We are taught this very early in our studies of arithmetic. One in relation to two is a very different thing from one in relation to four, to eight, and so on. If we go on increasing the second term of the relation without limit, the first term becomes infinitely small—equal, in fact, to nothing. In arithmetic nothing is small or great absolutely; all is relative. A high tower does not equal a low hill; a wide street would be but a narrow river. The distance from London to Melbourne is great as distances go between places on this island, small as compared with that between earth and moon; which, again, is trifling as compared with our distance from the sun; which, again, is but a small fraction of the space between the sun and the nearest star. Such words as *up* or *down* point for different populations to different regions of the sky. Astronomy brings all this forcibly before us in the case of motion, the only intelligible meaning of which is change of position in reference to some other object. On the deck of a ship sailing at four miles an hour, from south to north, a passenger walking at the same rate from north to south is at rest relatively to objects on the shore past which the ship is sailing. Absolutely, however, neither coast, ship, nor passenger is at rest. They share alike in the earth's rotation and orbital motion; not to speak of the proper motion of the sun, or of the motion of the central point round which, for aught we know, the sun may be moving.

In physics the word *force*, as indicating something absolute and

¹ In his *Essay on the Development of Christian Doctrine*, 1845.—ED.

² This council sat at intervals between the years 1545–1563.—ED.

self-existing, is meaningless. We can only conceive of it in the action and reaction of two bodies. Gravitation, electricity, magnetism, heat, chemical affinity, all imply this. When we come to the science of living bodies the relativity of all the phenomena examined becomes even more obvious. Life is the mutual action and reaction of organism and environment. The blade of grass is unintelligible without knowledge of the light and air acting on its green cells, the water and alkaline salts with which the fibrils of its roots come into contact. The higher life of a bird or beast implies perception of far-off things and contractile organs for coming into close contact with them. The very term used by Bichat for describing this kind of life—the life of relation—brings into prominence the fact that absolute, self-dependent existence is but a logical figment.

When biology began to shed light on the secrets of human nature it was seen that our knowledge had its foundations in impressions made on special arrangements of nervous tissue; that it was relative to our physical organization; that of absolute reality we had no knowledge whatever. In Diderot's celebrated *Letters on the Blind and the Deaf*¹ it was shown that, on the supposition of sight and hearing being denied to us, the whole framework of our thoughts and our social life would be fundamentally changed. Following out this line of thought, it is easy to see that Positivism throughout its whole structure implies relativism; indeed, the two words are in many respects synonymous.

As we pass from individual life to the life of communities we come to see the significance of this conception of relativity more clearly. In judging of this or that historical action we have to take into account the stage of civilization reached by the statesman or the nation that performed it. Cæsar's conquest of Gaul, effected at a time when war was the principal occupation of man, is not to be judged by the standard applied to the attacks of the first Napoleon on Germany, or of England upon India or Africa, made at a time when peaceful industry is admitted to be the first condition of political progress. Ideal constitutions, again, such as the theorists of the French Revolution and of later times supposed applicable to every phase of society, have shown themselves to be mischievous abstractions. Liberian negroes or Sandwich Islanders will be none the better, and probably much the worse, for constitutions framed

¹ *Lettre sur les Aveugles* (1749), and *Lettre sur les Sourds et Muets* (1751). These were placed in the last section of the Positivist Library.—ED.

on the model of the United States. There is a definite relation between a given stage of civilization and the political institutions adapted to it; and to find this relation is the business of the practical statesman. Thus we see that in every department of thought Positive doctrine is *relative*, not *absolute*.

7. Aristotle told us long ago that all intellectual and moral activity ("every art and every method," to use his own words¹) had some end in view which was aimed at as the chief good. We may ask, as he asked, What is the highest good, the highest form of happiness? And we shall find it hard to give a better answer than his own—a life of noble activity. In our perplexed world, with its strifes and rivalries, its bitter animosities and conflicting aims, how is such a life to be led? Of the conditions to be fulfilled two seem paramount. First, warlike activity resulting in conquest and despotic rule, on the one hand, subjection and slavery on the other, must give place to industrial activity; to peaceful development of the resources of our planet, in which some day men will be able to work together without conflict. Secondly, the convictions of men on all the highest subjects must rest not on supernatural revelations maintained by the precarious tenure of personal fascination or traditional prejudice, but on scientific demonstration finding its way spontaneously and surely into every sound intelligence. These two conditions work together and spring from the same root. By means of them the lives of men will become convergent and harmonious. It sounds strange and paradoxical to say, as Positivists say, that man's life tends as the world goes on to become more and more religious.² Yet it is true, if we give to the word *religion* its true meaning; if we mean by it the state in which man thinks and acts at peace with himself and at peace with his fellow-men; the state of Unity within and Union without.

What sort of scientific convictions can there be that have anything to do with the moral guidance of human life, and which can come into comparison with the primæval truths preached centuries ago by priests and prophets? Evidently those truths which deal with the structure of human nature itself. Theologians have told us that our nature is utterly corrupt. Positive science demonstrates the contrary. We have to thank the great sceptic Hume for being among the first to lay down the foundations of Positive morality in

¹ *Ethics*, bk. i, ch. i.—ED.

² "The general law of the human movement, whatever the point of view chosen, consists in the fact that man becomes more and more religious."—*Positivist Catechism*, 2nd Eng. ed., p. 259.—ED.

his proof that unselfish affection was a spontaneous element in human nature.¹ Georges Leroy confirmed this truth by showing that man shared these unselfish emotions with the higher animals.² Gall added yet further evidence, and distinguished in animals as in men the three distinct impulses of reverence, pity, and individual love.³

Henceforth a wholly new complexion was given to the character of Positive doctrine. It now presents itself not merely as a storehouse of solid and useful material; it points directly to the way in which man's activity, intellect, and feeling in private and public life can become convergent, every part of it tending to that ennobling energy which Aristotle had recognized as the supreme object of desire. In other words, all that we mean when we use such words as "art," "poetry," "religion," "aspiration towards a higher life for ourselves and for those around us," comes within the sphere of Positive doctrine. Striving to become more perfect, making efforts to subdue ourselves for the sake of others, are aims just as real, just as useful, are to be accomplished by means just as certain and definite, as the construction of a nautical almanac, a steamship, or a factory. They have even more to do with the building up of human life, they are more enduring, they can be more truly said *to be*. Who remembers the interminable series of petty wars and frivolous ambitions by which this or that self-seeking ruler has struggled to place and power? All that is gone; but the poems of Homer and Æschylus, the story of the Gospels, the sublime heroism of Jeanne d'Arc, the civic courage of Milton or Washington—these remain. Whether named or nameless, our life is built upon them. Positive doctrine, then, is not merely real, useful, and all the other things of which we have spoken. It is also *sympathetic*.⁴ It lifts man above himself into communion with Humanity, through whom he lives, for whom he works.

¹ In the *Inquiry Concerning the Principles of Morals* (1751).—ED.

² See pp. 54, 80.

³ See p. 80.

⁴ This seventh meaning was given to the word by Comte in 1854. See *Pos. Pol.*, vol. iv, p. 473.—ED.

II

THE FIRST TWO CHAPTERS OF COMTE'S
"POSITIVE PHILOSOPHY"¹

HALF a century has passed since Miss Martineau undertook to present to English readers in a condensed form the six volumes of the *Philosophie Positive*. Her two volumes,² corresponding in bulk to between three and four of the original work, form the principal channel through which Comte's philosophical system has become known to the English-speaking world. Comte himself, in the last edition of his catalogue of the Positivist Library,³ substituted Miss Martineau's condensation for his own work. A translation of it has appeared recently in French.

It was obvious from the first that the various sections of this great philosophical treatise differed in permanent value. The sections which dealt with fundamental principles, either of method or of doctrine, are distinguishable from the chapters which entered into the details of each of the six sciences considered. One of these sciences, Sociology, occupies half the work. Indeed, it was for the sake of this science that the previous volumes were written; for they may be looked on as a preparatory discipline for the study of social phenomena, a science of which Comte, without injustice to previous thinkers, may be regarded as the founder. In his treatment of Cosmology and Biology Comte worked upon the results of other men. These had already emerged from theology and metaphysics, and had attained, with some qualifications, the positive or scientific stage. What was wanting was to clear them from misconstructions, to indicate their historical importance, to present their leading principles in orderly succession, and to define the special methods of research to which they had given rise. In Sociology, on the other hand, the principles and the methods of research had themselves to be created.

Further, a distinction has to be made in Comte's treatment of the sciences grouped by him under the title of Cosmology. This

¹ *The Fundamental Principles of the Positive Philosophy: Being the first two chapters of the "Cours de Phil. Pos."* Tr. by P. Descours and H. Gordon Jones. With a biog. pref. by E. S. Beesly. Issued for the Rationalist Press Association by Watts & Co.; 1905.

² *The Positive Philosophy of Auguste Comte*. Freely tr. and condensed by H. Martineau. 2 vols.; 1853 and 1875. With intr. by F. Harrison, 3 vols. (George Bell and Sons; 1896.)—ED.

³ See *Pos. Pol.*, vol. iv, p. 486.

class included the Astronomy of the solar system, the various branches of Physics, and Chemistry. Astronomy was brought to something like perfection by Newton's investigation of gravitation, and by the labours of Clairaut, Lagrange, and other great mathematicians of the eighteenth century. But the same cannot be said of either Physics or Chemistry. Here far more remained to be done, and still remains. It must be obvious to every reader of the second half of the second volume of the *Philosophie* that the work done since that volume was written by such men as Faraday, Helmholtz, Maxwell, Lord Kelvin, Hertz, and many others that might be named, involves nothing less than a complete recasting of the group of sciences known as Physics, before its main principles can be presented in orderly and intelligible sequence.

Such a recast would not, however, involve any change in the fundamental principles of Comte's philosophy. The exposition of the successive states through which our conceptions of each department of knowledge have passed—known as the Law of the Three Stages—would remain unaltered. So, too, the distinction of sciences into abstract and concrete would be retained; and the Classification of the abstract sciences in accordance with their diminishing generality and increasing complexity would be unaffected. Progress through the three stages would still be seen to be more or less rapid as the degree of complexity varied. And, lastly, each science would be seen to make its own special contribution to the perfection of positive method.

Comte had himself suggested, in a letter quoted by Professor Beesly in the preface to the little volume here noticed, a selection to be made from the first three volumes of his work suitable for those who had little time for the specialities of science. In the first volume the two introductory chapters should be read;¹ then the chapter dealing with Mathematics as a whole, and the introductory chapters of each of the three great divisions of Mathematics—the Calculus, Geometry, and Rational Mechanics. In the second and third volumes he advised the study of the introductory chapters of Astronomy, Physics, Chemistry, and Biology. In the concluding half of the work, dealing with the new science of Sociology, no chapter could be spared. The chapters thus selected as essential amount to twenty-five out of the sixty of which the Treatise consists. It may be hoped that at no distant day all these chapters will be translated with the same care and accuracy as the two

¹ These are the two chapters tr. in the *Fundamental Principles*.—ED.

which we are now considering. Taken together, these present what the translators speak of as "The Fundamental Principles of the Positive Philosophy."

The leading feature of this translation is that it is not, like Miss Martineau's, a condensation or abridgment. It is, undoubtedly, much more than a literal rendering of each sentence; a procedure which, as the writer of the preface very truly remarks, would result in a version considerably less intelligible and attractive than the original. It is essential that a translator of Comte

should not only be skilled in the art of turning the idioms of one language into those of another, but that he should have made a wide and careful study of Comte's other writings, so as to be competent to expand what is over-compressed, to condense what is verbose, and to substitute direct statements for indirect allusions. If this is done with judgment, the translation will be a boon to the English reader, even though he may not be unable to read the original.¹

Mistakes are not numerous in Miss Martineau's version, but they are not entirely absent. A more serious defect is that "the omissions, necessarily extensive, often detract from the force and completeness of the reasoning."² A signal instant of this occurs in the celebrated passage in which Comte condemns the method of introspective psychology as a means of gaining insight into our intellectual functions. In the original, eight paragraphs³ are occupied with this discussion. These, in Miss Martineau's version, are reduced to two,⁴ with the result of seriously impairing the cogency of the argument. As the subject is one of very great philosophical importance, it may be worth while to place a part of the new translation and of Miss Martineau's version side by side:—

NEW TRANSLATION

As far as moral phenomena are concerned, it may be granted that it is possible for a man to observe the passions which animate him, for the anatomical reason that the organs which are their seat are distinct from those whose functions are devoted to

MISS MARTINEAU'S TRANSLATION

It may be said that a man's intellect may observe his passions, the seat of the reason being somewhat apart from that of the emotions in the brain; but there can be nothing like scientific observation of the passions except from without, as the stir of the

¹ Preface, p. 7.—ED.

³ Ch. i, §§ 48-55.

² *Ibid.*, p. 8.—ED.

⁴ 1896 ed., vol. i, pp. 11-12.

NEW TRANSLATION

observation. Everyone has had occasion to notice this fact for himself. But such observations would evidently never possess much scientific value. The best way of knowing the passions will always be to observe them from the outside; for a person in any state of extreme passion—that is to say, in precisely the state which it is most essential to examine—would necessarily be incapacitated for observing himself. But in the case of intellectual phenomena, to observe them in this manner while they are taking place is clearly out of the question. The thinking individual cannot cut himself into two—one of the parts reasoning while the other is looking on. Since, in this case, the organ observed and the observing organ are identical, how could any observation be made?

The principle of this so-called psychological method is therefore quite worthless. Besides, consider to what thoroughly contradictory proceedings it immediately leads. On the one hand, you are recommended to isolate yourself as far as possible from the outer world, and you must especially give up all intellectual work: for if you were only engaged in making the simplest calculation, what would become of the *interior* observation?

On the other hand, after having, by means of due precautions, at last attained to this perfect state of intellectual slumber, you must

MISS MARTINEAU'S TRANSLATION

emotions disturbs the observing faculties more or less. It is yet more out of the question to make an intellectual observation of intellectual processes. The observed and observing organ are here the same, and its action cannot be pure and natural. In order to observe, your intellect must pause from activity; yet it is this very activity that you want to observe. If you cannot effect the pause, you cannot observe; if you do effect it, there is nothing to observe. The results of such a method are in proportion to its absurdity.¹

¹ 1896 ed., vol. i, p. 12.—ED.

NEW TRANSLATION

then occupy yourself in contemplating the operations which will be taking place in a mind supposed to be blank! Our descendants will no doubt see such pretensions ridiculed on the stage some day.

The results of such a strange procedure are in thorough accordance with the principle.¹

I will take another instance in which Miss Martineau has pushed condensation so far as to give an erroneous conception of Comte's meaning on a very important subject. It occurs in the second chapter, the chapter devoted to the Classification of the Sciences. In the first part of this chapter (§§ 7-24) Comte defines with great precision the boundaries of his subject, by distinguishing (*a*) speculative from practical knowledge, (*b*) the Abstract from the Concrete Sciences. He then proceeds to consider the two distinct modes of expounding the truths of a science: the historical method, in which the knowledge "is presented in the same order as that in which the human mind actually obtained it"; the dogmatic method, in which "the system of ideas is presented as it might be conceived of to-day by a single mind which, being placed at the right point of view and furnished with sufficient knowledge, should apply itself to the reconstruction of the science as a whole."² The plan of teaching a science by means of its history has much that is attractive. A science is not completely known, said Comte, if we are ignorant of its history. But the history of the various sciences cannot in reality be treated separately.

When we consider in its entirety the actual development of the human mind, we see that the different sciences have, in fact, received improvement simultaneously, and from one another. We even see that there is an interdependence between the progress of the Sciences and that of the Arts, owing to their innumerable reciprocal influences; and, finally, that they have all been closely connected with the general development of human society. This vast interlacement is so real that, in order to understand how a scientific theory actually arose, it is often necessary to consider the improvement in some art which has no rational link with it, or even some

¹ Ch. i, §§ 52-54.—ED.

² Ch. ii, §§ 29-30.—ED.

particular progress in social organization without which this discovery could never have taken place. We shall see numerous examples of this as we proceed. It follows from what has been said that we can only know the true history of each science—that is to say, the way in which the discoveries composing it were actually made—by making a direct study of the general history of humanity.¹

Now, this clear recognition of the reciprocal action of the various departments of science, and of the way in which science has been affected by the growth of the arts and by the political and social circumstances of the time, exactly anticipates and meets one of the most serious criticisms directed by Herbert Spencer against Comte's Classification of the Sciences. Spencer, in his Essay on "The Genesis of Science,"² maintains that Comte, in his zeal to present the sciences in a linear series, ignored their reciprocal action on one another, and the influence upon them of social events and the arts of practical life. Our surprise that he should have made this mistake is lessened when we find that in Miss Martineau's version the passage here quoted is entirely omitted.

Several other instances of less important omissions might be quoted. The consideration of them makes it clear that, if a selection is to be made of the most important chapters of the *Philosophie*, these chapters should be translated with all the fullness of the original; due care, of course, being taken to make the translation vigorous and idiomatic, as well as exact. The two chapters here given, which present in germ the leading features of the whole work, form an excellent model for imitation.

III

COMTE'S "DISCOURSE ON THE POSITIVE SPIRIT"³

WHILE Comte was engaged in elaborating his *System of Positive Philosophy* between 1830 and 1842, he never lost sight of the social purpose which this philosophy was intended to serve. What was needed was that the leading principles of this philosophy should be made familiar to the European mind. This could not be done by the bare enunciation of a series of abstract propositions. The

¹ Ch. ii, § 38.

² 1854

³ *A Discourse on the Positive Spirit*, by Auguste Comte. Translated, with explanatory notes, by E. S. Beesly. (London: William Reeves; 1903.)

Positive Spirit must be shown at work in organizing a special branch of knowledge—a branch intimately connected with man's life on the planet, and sufficiently elaborated to serve as a type for its application to other departments in which the facts to be dealt with were more complex, which were more liable to the disturbance of human passion, and in which, therefore, less progress had been made. Astronomy was the science selected for this purpose. It was the simplest of the physical sciences, in that the forces at work were few in number, and were susceptible of precise mathematical calculation. It served, therefore, as a type from which the other sciences—physical, chemical, biological, and sociological—fell far short, but towards which they might be expected, as the human mind advanced, gradually to approach more and more completely. Viewed historically, this science was specially bound up with the development of human thought and its liberation from theological trammels. It was an incidental but by no means unimportant advantage that it was a branch of knowledge unconnected with mercantile profit, contrasted in this respect with certain departments of physical and chemical science of which the industrial applications have offered constant stimulus to the desire of personal gain and advancement. A Paris workman would not attend lectures on astronomy with the hope of one day rising from the ranks and becoming a capitalist. To follow the exposition of astronomical science presented by Comte, a very moderate degree of mathematical attainment was required, such as any intelligent workman could easily provide for himself without the labour and expense of a scholastic career. Elementary geometry and trigonometry and elementary mechanics would suffice.

This course of lectures¹ was preceded by a Discourse intended to set forth the general character and the social purpose of the synthesis of which the science of astronomy was a component part. Comte's hearers were not invited to study astronomy with the purpose of either improving their material position in life, or of gratifying their intellectual curiosity. They were called on to take part in a great intellectual revolution destined to prepare them for the reorganization and regeneration of society. It was necessary, therefore, to explain the fundamental principles of this revolution. The Discourse thus divides itself into two nearly equal parts. In the first part, contained in pages 1 to 79 of this edition, the intellectual side of the Positive

¹ The course of lectures was published by Comte in 1844, as follows: *Traité philosophique d'astronomie populaire*. 2nd. ed. in 1893. The first 108 pages are occupied by the *Discours sur l'esprit positif*.—ED.

Synthesis is expounded. The second part explains the way in which the new philosophy will affect society.

Naturally, the Discourse opens with a full explanation of the law of Intellectual Evolution, the law of the three stages. The Positive mode of thought is the outcome of a long process of development. It is preceded by modes of thinking framed on entirely different lines. In the early periods of human life "all phenomena whatsoever were supposed to resemble those which we ourselves produce, and which for that reason seem to us at first sufficiently known through the direct intuition accompanying them."¹ This is the phase of thought called Fetishism. Gradually a great revolution takes place, one of the greatest which the human mind has ever experienced. "Life is no longer attributed to material objects themselves, but is mysteriously transferred to sundry fictitious beings, usually invisible, whose active interposition is thenceforth considered to be the direct cause of all external and even, as the theory gains ground, human phenomena."² Fetishism thus passes into Polytheism. This is the principal phase of theological belief. The concentration of all gods into one is the final and the feeblest form of theologism, largely brought about by the increasing growth of Positive knowledge. Meanwhile the gulf between the theological and positive conceptions was gradually filled by an intermediate process of thought, denoted by Comte metaphysical or ontological, in which phenomena were regarded as the result of underlying abstractions more or less personified. Underneath the impressions of sight, touch, and hearing was supposed to exist something permanent, a substance or *under-existence*, as their cause. Opium, to use Molière's illustration, had a dormitive influence, and this was supposed to explain its power of sending people to sleep. All such influences, innate properties, or essences were summed up in the one great abstraction called Nature. This phase of thought was absolutely necessary in the course of human development. It set men free from slavish subjection to divine terrors, made it easier to conceive of constant laws of phenomena, and kept alive the desire to apprehend the world as a whole, "until the spirit of generalization could find a better aliment."³

While these provisional modes of thought were working out their destiny, and gradually approaching their decline and fall, the foundations of a more fruitful and more permanent philosophy were being laid. From the earliest days of savagery the common sense

¹ *Discourse*, p. 3.—ED.

² *Ibid.*, p. 5.—ED.

³ *Ibid.*, p. 16.—ED.

of mankind had grasped firmly many prominent facts, moral and physical, as to man and the world. Facts of character, facts of the revolving sky, facts of birth and death, of breeding and inheritance, are as well known to the savage as to ourselves, and practical action is based on such knowledge. Very late in the history of the human race men arose who grouped facts together, found certain permanent relations between them, and discovered laws by which many unseen facts could be predicted. Science arose, limited at first to the discovery of fixed relations—that is, of natural laws—in the simpler facts of geometry and astronomy made by Greek and Arabian inquirers, extended afterwards by Galileo and others to the more complex relations of forces operating on our planet, and conceived by Bacon as discoverable in the phenomena of human life. During the last three centuries Positive Philosophy has risen to be the rival of metaphysical philosophy and theological philosophy. What was needed was that its diversified efforts should be seen to converge to a centre, that centre being the Service of Man. With the creation of Sociology such a centre of convergence was supplied. The thinkers of the eighteenth century, of whom Hume, Diderot, and Condorcet may be taken as types, prepared the way. The genius of Comte built on their foundations. The new Synthesis, ranging the special sciences in due order round the science of Humanity, showed itself in the fullness of power. It deals with realities, not fictions; it aims at practical utility. Its conclusions are certain; they admit of precise measurement; they are constructive, not negative or critical; they claim to present not absolute truth, but truth in relation with man's faculties and needs. And, finally, this philosophy appeals to man's highest instincts of love and sympathy. *Real, useful, certain, precise, organic, relative, and sympathetic*—such are the distinctive features of the new Synthesis.

Let us pass from the intellectual to the social aspect.¹ Words are not needed to prove the influence of ideas and beliefs on social passions and antagonisms. From the days of Luther to the Peace of Westphalia Europe was plunged into bloodshed by disputes on transubstantiation and the authority of the Pope. Yet these were trifles compared with the causes of strife which wrought on men during the French Revolution. The question then, and for long afterwards, was between Church tradition and feudal law on the one side, and free thought and popular rights on the other. It was a strife between God and Humanity, between King and Republic, in

¹ *Discourse*, pp. 79-169.—ED.

which those who defended the cause destined ultimately to triumph were blind leaders of the blind, destroying their foe in the dark, but wholly unaware how to use their victory.

No solution is possible but one which shows political phenomena to be regulated by natural laws as certain as those which govern the motion of the planets, the play of electrical or calorific forces, and the evolution of vegetal and animal life. As in the study of life we distinguish the facts of organization and structure from the facts of growth, so in the study of sociology we contemplate first the conditions of Order, and secondly the conditions of Progress. Progress is the development of Order, as life is the development of structure. Political efforts which aim at Progress regardless of social structure are predestined to failure. How do we find the conditions of social order? By studying different societies, and, still more, by studying the same society in different stages of its growth. Those conditions which we find common to all stages we may assume to be permanent and necessary, and any attempts to upset them can only lead to death or decay. With Progress they are wholly incompatible. In a comprehensive survey of human society we find family life, we find the institution of property, we find government in its two forms—the control of acts, the organization of opinion. We conclude these things to be bound up with Social Order; respect for them, therefore, is indispensable to Progress.

The claim of Positivism to guide the Future rests upon its capacity for explaining the Past. Theological and metaphysical schools of thought cannot do this, because their standard is absolute, not relative. To the destructive thinkers of the eighteenth century mediæval Christianity seemed a degrading superstition. But mediæval Christianity passed an exactly similar judgment on the polytheistic beliefs which had gone before it.

In the preceding and following periods each sees nothing but murky confusion and inexplicable disorder; nor can it suggest how its own short period can be connected with the great spectacle of history as a whole unless by miraculous intervention.....The Positive Spirit alone, in virtue of its eminently *relative* nature, can fairly represent all the great historic epochs as so many determinate phases of one and the same fundamental evolution, each phase resulting from that which preceded, and preparing the way for that which followed it, and this according to invariable laws which fix the share of each phase in the movement common to all.....We may assert with confidence at the present day that any doctrine which

sufficiently explains the whole Past will, by the mere fact of satisfying that test, inevitably obtain the intellectual direction of the Future.¹

Admitting that Positive doctrine lays down principles adequate to our political guidance, how far will it be capable of controlling and inspiring individual conduct? It was not till 1852, Professor Beesly remarks, that Comte "formally detached Ethics from Sociology as a seventh and crowning science. But he gets very near to doing so here."² Comte shows that under Polytheism Ethics was always subordinate to Politics. Its position of independence and, indeed, of superiority is due to mediæval Catholicism, and resulted from the separation of spiritual from temporal power, which was then, though imperfectly, established. Polytheistic Ethics consisted in direct and special precepts: to do this, or to refrain from that. Under Catholic Monotheism principles of conduct were laid down; the application of them to particular cases was left to human wisdom. As time went on the theological doctrine lost its power, the principles remained standing alone; and, though often impaired by the decay of the doctrines connected with them, they were not destroyed. The work now before us is to consolidate them on a human basis. "Morality must either be at last founded on the Positive knowledge of Humanity, or it must be left to rest on supernatural injunctions. Between these alternatives no durable basis can be found."³ No question can be raised as to the efficacy of purely human enthusiasm. The freethinking Republican soldiers who saved France from a retrograde coalition showed at least as much devotion as the superstitious Vendéans "who, in the very bosom of their country, made common cause with the foreign invaders."⁴ In no case can we accept as a solution the prevailing tendency to reserve emancipation for the so-called upper and instructed classes, under a disguise of collective hypocrisy retaining theological creeds as a useful mode of controlling the masses. Such a compromise, favoured nowadays as much by Protestants as by the Jesuits with whom it originated, is as needless as it is corrupting. The Positive theory of Humanity determining the real influence of each act, habit, or feeling will lay down rules of conduct for the guidance of men's lives as certain as the conclusions of geometry. The demonstration of such rules may be too hard for most men to follow. But so are the demonstrations of astronomy, which never-

¹ *Discourse*, pp. 97-98.—ED.

³ *Ibid.*, p. 105.—ED.

² *Ibid.*, p. 98.—ED.

⁴ *Ibid.*, p. 107.—ED.

theless the sailor uses every day of his life with unfaltering conviction.

By appealing to Humanity as the groundwork of conduct the Positive doctrine touches social feeling directly and immediately; whereas theological and metaphysical teaching could only move it indirectly, the first by holding out hopes of future reward to those who acted uprightly, the second by expositions of enlightened self-interest. Such circuitous modes of arousing unselfish enthusiasm taint our generous sympathies with baser matter. The full force of such sympathies, when for the first time allowed free sway, will be seen in the Future.

Meantime it is essential that a solid groundwork of these convictions should be laid. All classes need it, and especially the great body of workmen, who are in many ways better prepared to receive it than the wealthy and lettered classes. For its full effect to be felt, Positive knowledge must be arranged in the order of increasing complexity and diminishing generality. Beginning with the simpler facts of mathematics and astronomy, we pass to the study of the physical and chemical forces of our planet; from this we proceed to the study of living beings, and thence to the final science of human nature, social and individual. The study of astronomy, involving as it does the fundamental truths of geometry, is here presented as the first step towards the Positive theory of Humanity.

In the foregoing pages a rapid sketch has been given of this truly remarkable work. A word must now be said of its presentation to the English reader. It has been a difficult task most successfully accomplished. The essay is a marvel of condensation and fullness. Every word tells, even those which to a rapid reader may seem superfluous; and every word finds its equivalent in idiomatic English. Though many sentences have been entirely recast, yet so completely has the error of diffuseness been avoided that, judging by the passages which I have specially examined, the number of French and English words is almost exactly identical.

Some features of the translation may be mentioned. First, the paragraphs are, for the first time, numbered. As editions of Comte's works multiply this enumeration will soon be recognized as essential; and, indeed, it should have been made long since. Again, footnotes have been added on almost every page. They are extremely brief; but attention to them will often show the reader that he was on the point of missing the full meaning of a sentence. For the benefit of readers unaccustomed to philosophical literature a lucid explanation is given of the very few technical terms which

Comte employed. Finally, an analytical table is supplied, in which the import of each of the seventy-nine paragraphs is summed up. A better introduction to the study of Comte could not have been devised than this English edition of the *Esprit Positif*.

IV

HUMANITY AND SCIENCE

ON my last visit to Paris¹ I found a little paper circulating there which the Positivist Society had found useful in explaining to outside sympathizers what was meant by the word *Positivism*. It runs as follows:—

Positivism is a scientific doctrine which aims at continuous increase of the material, intellectual, and moral well-being of all human societies, and in particular of the societies or nations of Europe. It seeks to effect this object by special modes of instruction and education. Positivism has three divisions:—

1. Philosophy of the Sciences, summed up in the conclusion that mankind must rely solely on its own exertions for the amelioration of its lot. The sciences co-ordinated in this Philosophy are:

Mathematics, including the Calculus (arithmetic and algebra), Geometry, and Mechanics:

Cosmology, including Astronomy, Physics, Chemistry:

Sociology, including Biology, Sociology specially so-called, and Ethics. Founded on this Philosophy we have

2. Scientific Religion and Ethics. Positive religion has nothing to do with any supernatural or extra-terrestrial being; it is the Religion of Humanity. The moral code of Positivism may be summed up thus: physical, intellectual, and moral amelioration with the view of becoming more and more fit for the service of others. By *Others* are understood three collective existences ranged in order of magnitude—the Family, the State, Humanity. Positivist Ethic deals with the relations of nations with each other; and thus leads to

3. Positive Politics, aiming at the suppression of war and the formation of the Commonwealth of European States, or, as Auguste Comte called it, the Republic of the West. It invites nations to fraternal action with the view of developing in concert the resources of every kind presented by the planet in which we dwell.

¹ Written in 1900.—ED.

"In this transformation of society Positivism repudiates all violent procedure. It acts by demonstration and persuasion, not by compulsion. Its device is :

Love the Principle; Order the Basis; Progress the End. Morally its formula is: Live for Others."

My reason for calling attention to this paper is not merely its simplicity and clearness of statement, but because it guards against a delusion from which some English utterances, especially of late, have not kept themselves entirely free; the delusion of supposing that the scientific side of Positivism may be for the present set aside as a negligible quantity, and that what is called the apostolate of the Religion of Humanity may be organized without regard to it. Comte began his career with the conviction that the social and moral doctrines of the future must be tested by scientific methods, and must rest on scientific foundations. So established, they would carry weight with the mass of practical people who had no time or leisure for tedious investigations; just as the results of astronomical science are accepted by navigators, or those of mechanics and electrology by working engineers. In a certain sense of the word, and a very true sense, man has been a Positivist from the beginning. Human life goes on whether science or theology has the shaping of it. Whatever men's faith may be, they do not leave off loving and hating, hoping and fearing, gathering and spending, acting and enduring. Settled grooves are hollowed out, beaten tracks are made, in which the course of human business runs quite irrespectively of theoretical beliefs and abstract principles. Men do not stop ploughing the fields or navigating the seas till a perfect theory of manures has been discovered, or till the resistance of waves to the lines of a ship's hull has been accurately measured. So with morals. Men and women who have no learning, no philosophical theories, no systematic doctrine, but who are endowed with generous instincts, good sense, and firm characters, teach morality to those around them, whether by word of mouth or by the more cogent method of example.

Is anything more than this wanted? In the ordinary conduct of life perhaps not; though even in private life complicated cases of conflicting duties will sometimes arise in which, after recourse has been had to parents and friends who see the details near at hand, it may be needful to call in some cooler adviser from the outside. But it is safe to prophesy that in the religion of the future there will be no place for the inordinate multitudes of priests, preachers, and ministers of all denominations who form at present

a real incubus upon every civilized country. In the religious organization of the future projected by Comte a tenth part of the number of religious teachers now existing would amply suffice. Those simple ceremonies which bring the life of the family into touch with the life of the State, consecrating the successive stages of each individual life—birth, marriage, death, and the like—being wholly dissociated from supernatural or mystical significance, will not need the intervention of any sacerdotal caste.¹ Each village community will supply men who have withdrawn from the engrossing activities of active life, to whom the presidency of such occasions would naturally belong. Duties of this kind which have hitherto been regarded as specially clerical will not be so regarded in the future. Nor will formal discourses on Positive doctrine be very frequent. "Positivism," says Comte, "is a doctrine which will rarely stand in need of systematic exposition. Utterances of a simpler and more spontaneous kind, coming either from women or from the working population, will be a better substitute. It is important to restrict the sacerdotal body within narrow limits for two reasons—avoidance of unnecessary expenditure and maintenance of the highest standard within the body."²

What, then, is the special function of this organized philosophic body, to the existence of which Comte attached such far-reaching and permanent importance? It falls under two heads—education of the young; continuous culture of sociological and ethical science. These, like other sciences, and indeed more emphatically than any other science, must be regarded as in a state of constant and progressive growth. The mere statement of this double duty is enough to show that the ordinary curriculum of literary culture that has been passed through by an intelligent journalist or by the average student of our universities is an entirely inadequate equipment for the task. To write fairly good English, to string sentences together freely, to display considerable powers of rhetoric and style, will go but a very little way. Nor will a vast accumulation of learning help much. A memory that could retain all the knowledge of the latest encyclopædia would be no qualification for the task. For what is the task? So to infuse the scientific spirit into the study of human affairs as to acquire the power of *prevision*, with a view to the wisest possible *provision*. He who would enter on work of this kind must begin by penetrating himself with the conviction

¹ Dr. Bridges refers to the Positivist Sacraments. See the paper on "Sacraments" in Part III.—ED.

² *Catéchisme Positiviste*, 3rd ed., p. 274; p. 211 of the Eng. tr.—ED.

that the scientific study of the facts of human life is at the least as difficult as the scientific study of mathematics, of electricity, or of chemistry.

Let us look at this matter more in detail. Begin with the central conception of Positive religion—Humanity. What precisely do we mean by Humanity? The entire mass of human beings now living on the earth? No; for the dead, whose inheritance has made us what we are, preponderate over the living, and our work is not for the present generation only, but for numberless generations yet unborn. And, further, among the dead as among the living, are many who set themselves in opposition to Humanity, who were traitors to her cause, who destroyed her treasures, who neutralized her noblest activities. Others again there were who did neither good nor harm, who led purely selfish lives, feeding on provision stored up by the labour of others, yielding nothing in return. These can lay no claim to be part of the great organism which we revere as the source of our spiritual life. Lives of this kind have “dissipated their energy”; are practically non-existent, are as though they had never been. Now, it is evident that this process of eliminating from Humanity elements that form no part of it is not a simple and easy matter that anyone can undertake without preparation. One of our greatest English writers, Thomas Carlyle, wrote a book on *Hero-Worship*.¹ Among his heroes he included Mohammed, Dante, Shakespeare, Cromwell, and others whom all revere. But among them also he placed one whom most men agree to reprobate; whose exceptional gifts were devoted to resistance to the best interests of Humanity, who did his utmost, and for a time with disastrous success, to turn progress backwards—Napoleon Bonaparte. It needs something more than generous sentiment, it needs a sound philosophy of history based on solid scientific culture, to eliminate the enemies of Humanity from her true servants, to choose the good and to reject the evil. In the political future of our race new problems will continually present themselves, in which similar disentanglement of what is hostile and obstructive from what is beneficent and progressive will be needed. In judging of such crises when they come, mistakes will assuredly be made even by the wisest. But this is no reason why wisdom should abdicate her judgment-seat. A body of qualified and carefully trained advisers specially devoted to the study of the laws of sociological change will, it is very certain, not be infallible. But they will form

¹ *On Heroes, Hero-Worship, and the Heroic in History*; 1841.—ED.

the surest guarantee that we can possess of avoiding fatal error, or of speedy extrication from it.

Attainment of scientific certainty, or such approximation to it as may be possible, in the complicated labyrinth of human affairs, is evidently not to be hoped for without systematic training in departments of science where the complication is less, and where, consequently, sure results are more accessible. Hence the importance of a sound philosophy of the sciences as the basis on which the whole structure of Positivism rests. Here we find a line of separation between the two principal schools of scientific philosophy—the school of Spencer and the school of Comte. The first school, starting from the truth that scientific method is one and indivisible, seeks for some single principle of which the truths of every science may be regarded as the outcome. It finds that principle in Evolution; the passage from a homogeneous, undefined medium pervading space to the state of definite co-ordination of differentiated parts, each with its own function to fulfil. To present a picture of the rise and progress of the Cosmos is the aim proposed by this class of thinkers.

But to Comte and to his school the purpose of a philosophy of the sciences is something entirely different. What they attempt is to range these great collections of natural laws in such an order that the mind can pass easily from one end of the series to the other, beginning with the most general and simple laws, and ending with the most special and complex.¹ The object is to frame what Lord Bacon called *scala intellectus*, a ladder of the understanding; to range the sciences in such a series that the transition from any one of them to that which went before or came after may be simple and natural. Classification of the Sciences, like classification of other things, is a human artifice, framed for human purposes. Doubtless the order of diminishing generality and increasing complexity does correspond in a loose way to the order of growth. Geometry and astronomy were carried by the Greeks to a high degree of perfection, whereas their knowledge of chemistry and physiology remained very rudimentary. Physics, again, in the eighteenth century, had become a solid body of scientific truth; but the very conception of a science of social phenomena had as yet hardly dawned upon the world. Nevertheless, the order in which the sciences, to use Comte's expression, detached themselves from the common stock of knowledge is so complicated by the various ways in which they have acted and

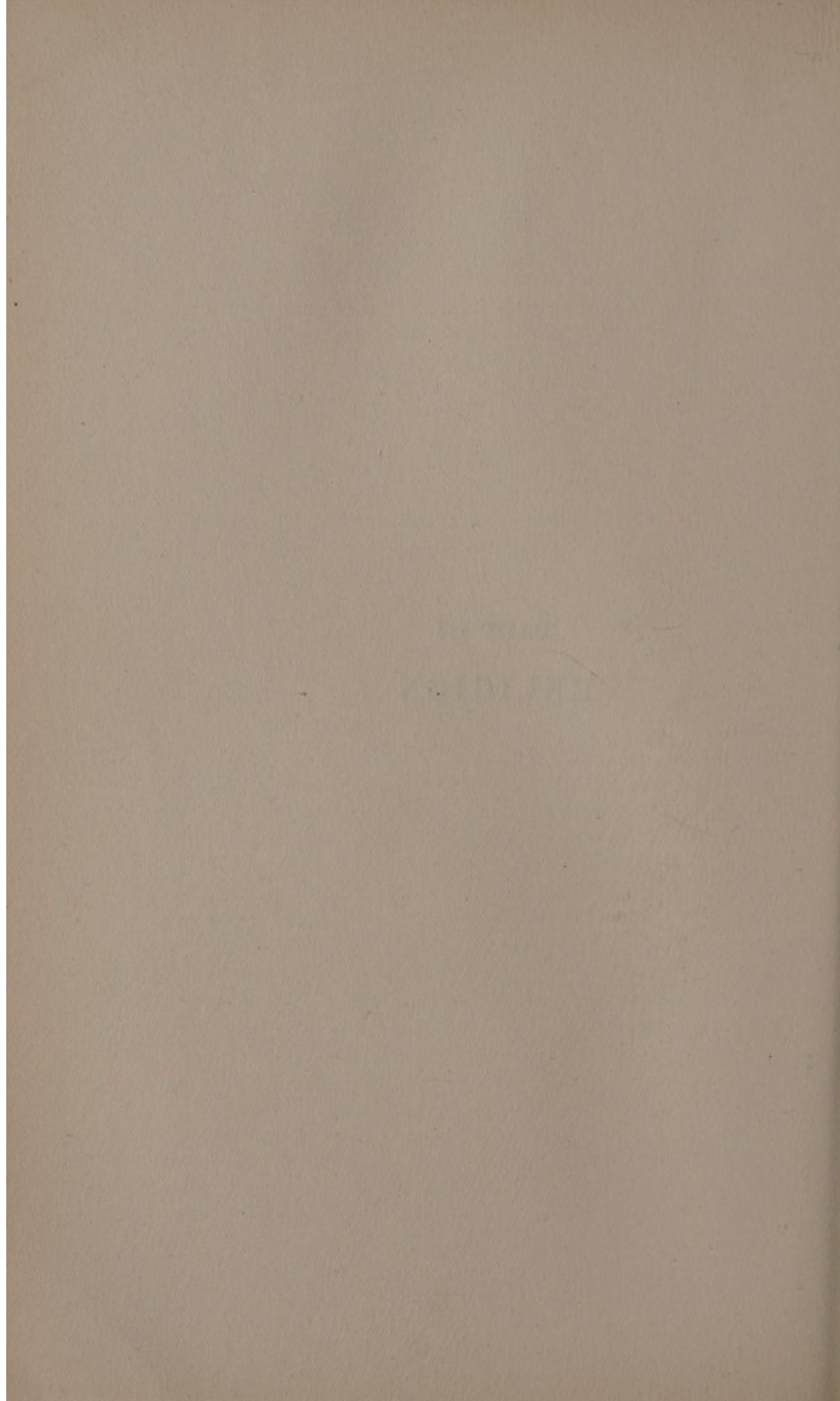
¹ See p. 162 (note 2).

reacted on each other, and have been moulded by circumstances, that it cannot be taken as a guide to the logical order in which they should be presented to the mind. It ought always to be remembered, though it is often forgotten, that classification is not an external objective fact corresponding to something that exists in nature. It is an artifice for helping forward the business of thinking. It is not a natural product; it is a tool invented for the purpose of producing more effectively.

The Philosophy of the Sciences constructed by Comte is not an attempt to explain the Evolution of the Universe. It is a discipline framed for the purpose of enabling us to infuse the scientific spirit into the study of social and moral facts. For this purpose it is not the newest acquisitions of scientific investigators, but rather the oldest, that are the most effective; not the latest and therefore the most doubtful discoveries, but rather those as to which there can be no doubt. Popular attention is apt to concentrate itself on the last new speculations as to the constitution of the ether, as to the earliest and most elemental forms of life, as to the transition from invertebrate to vertebrate organization, as to the forms of matter which preceded the formation of hydrogen, as to the order in which the metals, as primeval gases cooled, were precipitated from protyle, and many other attractive conjectures of the same kind. These are the doubtful victories of science; her hazardous advances into the unknown from which she will often be driven back with temporary loss. Little will be gained from these sources for the discipline here spoken of. What is wanted for the purpose of infusing the scientific spirit into the study of political and moral action is something widely different from semi-scientific adventures of this kind. We want a series of types of certainty, ranged in order of increasing complexity. Mathematics offer the first, the simplest, and the most stable elements of this series. In its more advanced stages mathematics enables us to solve some of the less complicated problems presented in the physical world around us. Where the direct power of geometry falls short, it still remains indirectly of the greatest value as a type of certainty, clearness, and quantitative precision, which continues to inspire us in the more complex facts of Physics and Chemistry, where we have to rely upon observation and experiment. These sciences prepare us in the same way for the study of Life; and the study of Life for the study of Society and of Man.

Such is the social purpose of Science—a purpose which incorporates it into the Religion of Humanity. Without it that Religion fades away into the flimsiest of cloud-lands.

PART III
RELIGION



CHAPTER I

CATHOLICISM

I

LAFFITTE ON CATHOLICISM

REFERENCE to our work on Comte's *Calendar*¹ will convince all candid readers of the generous appreciation accorded to the founders and builders of the Catholic Church. A yet closer study will show that the services of that Church to Humanity were never estimated even by its own disciples at their full value until they had been set forth by the Positive school. By the keen and brilliant thinkers of the eighteenth century, from whom Comte directly descended, they were wholly misunderstood. Five centuries of decay, and of the abuses inseparable from decay, had led men like Hume, Diderot, Condorcet, and Voltaire to regard it with contemptuous antipathy, as the principal obstruction to human progress. No difference was recognized between the period of its decline and the centuries of its growth and maturity. The vast interval from the fall of Græco-Roman civilization to the Renaissance of classical literature and art in the fifteenth century was looked upon as a time of arrested growth, of comatose slumber. Needless to say that the facts of history, so regarded, refused to lend themselves to any intelligible interpretation. Pascal's brilliant conception of the series of generations as a single man ever growing, ever learning, was meaningless if during forty of those generations there was neither learning nor growth. Condorcet did his best to trace human progress from prehistoric savagery to the diffusion of Greek culture over the Mediterranean, and to forecast a splendid future founded on the past. But the Dark Ages stood in his way as a gulf that he could not overleap.²

The temporary failure of the French Revolution, and the collapse of hopes founded on Rousseau's anarchical dreams, forced men back upon the study of the Middle Age, and stirred up attempts to

¹ *New Calendar of Great Men.*—ED.

² Cf. pp. 91-92.—ED.

restore its institutions and beliefs. Poets like Walter Scott, Chateaubriand, and Manzoni idealized the days of faith and chivalry. Vigorous thinkers like de Maistre pointed out the wisdom that underlay the fabric of the mediæval Papacy.¹ Revolution and counter-revolution stood opposed, hopeless of reconciliation. It was Comte's achievement to combine the truths affirmed by each; and thus, by making a consistent theory of history for the first time possible, to open out the path of true progress.

The work on Catholicism recently published by M. Laffitte² sets forth the precise position occupied by the Church in the history of Humanity with extreme clearness and fullness. Based, of course, upon Comte's philosophy of history, it is far from being a mere repetition or amplification of Comte's observations on the subject. Here, as in other branches of Positive Philosophy, M. Laffitte has set himself the task of thinking out Comte's thoughts, often so condensed or set forth in such abstract language as to evade attention, and of carrying them to their legitimate conclusions. Readers of his work on Comte's *First Philosophy*³ are well aware what light has been shed upon the most obscure passages of the master by the energy and subtle insight of the disciple, who will for ever remain associated with his name, as Archytas is associated with Pythagoras, or Theophrastus with Aristotle.

In this treatise the order followed is that indicated by the arrangement of the Positivist Calendar. St. Paul's life and work are first appreciated. His connection, at first hostile, afterwards sympathetic, with the group of Jews gathered round the memory of Jesus is spoken of; the entire originality of his conception of the crucified and risen Christ, as contrasted with the miraculous but purely human biographies of the first three Gospels, is set forth as the foundation on which it was possible to combine the enthusiasm of the Jews for their tribal God with an entire abandonment of tribal narrowness. All self-assertion on the part of the true founder of the Christian Church was done away with, and gave way to the sublimest abnegation. The Christ of St. Paul became the Ideal of Humanity—a being far above ourselves, yet with whom the adorer could become incorporate; the union of human and divine; the head of the Church. By the untiring energy and devotion of St. Paul that Church was established in many important centres of

¹ In *Du Pape*, 1817. Placed in the last section of the Positivist Library.—ED.

² *Le Catholicisme : St. Paul, St. Augustin, Hildebrand, St. Bernard, Bossuet*. 1897. This forms vol. iii of the *Grands Types de l'Humanité*.—ED.

³ See above, p. 47 (note).

Asia Minor and Greece. It found a fitting environment in the Græco-Roman world of that time. Roman conquest, by suppressing the conflicts of nations, had given the death-blow to polytheism. Distant nations were brought into easy and peaceful communication; the conception of the Human Race grew familiar. Greek philosophy had prepared all cultivated minds for monotheism. Cosmopolitan cities like Constantinople, Antioch, and Alexandria arose, in which traditions and ideas could be exchanged. Here and elsewhere the Jewish institution of the synagogue became a powerful instrument of propagation.

The four weeks in the month of St. Paul are represented by (1) St. Augustine, in whose writings the Catholic doctrine attained its complete maturity; (2) Hildebrand, who raised the spiritual power of the Church to its highest level; (3) St. Bernard, who illustrates the full perfection and social utility of the monastic system; finally (4) Bossuet, who leads us to consider the great services of which Catholicism has been capable during the inevitable decline of its independent spiritual power. Half of the volume is occupied with this final week, the subject of it being, of course, in more immediate relation than the others with the social and religious problems of our own time.

M. Laffitte describes with extreme clearness the stages in the evolution of Catholic doctrine, from the germs visible in St. Paul's Epistles to the full statement given in the Nicene Creed. The process took place, as Cardinal Newman showed fifty years ago in his remarkable essay on *Development*,¹ through the resistance offered by the Church to successive heresies—principally to those of Arius, Nestorius, and Eutyches. Each of these in its own way tended fatally to impair St. Paul's fundamental institution of the Christ as the idealized and divine Humanity, intermediate between man and the abstract and barren conception of an omnipotent Creator. The most dangerous of all these heresies was that of Arius, which, by reducing the Christ to the level of a mere prophet, would have fatally undermined the spiritual power of the priesthood, endowed with the power of bringing Christ, through the sacrament of the Eucharist, within the reach of men. The heresies of Nestorius, who duplicated the personality of Christ, and of Eutyches, who practically abolished his humanity, tended, each in its own way, to a similar result. By the Catholic doctrine, combining the twofold nature of Christ with the unity of his person, the two

¹ *An Essay on the Development of Christian Doctrine*; 1845.—ED.

instincts of veneration and of love were stirred and strengthened; the controlling and purifying influences of monotheism were combined with all that was best in the older polytheism, the union of adorer and adored.

Christian doctrine is due in the main to the Eastern Church; but the great social achievement of Christianity, the formation of a spiritual power, independent of temporal sovereignty and capable of modifying and moralizing it, was effected in the West. Constantine, says Dante, "became a Greek to make room for the Shepherd."¹ In the Eastern half of the Roman world the Church remained in servile subordination to the State. Of the three chief patriarchates, neither Alexandria, Antioch, nor Constantinople attained supremacy. When the Western Empire fell into independent provinces, the bishops of Rome maintained the ascendancy of the imperial city by spiritual forces. The successive steps in the formation of the Papacy are clearly indicated in M. Laffitte's work, special prominence being given to the life and work of Gregory the Great in the sixth century, the mission of Augustine to England, the relations of the Roman bishopric with the Frankish kingdom, and the formation of the Roman territory into an independent principality. Under the Carlovingian kings the Papal power grew steadily, and finally, after a brief period of decay, was raised to its final supremacy over the West by Hildebrand, in the second half of the eleventh century.

The spiritual force of Catholicism rested in great part upon the monasteries; and one of the most interesting and original sections of M. Laffitte's work is his chapter on the rise and progress of monasticism, from St. Benedict in the fifth century to St. Bernard in the twelfth. Monastic life had been introduced into Rome by Athanasius from Egypt in the fourth century. It was practised by Jerome, Ambrose, and Augustine; it was diffused in Spain by St. Isidore, in Gaul by St. Martin; and from Gaul it spread to Ireland, whence it reacted most powerfully on all Christendom. But the most potent and permanent organizer of monastic life was Benedict of Nursia. "This true Roman," says M. Laffitte, "devised a machinery for the conquest of the barbarian world by Christian civilization which we may compare with the Roman legion of former times: what the legion had been for the Senate the monastery became for the Papacy."²

Monasticism had its industrial as well as its spiritual side; and

¹ *Paradiso*, canto xx, 57.—ED.

² P. 266.—ED.

this is set forth in the book before us with great clearness. It was a form of socialistic co-operation, carried on with strenuous regard to economy, but differing profoundly from the socialist schemes of our own time in subordinating economic to moral purposes. All the greater were the industrial results. In the centuries preceding the rise of the Communes, the cultivation of the soil in northern Europe, the reclamation of wastes and forests, and the institution of the first machines, notably of wind and water-mills, was due to the Benedictines. Gradually, as capital increased, the abbots took their place in the feudal system as landlords of a milder and less exacting type than the baronial authorities. Slaves became settled cultivators, with the rights of freemen; and meantime energies were set free for the culture of music, architecture, and literature. All this is admirably illustrated by quotations from the monograph of M. Guérard on the history of the abbey of St. Germain-des-Prés, which sets forth in minute detail the precise condition of the occupiers of the lands held by this abbey in the ninth century.

Of the moral and social results of the monastic system St. Bernard is the most perfect expression. It is, however, the less needful to dwell on the services of this extraordinary man, since they have been so powerfully set forth in the *Life of St. Bernard*¹ by one of the most distinguished of English Positivists, Mr. J. Cotter Morison. We have only to think of him as the monk who, while profiting to the full by the discipline and seclusion of his cell, intervened wisely and effectively in every great question, intellectual and practical, that agitated Christendom, and who, from his humble station, was the chosen guide and counsellor of Popes and Kings. Worthy was he indeed to utter the noble hymn to the Virgin that closes the *Vision* of Dante.

With the close of the thirteenth century the sociological mission of Catholicism came to an end. Literature and the arts passed from the monks into other hands. Architecture, industry, agriculture, became the functions of trade guilds or of independent cultivators. Canon law gave way to civil law. Kings became supreme over Popes. Scholastic philosophy, once the great bulwark of orthodoxy, developed the habit and the power of criticizing the foundations of the Christian faith. After a brief delay the organized insurrection of Protestantism shattered the Catholic dominion in twain; and the

¹ *The Life and Times of St. Bernard: Abbot of Clairvaux.* (Macmillan and Co.; 1877.)—ED.

attempt forcibly to reunite it devastated Europe and wasted human energies for more than a century.

Nevertheless, a long and, in many ways, a most fruitful future lay before Catholicism in its decline. It could no longer influence the action of States. Every step taken from the Reformation to the third French Republic has made it abundantly clear that the Christian religion has no exclusive privilege to bind social action, and that the religion of the future must rest on wholly different foundations. But for the mass who do not march in the van of progress it continues to afford a moral shelter, controlling selfish passion and stimulating unselfish ardour, until the final Religion of Humanity, embracing all nations of the world within its fold, shall have spread more widely and taken more palpable shape. M. Laffitte's careful study of Bossuet discriminates with perfect clearness between the sphere of work from which Catholicism is finally excluded and that in which it can continue to work for the good of mankind. Bossuet frankly accepted the subordination of Church to State. His sole anxiety was to preserve the spiritual power from further dissolution—a policy well illustrated by his successful struggle against the quietistic and enervating mysticism of Fénelon and Molinos.

Not less instructive are the pages devoted to the examination of the systematic effort made by the Jesuits to consolidate the papal power. The political intrigues in which the later Jesuits were absorbed, and which led at last to their dissolution, have blinded us to the marvellous organization of spiritual forces effected by the first founders of the order. M. Laffitte brings us back to the true point of view from which their effort should be judged. His comparison of the *Spiritual Exercises* of Ignatius with the private devotion expounded in the *Positivist Catechism* of Auguste Comte, and exemplified in his testamentary volume,¹ is full of significance and wisdom. Never were men more vigorously prepared by moral discipline than the Jesuits for a great social function. Nor was that function wholly a failure. The Jesuit missions in China and Paraguay are the first, and hitherto the only, model of the way in which higher civilizations should proceed in modifying and elevating the retarded races of mankind.

The volume closes with some valuable counsel, in the spirit of

¹ *Testament d'Auguste Comte*; 1884. An Eng. tr. has been published as follows: *Confessions and Testament of Auguste Comte and his Correspondence with Clotilde de Vaux*. Ed. by A. Crompton. (Liverpool: Henry Young and Sons; 1910.)—ED.

Comte's *Appel aux Conservateurs*,¹ as to the way in which disciples of the new and final religion may co-operate with those older in resisting the revolutionary dangers which threaten to disintegrate many of the most precious institutions handed down to us from the past. Taking this volume as a whole, it appears to me the most valuable contribution made to Positive Politics since the death of Auguste Comte.

II

RELIGION AND SOCIOLOGY

IN the December² number of the *Positivist Review*, under the title "Positivism and the Unknowable,"³ something was said of the attention given by Conservatives and Catholics in France to the teaching of Auguste Comte. Among many indications of this, reference was made to two articles by M. Brunetière which appeared in the *Revue des Deux Mondes* of last year.⁴ A third, by the same writer, was published on February 15.⁵ Like the others, it raises important questions which it is exceedingly desirable that Positivists should consider.

The first principle laid down by the writer is that all religions, whatever their origin, duration, or value, are essentially social facts, not facts of individual life. Quoting from Guyau's work on the *Irreligion of the Future*,⁶ he speaks of religion as originating, not, as often stated, in anthropomorphism, but in sociomorphism. It reflects, that is to say, not man's individual nature, but the nature of the community to which he belongs. All religions, he goes on to say, whether fetishist, polytheist, Mohammedan, or Buddhist, are social institutions; they are *motifs de rassemblement*, forces which bring men together. There have been local religions and universal religions; there have been religions of the family and religions of the State; there have been jealously exclusive religions, like Brahminism or Judaism; there have been religions of the open door, like Buddhism; there have been militant religions, like Islam. But one thing has never yet been seen—the religion of the individual.

¹ 1855. Eng. tr. in 1889, entitled *Appeal to Conservatives*. (Trübner and Co.)—ED.

² 1902. ³ The paper will be found in ch. iii of this Part.—ED. ⁴ 1902.

⁵ 1903. The article was on "La Religion comme Sociologie."—ED.

⁶ M. J. Guyau, *L'irreligion de l'avenir*; 1887.—ED.

The so-called religion of the wise man, "of which no wise man ever speaks," is no religion at all. If we have to speak of the religion of Plato or of Socrates, it began only when Socrates and Plato gathered disciples round them. To say you can have a religion to yourself is like saying you can have a family to yourself or a country to yourself. Family, Country, Religion, are collective words, or they are nonsense.

Think of the meaning of the word *heresy*. "The heretic," says Bossuet, "is the man who has an opinion," the man who detaches himself from the group. *Vae soli! Les hommes aiment à penser en troupe*. The heretic disappears unless he can gather disciples round him. If he does this, he forms a schism. But a schism is itself a communion—the gathering together of the dissenters. We thus come back to what is the principal character of religion—a belief held by many in common. Reform in religion means a revolutionary movement penetrating through every fibre of society. Thus the Buddhist revolution meant the suppression of caste. Thus, too, Christianity was persecuted, not on account of its dogma, but because it brought in a new social state. In the United States (and M. Brunetière might have added, in England also) Protestant Christians are finding out that what is wanted is the socialization of Christianity. "The doctrines of Jesus," says Mr. Herron, of Grinnell College, Iowa, "are less theological than social." Look, again, at China. Why is she so recalcitrant to our missions? Because her religion is not a theory, not a metaphysical doctrine, but a social system; and until the social structure of China is fundamentally changed Christianity will be powerless.

Having got so far, M. Brunetière goes on to say that Auguste Comte had said all this, or most of it, long ago. The whole tendency of his thought was to identify Religion and Sociology. I quote the following passage, which, full as it is of confusion and misrepresentation, is not without interest:—

Sociology led Comte to religion; and religion as he conceived it (*sa religion*) became at once the rule and the judge of his sociology. His religion, *from which he most carefully avoided eliminating either the unknowable or the supernatural* (and, indeed, no one has spoken so severely as he of the monstrous contradiction disguised under the words "natural religion"), is the mystical foundation of his sociology. His sociology is simply an attempt to realize his "kingdom of God" upon the earth.¹

¹ *Revue des Deux Mondes* (February 15, 1903), p. 854.—ED.

On the words which I mark in italics we will not dwell at present. M. Brunetière goes on to say how highly he approves of Comte's definition of religion as given in the *Positivist Catechism*;¹ how truly, deeply, eternally religious it is; how it only needs completing to make its universal adoption desirable. Not less cordial is his praise for all that Comte says, in his annual Circulars² and elsewhere (see especially the sixth Circular), as to the "revolutionary disease." Comte described it as due to "an over-stimulation of pride and of vanity, kept up by the tendency, a very contagious tendency, to believe in personal infallibility."³ It is to this disease of the public mind, and not to the progress of science and free-thought, that M. Brunetière attributes the decay of Catholicism during the last five centuries. But how does he explain the origin of the disease? Comte's explanation is well known. Theological dogma, once capable of rallying men under a common standard, has now lost its power to rally; consequently, every man tends to become his own pope, and follows what is right in his own eyes. But controversy with M. Brunetière is not the purpose of this paper, and we may pass on.

Comte's sixth Circular was written while he was preparing his *Appel aux Conservateurs*,⁴ much of which, indeed, is an expansion of it. It is needless to say how gladly the Catholic writer accepts all those pages of the book which dwell on the services which Catholicism, even in its decline, is still capable of rendering, and how carefully he ignores the proofs given that the decline is irrevocable. Such one-sidedness is to be expected; it must be reckoned with as a certainty. But—and here lies the point at which this paper is aiming—it *must not be shared by Positivists*. For, on the one hand, we are bound to make it clear to ourselves and others why it is that no theological religion, whether Catholic or any other, can fulfil that one of the two essential functions of religion which consists in rallying the nations of the world under a common standard; and, on the other hand, our principles compel us to acknowledge that the second function—that of bringing the divergent desires and thoughts of each individual life under moral control—is carried out to some extent by every form of sincere belief that has prevailed among men, and assuredly not least by Catholicism, even in its decline.

¹ First Conversation. 2nd Eng. ed., p. 34.—ED.

² These Circulars will be found in Dr. Robinet's *Notice sur l'Œuvre et la Vie d'Auguste Comte*; 1860. 3rd ed. in 1891. For an Eng. tr. see *The Eight Circulars of Auguste Comte*. (Trübner and Co.; 1882.)—ED.

³ Sixth Circular. See Robinet, p. 513 of 3rd ed., or p. 47 of Eng. tr.—ED.

⁴ See above, p. 237 (note 1).

Let it be remembered that what Comte always looked forward to with hope was to see Positivism and Catholicism brought into direct contact and fairly confronted. The word *Christianity* in our times means something different for every person who speaks of it. It may mean strict Calvinism; it may melt away into Deism and the vaguest philanthropy. But with Catholicism no such mistake is possible. The Anglican priest may sign the Thirty-nine Articles, and may proceed to declare his doubt of every one of their dogmas. No such latitude is permissible to the Catholic. In Catholicism we have, as its supporters maintain, the only adequate discipline of life. In the early Middle Ages this claim was, as Positivists most cordially agree, very largely justified. Comte and his successor, Pierre Laffitte, have shown with far greater force and fullness than any Catholic writer, more fully than even Joseph de Maistre, that the Catholic system brought forward the problem of the moral government of human life in a way that had never before been attempted. What was peculiar to it was the rise of a special body of men, *separate from and independent of the State*, whose business it was to inculcate morality in all relations of life, public and private. I earnestly advise those who may find the fifty-fourth chapter of the *Philosophie Positive*, or the sixth chapter of the third volume of the *Positive Polity*, either too difficult or too inaccessible, to read carefully the third volume of Laffitte's *Grands Types de l'Humanité*.¹ This volume, published separately from the other two and at a much later date (1897), deals with the principal names in the month of the Positivist Calendar that bears the name of St. Paul. Libraries of Catholic theology may be safely challenged to produce a book that has done such justice to the services rendered by St. Paul, St. Augustine, St. Benedict, Hildebrand, and St. Bernard.

Setting, as we do, so high a value on the Catholic Church, from its rise under St. Paul to its culmination in the age of St. Francis and of St. Thomas Aquinas, why is it that we repudiate its claims to the moral government of mankind in the present and in the future?

For many reasons; but chiefly because, so far as public life is concerned, Catholicism has abdicated its function. This was not due to Protestantism. Two centuries before Luther burnt the Pope's bull, or Henry VIII sent men to the scaffold for denying his own headship of the English Church, the independence of the Church as a controlling power over the Western States had died a natural death. Even at the height of its power Catholicism had

¹ See above, p. 232 (note 2).

failed to establish its control over Eastern Europe. It could not breathe its life into the feeble Christianity of Byzantium; its heroic struggle with heroic Islam ended in an armed truce. The fourteenth and fifteenth centuries saw its increasing subjection to the State. The sixteenth and seventeenth brought the Protestant revolt and the final independence of the revolvers. The eighteenth century, making every dogma of theology an open question, culminated in the French Revolution; and not merely those who took part in it, but such onlookers as Goethe and Wordsworth, and countless others, felt that a new era had begun.

Throughout these five centuries a marvellous store had accumulated of scientific discoveries, artistic creations, industrial inventions, geographical explorations; many of the first, and some of the second, being hostile to Catholic doctrine, and all independent of it. Small wonder that early in the nineteenth century men of insight, born under the impulses of the Revolution, should feel that the time for the reconstruction of life on a purely human basis was at hand. Among these prophetic souls Comte stood alone in surveying the full extent of the problem to be solved. To those familiar with Condorcet's *Progress of the Human Mind*,¹ and with de Maistre's appreciation of the mediæval Papacy,² it will be enough to say that his great discovery of sociological evolution combined the point of view of both these thinkers. To Condorcet human progress seemed continuous, from the humblest beginnings onwards, till Christianity arose. Christianity, as he conceived it, involved civilization in a thousand years of darkness, till the Renaissance and the Revolution restored the light. For de Maistre, on the other hand, the mediæval years were luminous and progressive; with the fall of the mediæval Papacy began a long period of moral and social aberration, from which it was the business of the nineteenth century to save us.

We come back, then, to the position taken up by Comte in the *Appel aux Conservateurs*, as guiding the attitude of Positivists to other forms of religion. Briefly, it is this: that, while the claim of Catholicism, or of any other theistic doctrine, to direct the public life of mankind has become, in the course of evolution, dangerous to public order, and requires unflinching resistance, yet, nevertheless, there is a standpoint from which Positivists and many followers of older faiths can recognize the value of each other's work. Both are aiming, though in widely different ways and in different surroundings, at an identical purpose. Both are protests against

¹ See above, p. 91 (note 5).

² *The Pope*.—ED.

irreligion; in other words, both are upholding the supremacy of soul over body, of spirit over matter, of love, joy, and reverence over cynical epicureanism or hopeless apathy.

Let there be no mistake, no mystification. When the Positivist and the Catholic meet on the arena of public life, there can be no surrender and no compromise. To direction of the public concerns of mankind Catholicism (and the same may be said of every form of organized Christianity—Greek, Anglican, Lutheran, or Calvinist) has irrevocably lost every lawful claim. Attempts to restore the power of the mediæval Church have been made from Philip II onwards. They have been repeated through the nineteenth century in Spain, in Austria, in Spanish America, and, above all, in France under Charles X, under the Second Empire, under the Third Republic. What has come of them we know. Nor can better things be said of the attitude of the Anglican clergy towards the Calvinists of South Africa, or of the resistance of British Nonconformists to justice in Ireland, or of the attempts of Christian missionaries, of whatever sect, to uproot the foundations of Chinese civilization. In the public relations of men, national or international, organized theism, in all its forms, has become a source of disunion and disturbance. All this has been said by Comte in words of unmistakable clearness. And yet Comte it was who, in the work I am now speaking of,¹ put forward the conception of a religious league against *irreligion*, in which, under Positivist direction, sincere supporters of every organized creed should be invited to take part.

I have noticed that many Positivists are disposed to disregard this conception, and even to look upon it as a chimerical paradox. To me it presents itself as a very striking illustration of Comte's depth of sympathy, and comprehensive grasp of the facts of moral life. It should be noted that, forty years after the publication of the *Appel aux Conservateurs*, Pierre Laffitte was led, at the close of his elaborate study of Catholicism,² to an almost identical conclusion. I say "almost identical," for, having regard to political and social changes which had taken place in the interval, wise modifications were introduced by Comte's successor, which, however, left the principle entirely untouched. Even so, it may still be regarded by some as an ideal counsel of perfection, which can never be applied. Yet it should be remembered that in all religion that

¹ The *Appel*. See pp. 117-23 of the Eng. tr.—ED.

² *Le Catholicisme*, pp. 687-90.

deserves the name we have to deal with ideals, our business being to strive to translate them into realities as time and place may serve. Prayer, the life-blood of all religions—what is it but the constant effort to uphold and to renew the ideal of life?

Religions are many; religion is one. The rate of transit from primitive and imperfect forms towards that which is perfect and final varies not merely between one century and another, not merely between one nation and another, but with different members of the same community. Difference of intellectual power is not the only cause of this, not even the principal cause. It depends rather on variations in social environment, on individual temperament, on historical antecedent. Any street in Paris, London, or Berlin contains a large number of families who are entirely "emancipated" from theology, and who live without ideals or aspirations of any sort or kind, sunk in selfish apathy or industrial slavery. In a Tyrolese or Irish village many families are sustained in their direst sorrows by lifting up their hearts to the Virgin Mother, the embodiment of purity and pity. Which are nearest to the Religion of Humanity?

III

MODERN CHRISTIANITY

JUDGED by its action on the collective life of nations, Christianity during the last few years, as during many that have gone before them, has been found wanting. In questions of justice, whether national or international, its authorized exponents have not been conspicuous as champions of right, and have very frequently ranged themselves on the side of wrong. Honourable exceptions there have been; but, on looking at the principal issues that have divided nations during the last ten years, it will hardly be felt that the case against Christianity has been too strongly stated.

Eight or nine years ago¹ France was deeply stirred by the charge of treason brought against a Jewish officer in the French army. There is no need to repeat the tale of the Dreyfus agitation. It is enough to say, in the fewest and plainest words, that the whole force of the Catholic hierarchy was arrayed on the side of injustice, and very nearly achieved success. Just as that struggle was ending, Great Britain was dragged by her plutocracy into war for the

¹ Written in 1905.—ED.

suppression of the Boer Republics. The minority that protested was strong and resolute; but the few clergy that joined it served but to make the acquiescence in wrong-doing of the clerical majority more conspicuous. If we turn to Eastern Europe, we find the Russian Procurator of the Holy Synod directing, now as ever, the forces of obscurantist repression. Lastly, in Eastern Asia, we see Christian missions, especially those of the Catholic Church, exacting exorbitant damages for riots which their own folly has provoked, and claiming extraterritorial privileges that, if prolonged, would sap the foundation of Chinese civilization.

It is not, therefore, surprising that those who are absorbed either as actors or as spectators in the business of public life—to whom the struggle for justice between classes or between nations is everything, and the rest almost nothing—should grow impatient when they see the established Churches ranging themselves on the wrong side, or at best passive in defence of the right. We may regret, but we cannot wonder, that they should take the rate of decay in theological belief as their measure of social and moral progress, and that they should be sometimes tempted into language that recalls the stupendous blunder of Condorcet and other leaders of the French Revolution, of regarding the whole Middle Age as a millennium of stagnation or reaction. That M. Jaurès and his followers, fighting against an organized conspiracy for the destruction of the French Republic, should speak, write, and act in this way is perfectly intelligible.

But Positivists have been taught to look at this matter from a more comprehensive standpoint. They have not been backward in the struggle for political justice, as all will allow. Their record as to India, China, Egypt, South Africa, Ireland, is one of which they need not be ashamed. They have supported the just claims of labour; they have been the firm opponents of Church establishments. Nevertheless, though this is much, yet for men, one of whose aims is "to see life steadily and see it whole," it is not enough. Justice is but one of the four cardinal virtues. And the Christian Church called our attention to others besides those four. It is possible to conceive a social state in which a series of vigorous and wise rulers should have established an unbroken period of peaceful and equitable government, and in which, nevertheless, the lives of the governed were not worth living. Something of this kind is what actually took place in the best period of the Roman Empire. Greek intellect and Roman energy had displayed forces for which there was apparently no further vent. On the surface of

things there seemed little to complain of, and little to work for. Refined culture was diffused everywhere, and there were no more worlds to conquer.

In such a condition of the world, "the fullness of time having come," Paul founded the Christian Church. It is not needful here to enter into the disputed question of the personality of Jesus, in which the sublime abnegation of Paul's noble and heroic nature inspired him to annihilate his own. Enough to recognize what surely must now be obvious, that the Christ of Paul's letters to the Galatians and Romans, the Unifier of divine and human, the Man-God, differed widely from the Galilean prophet and miracle-worker of the first two, or even of the first three, Gospels. The founder of a Jewish sect was transformed into the central object of a universal faith that embraced the whole Roman world. Put forth as an ideal vision, it might have impressed a few ardent spirits, and then have faded into oblivion. But in Paul the inspiration of a prophet was combined with the energy and organizing genius of a Cæsar. In city after city of the Eastern Mediterranean a fortress of the new faith was built; and when his life was prematurely cut short the Catholic Church was founded. A society existed outside the sphere of political life whose direct object, in view of the speedy coming of the Messiah, was the purification of the soul, the education of the heart, the restraint of baser passions, the systematic culture, impressed on young and old, on rich and poor, on bond and free, of the instincts of reverence and love. Stable enough to survive the fading hopes of the immediate advent of the Christ, this society permeated and leavened the mass of the Roman world, acted on, and was in turn moulded by, feudal customs, and stood out at last in the Papacy of Hildebrand and Innocent III as the moral arbiter of European States.

I am not proposing to recount Church history in two or three pages. But I gladly take occasion to recall the attention of readers of the *Positivist Review*, as I have done once before, to the masterly treatment of this subject, from the Positivist standpoint, by Pierre Laffitte; and I am the more willing to urge this that in our English work on the *Positivist Calendar*¹ my own treatment of the life of St. Paul did not lay such stress as Laffitte's book,² published some years later, would have taught me to do, upon the germs of Catholic discipline visible throughout St. Paul's teaching. They needed, in fact, only the natural process of development, which Cardinal

¹ *New Calendar of Great Men.*—ED.

² *Le Catholicisme.*—ED.

Newman so powerfully depicted sixty years ago, to pass into the accepted creed of mediæval Christendom. Newman remarks, in the Introduction to his remarkable essay,¹ that "perhaps the only English writer who has any claim to be considered an ecclesiastical historian is the unbeliever Gibbon." Gibbon had realized, in his own imperfect way, that Christianity was something more than a creed, that it was not to be summed up in a manual of doctrine, that it was a social force of stupendous import undergoing through a long series of centuries a process of organic development.

If Newman could have read the volume to which I am now calling attention, he might with more reason have said that, while written by the principal exponent, next to Comte, of the Religion of Humanity, it contains a more adequate account of the rise, constitution, and social efficacy of the Christian Church than has ever yet been presented by any of its professed defenders. In form it is a continuation, but on a much larger and fuller scale, of the two volumes entitled *Grands Types de l'Humanité*,² which deal with the great men commemorated in the first five months of the Positivist Calendar. In this third volume one month alone is dealt with—the month of St. Paul; and nearly half the volume, 300 pages, is devoted to the week commemorating the celebrities of Christianity during the last five or six centuries. This period, as students of Comte's philosophy of history are well aware, began with the spontaneous decay of the Papacy in the fourteenth and fifteenth centuries under Anti-popes, Schisms, and conflicting Councils; this in the sixteenth and seventeenth was followed by the systematic disruption effected by Luther and Calvin; finally came the more destructive movement of Deism and Atheism, issuing in the Revolution, from the turmoil of which we have not yet escaped. Chief among the Catholic celebrities of this period comes Bossuet, the philosophic organizer of the Gallican Church. With him are associated Christian philanthropists like St. Vincent de Paul, the founder of the order of Sisters of Charity, and the Abbé de l'Épée, the teacher of the deaf and dumb; beneficent mystics like Catherine of Siena, St. Teresa, and the founders of the Society of Friends; reformers of Church discipline within the limits that were then possible, like Charles Borromeo, Xavier, and Loyola. It is obvious that other names might have been chosen more familiar to British

¹ See above, p. 233 (note).

² *Les Grands Types de l'Humanité*. Appréciation systématique des principaux agents de l'évolution humaine, par P. Laffitte. Two vols. (Paris; 1875-1876.)—ED.

and American ears. But this is a matter of quite secondary importance for our present purpose, and need not be discussed here. The essential point to be considered is that throughout the period during which Catholicism, as a force acting on national and international life, was undergoing continuous decline, it presents us with a series of men and women whose services to the moral life of Western Europe deserved, in Comte's opinion, special commemoration.

Now, it is sometimes said and thought that all this was well enough for times when the final faith of Humanity had not yet arisen; when it was not thought possible that there could be any organized moral discipline except under the guidance of theological belief. But the case is now quite otherwise. A human religion in perfect harmony with science, satisfying the most ardent imagination and directing our moral energies to the culture of affection in private life and to the establishment of public justice, is now before the world. Let the world accept it, and cling no longer to "creeds outworn."

There is some truth in this, but not the whole truth. And what is missing is of great practical importance. In the first place, though it is true to say that the new religion is before the world, it has as yet been presented rather as a vision of what may be than as an effective reality. I do not doubt that the time is near at hand, perhaps in the century that is now beginning, when a teacher or school of teachers will arise whose personal devotion, aided by sufficient intellectual power, will make the Religion of Humanity as real to large bodies of men and women in Eastern and Western cities as was Christianity in the humbler streets of the cities of the Levant when Paul had done his work. But this lies still in the future. And, meanwhile, all we can be sure of is that all truly religious men and women, in the wide and all-embracing sense that Comte gave to the word *religion*, be they Agnostic, Catholic, or Methodist, are silently preparing the way for that future; standing aloof altogether from the iniquitous ambitions with which the official Churches may continue to trouble the world.

I have spoken of the fourth week of the month of St. Paul. It suggests a brief reference to the first week, which represents the three or four centuries in which the Catholic doctrine was passing through its slow yet continuous evolution from St. Paul's Epistles to the Nicene Creed. Christianity was working underground during the greater part of this period. The great Fathers of the Church, Greek or Roman, belong to its close. The thought of

an independent spiritual power which should arbitrate between contending nations, and which, when wielded by an Ambrose or a Hildebrand, could bring emperors to their knees, was not possible before the fourth century. Yet the discipline and purification of private life, the restraint of selfish passion, the culture of reverence and love, of which the triumph of the mediæval Church was the outcome, was going on all the while, and from that time to this has never ceased. It will survive, it may be, for many years after the Religion of Humanity has gained its legitimate ascendancy over the progressive sections of mankind.

Comte, as all students of his writings are aware, was too sanguine in his hopes of the rapidity with which his teaching would permeate the world. Yet his highest hopes for the nineteenth century were that at its close a thousandth part of the adult male population in Western Europe should have accepted Positivism. That so small a minority would suffice to protect the interests of public justice—that is to say, of Positivism applied to national and international life—is not the unreasonable assumption that it might at first appear. With rare and very transient exceptions, minorities have always guided the public life of the world in the past; and they will always guide it in the future. At present the work, or much of it, is done by eloquent platform speakers, by brilliant literary men, and by a Press bought and sold by millionaires. Obviously, a better result may be imagined and hoped; but in any case, be the leadership wise or unwise, it will be the function of a minority.

However this may be, it must remain a matter of momentous importance whether, in the vast majority of men and women who take no part in speculative changes, and who are not actively engaged, except at rare intervals, in public agitations, the continuity of moral tradition and discipline in private life is upheld or not. Many of the indications at the present time are unfavourable, and warn us that this continuity is threatened. Without indulging in querulous jeremiads as to contemporary morality, there is enough to make thoughtful men unwilling to see guarantees of any kind for moral discipline swept away till more efficient substitutes have taken their place. With such hesitation, Positivists can sympathize without abandoning any of their principles; or, rather, in conformity with their principles, they are bound to sympathize. Having been taught something of the more perfect religion of the future, they are the more able to recognize the value that survives from the religions of the past and present. They can tolerate no theological interference with the government of nations; no armed intervention,

whether through protected missions or otherwise, to eliminate Confucianism from China, Shintoism or Buddhism from Japan, Islam from the Ottoman Empire. To the grant of official privileges to any form of faith, their own included, they offer determined opposition. But this attitude will not hinder them from acknowledging the services rendered by theological religions in the time of their strength, and the useful work that still remains to be done by them in their period of decline.

This attitude of respectful sympathy is the essential meaning of the league of religions against irreligion, projected by Comte in his *Appel aux Conservateurs*.¹ The comments on it with which Laffitte closes his treatise on Catholicism are of great interest and value. Its mode of application will doubtless vary very widely with time and circumstance; but the combination of sincerity with sympathy will remain the characteristic note. It is, perhaps, hardly needful to point out that in the sense here given to the words *religious* and *irreligious* large masses of nominal Christians must be classed among the latter; and that among those who reject every form of theological belief some are in a very true sense religious, even though they may not formally accept the Religion of Humanity.

IV

CATHOLICISM AND SCIENCE²

IT may be feared that the excitement of passing events has left little time or leisure for watching the remarkable controversy between Dr. St. George Mivart and Cardinal Vaughan as to the limits of divergence on scientific questions permitted by the Catholic Church. Into the details of the controversy I have no intention of entering. Those who care to study them, and they are worth study, will find most of them in the *Nineteenth Century* (August 1899, January, February, and March, 1900), and in the *Times* from January 12 to January 27. For several years Dr. Mivart has been maintaining that the attitude of the Roman Church with respect to modern scientific discovery was far less inflexible and uncompromising than had been commonly supposed. He had been encouraged by many Catholic theologians to believe that the Church had taken

¹ Cf. above, p. 242.—ED.

² April, 1900.

warning from the scandal of Galileo's imprisonment, and would in the future avoid the mistake of presenting any obstacles to scientific research, whatever the conclusions to which such research might lead. However obstructive Catholicism might appear, especially in its Roman centre, there was yet room within its borders for a progressive element, which at some future time might leaven the inert mass and restore its intellectual vitality.

Hoping and believing this, yet not feeling quite sure of it, Dr. Mivart resolved to bring the matter to a definite issue. To live in a fog of doubt and equivocation on such a matter had become intolerable to him. Yes or no, is the Church prepared to accept the conclusions to which scientific reason may lead us, whatever those conclusions may be? Assuming an affirmative answer to this question, Dr. Mivart, in his article of January last,¹ entitled "The Continuity of Catholicism," showed very quietly but also very unmistakably some of the results that followed. In a most sympathetic and reverential spirit, but without any flinching, the miraculous story of the conception and the resurrection of Jesus were dealt with as a scientific student would deal with the legends of Buddha or the early tales of Greece and Rome. The Fall of Man and the scheme of Redemption faded away altogether. "Most scholars would deny that there is more historical evidence for the garden of Eden than for the garden of the Hesperides." The Biblical account of the fall is "a myth intended to symbolize some moral lapse of the earliest races of mankind," or perhaps indicates "the first awakening of the human conscience to a perception of right and wrong." An entire change takes place in the point of view from which Christ's death is looked at. It is no longer a satisfying of God's justice and a redemption from the curse of original sin. In the view of many modern Catholics, "Christ's life and death have served to set before us a great 'object lesson.'" Observe that these and many other propositions of the same kind were not put forward by Dr. Mivart as individual speculations of his own concocting. The whole point of his article lay in his bringing them forward as samples of an evolutionary process which Catholic doctrine was at the present time undergoing in the minds of many distinguished priests and theologians he knew personally.

As might be supposed, the challenge was at once accepted. On January 9 a form of recantation was sent to Dr. Mivart, with a request that he would sign and return it; a request which, a week

¹ *Nineteenth Century*; January, 1900.—ED.

afterwards, was accompanied with an intimation that in case of refusal the law of the Church must take its course. The terms of this remarkable document are pitilessly clear. The signer was required to declare, generally, his submission to the Catholic Church as the supreme and infallible guide of Christian faith. He was then required, specifically, to announce his belief in the following tenets, in the plain literal meaning of the words: the miraculous conception of Jesus; the Virginity of Mary; the Fall of Man—that is, that “Adam’s sin entailed loss of holiness and justice received from God, not for himself alone, but for us all”; that the Crucifixion of Christ “was not merely an object lesson of fidelity unto death, but a true and full satisfaction to the offended justice of God for the sins original and actual of all men.” He was to “reject as false and heretical all doctrines which teach that the souls in Hell may eventually be saved, or that their state in Hell may be one which is not of punishment.” He was to proclaim his belief in the plenary inspiration of Scripture in terms which would satisfy the strictest Bibliolater in Calvinism. Against evolution of doctrine in the sense foreshadowed by Dr. Mivart the form of recantation was hopelessly stringent. He was to say that “the doctrine of faith which God has revealed has not been proposed like a philosophical invention to be perfected by human ingenuity, but that.....that meaning of the sacred dogmas is to be perpetually retained which our Holy Mother the Church has once declared, and that such meaning can never be departed from under the pretence or pretext of deeper comprehension of them.” He was to “reject as heretical the assertion that it is possible at some time, according to the progress of science, to give to doctrines propounded by the Church a sense different from that which the Church has understood and understands; and consequently that the sense and meaning of her doctrines can ever be in the course of time practically explained away or reversed.”

Dr. Mivart made one effort—not, it would seem, a very hopeful one—to modify the Cardinal’s purpose. On January 19 he wrote to ask whether Cardinal Vaughan really meant that he was to say that there are no errors, or altogether false statements or fabulous narratives, in the Old and New Testaments, and that he would not be free to hold and teach, without blame, that the world was not created in any six periods of time; that the story of the serpent and the tree is altogether false; that the history of the Tower of Babel is a mere fiction devoid of any particle of truth; that the story of Noah’s ark is also quite erroneous, as again that of the plagues of Egypt; that neither Joshua nor Hezekiah interfered with the

regularity of solar time; that Jonah did not live within the belly of any kind of marine animal; that Lot's wife was never turned into a pillar of salt; and that Balaam's ass never spoke? If he is told that to believe these things is not necessary, it will "greatly facilitate the signing of the document." The Cardinal replied by referring his correspondent to the Pope's Encyclical of 1893, entitled *Providentissimus Deus*. Consulting this Encyclical, Dr. Mivart found that it asserted in most unmistakable language the plenary inspiration of the Bible in every particular. His letter in the *Times* of January 27 announced the closing of the controversy. "It is now evident," he writes, "that a vast and impassable abyss yawns between Catholic dogma and science, and no man with ordinary knowledge can henceforth join the communion of the Roman Catholic Church if he correctly understands what its principles and its teaching really are.I categorically refuse to sign the profession of faith.....*Liberavi animam meam*. I can sing my *Nunc dimittis* and calmly await the future." So ends this significant controversy. It is worth studying, because it brings into prominence the features which distinguish Catholicism from every other form of Christianity.

In an article on Dr. Jowett in July, 1897, and again in a more recent paper on "A Church without a Creed,"¹ I tried to show the inevitable hollowness of all attempts to re-establish Christianity as a governing influence in the world without regard to its dogmatic basis. This has been felt by all the great teachers of the Christian religion; by St. Paul, who declared the doctrine of the Resurrection to be the foundation-stone of his faith; by St. Augustine, who spent three-fourths of his life in the refutation of heresy; by St. Bernard, whose controversy with Abelard still retains its dramatic interest; by Dominic, by Luther, by Calvin, by Bossuet when he crushed Fénelon, by the Jesuits who imprisoned Molinos; by Bishop Butler, the greatest philosopher of Anglicanism; by the most impressive of modern Catholics, Cardinal Newman. All these men knew well that as a governing force in the world Christianity without a creed is as powerless as steam without a steam-engine, or gunpowder without artillery. In season and out of season they acted according to their convictions; Augustine and Bernard with triumphant success, the rest with increasing degrees of failure as the centuries went by. When Dominic founded the Inquisition the seeds of dissolution were already sown. Calvin roused more hatred than fear when he burnt Servetus; Bossuet was followed hard by

¹ The two papers referred to will be found in the next chapter.—ED.

Voltaire. Yet still the Jesuit, feeble of intellect but not less tenacious than his founder, is doing his best to set fire to European civilization, on the bare chance that the Pope may be made king again, and France be hidden under a shameful veil of darkness.

To some of those who agree with me generally in this outline of the situation it will seem an intolerable paradox to say, as nevertheless I am compelled to say, that in the controversy between the Cardinal Archbishop of Westminster and the distinguished man of science, the Cardinal from one point of view, and that of paramount importance, must be admitted to be right. More consistent, more faithful to his trust than his Anglican competitors, Cardinal Vaughan upholds the principle that the Catholic Church exists, not merely for the purpose of stimulating and controlling the inward emotions of men and women as individuals, but of giving counsel in their dealings with one another. To give advice in social questions implies that the adviser has a definite body of principles, defining with some degree of precision the action of man not merely as an individual, but as a member of a community. In other words, the counsellor must have a theory of human society, be that theory right or wrong. It often happens that the theory may be erroneous, and yet the advice founded on it be sound. Ptolemaic astronomers gave for the most part excellent advice to navigators and to the makers of calendars, though on a mistaken theory. The time came when the theory itself had to be corrected by Copernicus and Kepler; but in the meantime, without some theory, no advice could have been given at all.

Now, the Catholic theory of society as presented in any of the accepted treatises of Catholic doctrine, notably in the *Summa Theologiae* of Aquinas, rests on a clearly defined basis of theological dogma as laid down during the twelve centuries that preceded it. By this it is not meant that no further change was possible, but that every such change, as announced from time to time by successive Popes or Councils, must be consistent with the doctrines that had been laid down before. Catholic Christianity is an organic whole from which no part can be taken away without ruin of the rest. "Each stone," says Father Clarke, replying in February¹ to Dr. Mivart's article, "of the City of God so rests on every other that the most minute flaw in any one of them would cause the whole to collapse." "The very faintest derogation from any of the dogmas of the Church

¹ *Nineteenth Century*; February, 1900. The article was entitled "Dr. Mivart on the Continuity of Catholicism."—ED.

would at once be her destruction." Here lies the strength of that Church. Here also lies its weakness.

Not that the Church inquires too closely into the private opinions of its believers. So long as there is no open attack, no formal denial, she is as tolerant as any other Communion, perhaps more so. To a scientific student like Dr. Mivart she would say—she had, indeed, practically said in his case—"Remain within the fold as long as you will, attend our services when and as you please, we shall not molest you. Put forward what theories of evolution you please, speculate as you like on the earth's history during the myriads of centuries that went before the birth of Adam—we are not afraid of you. We do not ask you to reconcile modern speculation with the teaching of the fathers. So far as reconciliation may be necessary, leave that to us. All that we ask of you is not to attack our teaching; not to deny the creeds." It may be that such language is not ethically defensible. It may not be consistent with the highest standard of honesty and truth. But, at any rate, it would seem that no further concession is possible for a Church that claims to be "possessor of the perfect and absolute truth," and that undertakes to direct society from the standpoint of revelation and theological dogma.

Religion has two fundamental purposes: unity within the soul of man, aiming at control of selfish passion by reverence and love; and union of men together by common principles and a common purpose.¹ All forms of faith, Protestant or Catholic, attempt the first—to say nothing of Buddhism and many forms of faith that are not Christian. The Catholic Church alone upholds her mediæval claim to fulfil the second. In the Middle Ages she achieved with her very imperfect doctrine an astounding measure of success. Wise rulers account for part of this; and, moreover, the doctrine, with all its insufficiencies, was not then the hopeless anachronism which it has since become. In times when all the facts of the physical world were under the dominion of theological methods, it could not be otherwise with facts of the social world. But now that both worlds alike are penetrated with the positive spirit—the spirit, that is to say, of humanity and science—the pretensions of the Catholic Church to social dominion force her into hostility to the best interests of mankind.

To after-times the situation in which the Western world now stands will appear singularly tragic. The controlling influences of

¹ See *Positivist Catechism*, p. 34.—ED.

the past have lost their power, and have ranged themselves among the forces of evil. Those of the future, which have been so long preparing, are not yet established. What has happened during the last two years in France and England is a strange sample of a world in which moral forces have abdicated. In the Dreyfus agitation the Church of France has shown itself a den of thieves. In England the clergy, with a few noble exceptions, have looked on while their rulers were committing one of the worst political crimes in modern history,¹ and, like the priest and Levite of the parable, they have passed by on the other side.

¹ The allusion is to the South African War, which began in October, 1899.—ED.

CHAPTER II

THE ANGLICAN CHURCH

I

JOWETT

OXFORD has played a singular and somewhat complicated part in the history of English social life. Recognized in the thirteenth century as one of the three centres of intellectual enlightenment in Europe, it bid fair under Grosseteste and Roger Bacon to be as distinguished in the cultivation of science as Paris in philosophical theology, or Bologna in jurisprudence. That promise failed; and the fertile field lapsed for many generations into a barren wilderness of dialectic. In the seventeenth century there was a new outburst of scientific energy. Under Wilkins, Wallis, Boyle, Christopher Wren, and Halley, Oxford took an even more prominent part than Cambridge in the foundation of the Royal Society. Sleepy conservatism prevailed through the eighteenth century, broken only by the rise and progress of Methodism. Following by a short interval the Evangelical revival came the neo-Catholic movement of seventy years ago, in which Newman was the most prominent figure, and which has left such lasting traces upon the Anglican Church. Side by side with the new mediævalism a process of a different kind has been going on, which may be briefly described as the pouring of the new wine of modern thought into the ancient bottles of the orthodox creeds. Here, too, Oxford has played a prominent part. Bishop Hampden and Dr. Arnold were contemporaries of Newman, Keble, and Pusey. The authors of the once celebrated *Essays and Reviews*¹ were for the most part Oxford clergymen. And no one, unless it be the late Dean of Westminster,² has set a stranger or more striking example of this mental attitude than the distinguished Master of Balliol, whose *Life*, written by two of his pupils,³ is now passing through the circulating libraries.

¹ 1860. Jowett was one of the seven authors.—ED.

² Dean Stanley.—ED.

³ *The Life and Letters of Benjamin Jowett*, by E. Abbott and L. Campbell. Two vols.; 1897.—ED.

Let us form a precise notion of what the attitude in question is. You belong to a community which is universally understood to be pledged to the support of certain doctrines. Further, not merely do you belong to it, but you play a leading part in it; you make it your business to train successive generations of younger men who shall advocate the doctrines on which the community is based. Meantime you yourself have come to disbelieve these doctrines. What line of conduct is open to you? Clearly, as plain men would think, two only—complete silence or open disavowal. The former course is taken by countless thousands in whom the current theological doctrines have long since died out. Not caring to uproot the faith of those who guide their lives by that faith, and find support in it through times of temptation and trial, they are content to follow their own thoughts and to do their own work without disturbing the lives of others. They say with the poet:—

O thou that after toil and storm
 Mayst seem to have reach'd a purer air,
 Whose faith has centre everywhere,
 Nor cares to fix itself to form,
 Leave thou thy sister when she prays,
 Her early Heaven, her happy views;
 Nor thou with shadow'd hint confuse
 A life that leads melodious days.¹

But to the trainer of youth, the official teacher of the doctrines disbelieved in, this alternative of silence is not possible. There is, it would seem, but one course open—to abandon a position which you cannot honestly defend.

Nevertheless, the subtle genius of Oxford theologians has found yet another way. Leave us, they say, to interpret these articles of belief, not in the plain natural sense which they convey to ordinary men, but as holding a hidden meaning which we are prepared to assign to them. Let us take, not their letter, but their spirit. Things we have learnt in our childhood as actual facts have become to us as sacred myths, the outward embodiment of sublime spiritual truths. The transition from the belief in the legend as historical fact to the recognition of it as a myth is in many, perhaps in most, cases gradual and unconscious; and of any group of people you may meet hardly two are in the same stage of this transition. It is best on many grounds to avoid if possible any violent break or revolutionary struggle. Once let the solid kernel of precious truth

¹ Tennyson's *In Memoriam*, xxxiii.—ED.

enveloped in the myth be exposed in its bare nakedness to the rough handling of common and vulgar minds, and it will lose its freshness, perhaps its vitality.

To these considerations others of a more dubious kind are added. If I leave my post of teacher, professor, priest, spiritual guide, I sink into obscurity, I lose my influence, my power of doing good, of leading weak minds onwards. If all those who think as I do leave the Church with which we are connected, we disappear from view; we leave our places to be taken by those who will stereotype the ancient formulas, petrify them, render them incapable of further growth. It is best for us, best for those who listen to us, best for the community we belong to, that we should stay where we are. Remaining at our posts, we shall reform the Church from within. Such, in a few words, are the motives that have led men like Dean Stanley and Dr. Jowett to remain dignitaries of the Established Church after rejecting all that are commonly regarded as its fundamental dogmas.

Dr. Jowett's biographers have supplied ample material for appreciating this side of his life and character, in the extracts taken from his diary, where his thoughts on religion are set forth with unmistakable clearness. Some of these, which will be found in vol. ii, pp. 311-14, may be quoted:—

Possible limit of changes in the Christian religion. (1) The conception of miracles may become impossible and absurd. (2) Immortality may pass into the present consciousness of goodness and of God. (3) The personality of God may pass into an idea. (4) Every moral act may be acknowledged to have a physical antecedent. (5) Doctrines may become unmeaning words. Yet the essence of religion may still be self-sacrifice, self-denial, death unto life.

Herbert Spencer's view that religion has to do with the unknown is only partly true. (a) Religion is the ideal or aspiration of morality and politics. (b) It is most important in relation to man. (c) It is the upward uncontrollable passion of human nature.

Two great forms of religion. 1. The sense of the presence of God.....the knowledge of Him as the great over-ruling law of progress in the world, whether personal or impersonal; the sympathy and harmony of the physical and moral, and of something unknown which is greater than either;.....the ideal to which all men are growing.

The best of humanity is the most perfect reflection of God: humanity as it might be, not as it is; and the way up to Him is to be found in the lives of the best and greatest men—of

saints and legislators and philosophers, the founders of States and the founders of religions, allowing for and seeking to correct their necessary one-sidedness. These heroes or demigods or benefactors, as they would have been called by the ancients, are the mediators between God and man. Whither they went we also are going, and may be content to follow in their footsteps.

2. The second great truth of religion is resignation to the general facts of the world and of life. In Christianity we live; but Christianity is fast becoming one religion among many. We believe in a risen Christ; not risen, however, in the sense in which a drowning man is restored to life, nor even in the sense in which a ghost is supposed to walk the earth, nor in any sense which we can define or explain. We pray to God as a Person, as a larger self; but there must always be a *subintelligitur* that He is not a Person. Our forms of worship, public and private, imply some interference with the course of nature. We know that the empire of law permeates all things.

"You impose upon us with words; you deprive us of all our hopes, joys, motives; you undermine the foundations of morality." No! there is no greater comfort, no stronger motive, than the knowledge of things as they really are, apart from illusions and pretences, and conventions, and theological formulas.....Anybody who gives himself up for the good of others, who takes up his cross, will find heaven on this earth, and will trust God for all the rest.

What are we to make of these very remarkable utterances? The first thought that will strike the reader is that they are pure and undiluted Positivism. As such we may accept them thankfully. They offer us the highest ethical truth expressed in purely human language; in words almost wholly clear of everything that is mystical, fictitious, unintelligible. We find from this biography that Jowett had studied Comte's works with great care. Nevertheless, he seldom lost an opportunity of speaking of him with contemptuous dislike. Why was this? Emancipated as he was from theological trammels, fully recognizing that the way to the ideal impersonal perfection which he called God was "to be found in the lives of the best and greatest men—of saints and legislators and philosophers, the founders of States and the founders of religions"—why could he not have recognized Comte as the leader of those who had set forward this ideal as a guide of life? There seems no other reason than that the life of Auguste Comte, dominated as it was by the ethical rule, *Vivre au grand jour*,¹ was a practical rebuke to his own. A great

¹ Comte, *Catéchisme Positiviste*. "Live openly."—ED.

university dignitary, declaring ostentatiously his attachment to the Anglican Church, enjoying the power and influence of his position to the full, and passing to his grave with all the splendour of Anglican ceremonial, he may sometimes have felt his life condemned by the example of the outspoken integrity and consistent abnegation of the philosopher to whom he owed so many of his highest thoughts. It was a principle with Jowett, as with the Bishop Blougram in Browning's poem,¹ that life should be successful. He felt repugnance, as his biographer naïvely owns, for those "who made a mess with their lives." Among his pupils those interested him who showed exceptional ability; but those also not less who were likely, from wealth or rank, to occupy high positions in the State. All this brilliant and dignified life would have been shattered had it come to the knowledge of men that there was not a single article of the Apostles' Creed that he could accept in the ordinary sense that the words convey to plain men. "His influence for good," as he put it to himself, would have disappeared.

Hypocrisy has always been the besetting sin of the Anglican Church; as must ever be the case with Churches incorporated into the State system, and deriving their power and dignities from Prime Ministers and Parliaments. When the Roman wondered how one augur could meet another without smiling, he said what must always be true when men subordinate the expression of the highest truth to motives of State policy; when they say: This is what I truly and from my heart believe; but if I say so I shall no longer be bishop of my diocese, master of my college, professor of my faculty; I shall be as ordinary men, my voice will be listened to no longer. It is as though Caiaphas were to say, If I follow Jesus, how can I continue to be High Priest?

It is hard to find the truth, hard to tell it in words which others can understand. But if the utterance of it is clogged with conditions as to personal consequences, worldly prospects, diminution of influence and the like, the truth will never get itself uttered at all, and the teacher's silence or implied assent to the worn-out doctrines of his time will have the melancholy result of lowering the standard of moral courage in those who accept his guidance.

¹ The poem entitled *Bishop Blougram's Apology*.—ED.

II

A CHURCH WITHOUT A CREED

THE *Times* of September 5¹ contained a long contribution to the current discussion on the crisis in the Church from the authoress of *Robert Elsmere*, which has been expanded in the last issue of the *Nineteenth Century*.² The writer holds, as most people hold, that what the Ritualists are aiming at is the introduction into the Anglican Church of doctrines to which that Church has for the last three centuries been consistently opposed. It appears to her "indisputable that the English Church of the last three centuries has been broadly and historically a Church of protest against the Mass and all that hangs by it. The Ritualists are pleading, therefore, for the toleration of new beliefs and practices."³ The compromise between certain ideas by virtue of which the English Church came into being should now, High Churchmen maintain, be enlarged; and "the present religious life of the nation can be enriched and strengthened by the bringing back of elements belonging to the common Christianity which the English Church has unduly let slip." "We are perfectly aware," she says, "of the extraordinary force and attraction of the Catholic doctrine.....It is absurd to suppose that you can permanently exclude a conception which has been so tenacious and so fertile in the life of Christendom from a great developing and assimilative body like the English Church. And if the conception cannot and should not be excluded, the rites and ceremonies which express it are inevitable, and to fight against them is a mere futility."

But Mrs. Ward goes on to point out that, while this new doctrine is pressing for acceptance on one side, another new doctrine is making an equally legitimate claim for admittance on the other. This doctrine is described as the "Christianity of a free and critical thought" as opposed to the Christianity of tradition. It is a Christianity which rejects the whole historical basis on which the Greek, Roman, Lutheran, Calvinist, and Anglican Churches, as well as most of the Nonconformist communities, have hitherto taken their stand. It is a Christianity which refuses to believe that

¹ 1899

² October, 1899. The article was entitled "The New Reformation."—ED.

³ The quotations are from the *Times*, not from the article in the *Nineteenth Century*.—ED.

Christ was born of a Virgin mother, that he worked miracles, that he rose from the dead, that he ascended into heaven. "Separable from these bygone historical and philosophical beliefs are," she holds, "the ethical and spiritual truths that lie at the heart of our faith; the assertion and illustration of those truths in the life and historical influence of Christ is what is essentially and eternally important; and, moreover, the assertion of them through the life of Christ and Christianity cannot be regarded by the Theist as a mere incident like any other in the history of the world, or as without some relation of special importance and significance to the Divine will and intelligence from which he believes all life to issue."

Mrs. Ward contemplates with equanimity the continued existence of a corporation endowed by the State with archbishoprics, bishoprics, deaneries, benefices, and magnificent buildings, the members of which shall be united by the flimsy tie of the name of Christian, while holding diametrically opposite opinions as to what that name connotes. To most plain men the whole thing bears the look of a misleading and mischievous jugglery. What is there in common between a creed which holds that the Almighty Creator of the Universe took upon him human shape, was born of a Virgin, and after a painful martyrdom rose from the dead, reascended into heaven, his body being partaken of by all believers in the Eucharistic sacrament, and a creed that rejects all this, and is content to believe that a remarkable prophet was born in Judæa during the reign of Augustus, taught unpopular truths and led a beneficent life for three years, suffered death for his opinions, and was laid in the grave like other men? In the interests alike of intellect and morality it is needful to protest against so enormous and outrageous a mystification, which can only result in securing a new and enlarged basis for systematic cant. Cant is a weed that runs riot everywhere, and not least on English soil. The insincere use of smooth words, especially where the insincerity is unconscious, is a corrupting and emasculating influence, incompatible with common honesty, and, therefore, fatal to any standard of life that deserves the name of religion.

The right course to take is simple in the extreme, so soon as the wrong course is clearly exposed. A State corporation empowered by the magistrate to regulate "articles of religion" is a monstrosity, because its immediate result is the organization of hypocrisy. Religion is the type of all spiritual forces, and with spiritual forces the temporal power should have nothing to do. Separation of Church from State, carried to its farthest practicable limits, is the first condition of true freedom and of political health. Of the two

creeds of which we have been speaking either, or neither, may be held with perfect honesty and consistency by any one. Both cannot be held simultaneously. Each of the two, then, and every other, must be allowed to rest on the support of its own believers.

The neo-Christian creed represents so singular a phase of thought that it is worth while to examine it more closely. When Mrs. Ward protests that Christianity cannot be regarded "as a mere incident" like any other in the history of the world, there is a sense in which we may readily accept her saying. It is assuredly not an incident like any other; it is a special fact, of exceptional and profound significance. The rise of the Christian Church during the first two centuries of our era, its extension during succeeding centuries till it became the dominant social influence—these are visible and indubitable facts which no one can gainsay. They are new facts, like the rise of Greek thought a thousand years before, or the French Revolution eighteen centuries later. Like other new facts, they may be regarded from two totally distinct points of view—that of theological, and that of positive thought. On the first it is not needful to dwell, further than to say that it is at least consistent with itself. Accepting the view that the world is governed by an inscrutable and arbitrary will, the supernatural events of the New Testament have nothing in them that is incredible.

But those who strive to bring religion into harmony with their daily life, and who see that life in all its details follows fixed and natural laws, will strive to examine the Christian epoch as they examine the other great epochs of the world, to analyse its antecedents and forecast its consequences. They will regard the Christian Church as a phase in the life of Humanity for which all that went before prepared the way; and they will find in it the germs of consequences vaster and farther-reaching than itself. To such it will appear that, after the tremendous stimulus given throughout the civilized world by Greece to intellectual culture and by Rome to practical life, it was inevitable that a recoil should take place to the inner life of emotion; and that side by side with the power of the magistrate there should arise a new and distinct authority specially charged with an appeal to the court of conscience, and with the government of the heart.

Which should be the name put prominently forward in connection with this new growth was a secondary matter. To the Positivist the first place seems to belong not to Jesus, but to Paul. If neither Jesus nor Paul had lived, a similar result would

sooner or later have been attained by parallel methods under other names. But to strip Jesus of his miraculous legend, and to continue to regard him as the central figure of the world's history, appears to the Positivist a hybrid and irrational faith with no future before it. Certainly it is not a faith that deserves that the magnificent endowments of the Church of England should be devoted to its maintenance.

III

THE LAMBETH CONFERENCE

NOT one of the least significant events of this Jubilee year¹ is the assemblage of bishops belonging to the Anglican Church, or in "full communion" with it, which has been held at Lambeth, under the presidency of the Archbishop of Canterbury. Nine archbishops and one hundred and eighty-two bishops took part in it. They truly described themselves as "assembled from divers parts of the earth." Of the whole number not more than two-fifths belonged to the United Kingdom (fifty-eight being English, ten Irish, and seven Scotch). Of the remainder eight represented India, fourteen Canada, sixteen Australia and New Zealand, eight the Cape, six the West Indies, and eighteen other Colonies. Forty-six came from the United States. The result of their deliberations has been given to the world in the shape of sixty-three resolutions, preceded by an Encyclical letter addressed to the Faithful in Christ Jesus.

This letter deals with three classes of questions: (1) Moral and social problems; (2) internal organization; (3) relation to other Christian bodies and foreign missions. Under the first head fall the problems of intemperance, of sexual disorder, of industrial disputes, and of arbitration between nations as a substitute for war. Let it be at once frankly accepted as a sign of progress that the great religious bodies should be compelled to turn their attention to questions of real and urgent gravity unconnected with mystical dogma, in which, therefore, men of every creed can work together for the service of man. In strenuous and persistent efforts to control excesses of the sexual instinct no one can refuse to admit that the Christian Church has done more than any other religious organization. Probably the difficulty is one which will never be

¹ 1897

entirely surmounted; approximations to the solution are all that can be expected. But from any organization claiming to be a spiritual power, fearless of the blame of politicians, a warning might be looked for against all social conditions that aggravate the danger. And of all such aggravating conditions none is more fatally operative than the accumulation of standing armies far from their homes, in tropical climates, among crowded Oriental populations. Physically, the consequences of this policy are so disastrous as to have forced themselves not merely on doctors, but on the military authorities themselves, who find a large proportion of their troops constantly in hospital. Yet the only remedies hitherto seriously proposed are such as aggravate the moral evil, while supplying an imperfect palliative for its physical symptoms. Substitute in India for a celibate army of foreigners a native militia, settled on the soil, and amenable to all the controlling local influences of custom and religion, and the evil will be reduced to its normal proportions. But till that time comes Englishmen must be prepared to know that their boasted empire in India is maintained at the expense of vice, not merely connived at by the authorities, but to some extent officially organized. The reproach is applicable to all standing armies, and will not be removed until our monstrous military systems have been replaced by a rational and peace-preserving force of police. But it applies with far greater cogency to an exotic army of foreigners stationed in a tropical population. It need hardly be said that considerations of this kind find no place in the Encyclical letter of the Lambeth Conference.

As to abstinence or moderation in the use of intoxicating drinks, the Anglican Church has not distinguished itself above other forms of religion, or from secular organizations such as trade unions or co-operative societies. In this respect no Christian organization has equalled the Mohammedan religion.

On the wide field presented by the industrial problem the remarks of the Anglican Encyclical will strike most readers as cold and barren. "We think it our duty," the bishops say, "to press the great principle of the Brotherhood of Man, and to urge the importance of bringing that principle to bear on all the relations between those who are connected by the tie of a common employment." It must be admitted that the committee to whom the subject was specially referred, and whose report is signed by the Bishop of Hereford, goes more into detail, and suggests the institution of lay committees with the special view of "studying social and industrial problems from the Christian point of view." Little

fault can be found with the views contained in this report, except that they are put forward in a timid and uncertain way. It is not, the committee say, their business to decide between "systems based respectively on collective or individual ownership of the means of production." Uncertainty as to so fundamental a question as to whether land and capital are to be held in common or to be appropriated by individuals must render advice on economic questions of very doubtful value. Vague recommendations of Brotherhood can do but little to build up the future organization of industry. Hard thinking and systematic study of the facts, animated by a social purpose, but carried on by scientific methods, are needed here, as in every other department of human life, and any spiritual power worthy of the name will be expected to supply them.

Much the same may be said of the recommendations put forward by the Encyclical as to international arbitration. "Peace," say the bishops, "is the great characteristic of the Kingdom of our Lord.The Christian Church can do more for it than any other influence that can be named." Surely a bold assertion. Since the fall of the Papacy in the thirteenth century, what has the Christian Church done for peace? Its discussions brought about the religious wars of the fifteenth and sixteenth centuries, terminated at last, not by priests, but by practical statesmen at the Treaty of Westphalia.¹ And, to come much nearer home, what has the Anglican Church done during the last sixty years to prevent or arrest the interminable series of African and Asiatic wars in which this country has been engaged while extending her Empire? What bishop has proposed arbitration with Chinese, with Burmese, with Afghans, with Zulus, with Matabele, with Egyptians? I cannot remember that from the bishops' bench in Parliament a single voice in all these quarrels has been raised for peace. Not a single protest is raised in this Encyclical against imperialism; and imperialism, as now understood in England, means constant, unremitting war. No civilized country during the last half-century has been so continuously at war as England.

It is significant that, though the Encyclical dismisses the subject of war with few words, and those by no means weighty, the committee to whom it was referred allude to "deep moral principles involved in it," which have been recognized by philosophers. "In Germany, Kant and Hegel; in France, Auguste Comte; in England, Jeremy Bentham, James Mill, and John Stuart Mill have written in this sense." A remarkable admission that the ethical principles

¹ 1648

underlying the question of war were apprehended and put forward not by the Christian Church, but by thinkers every one of whom stood outside the pale of Christianity. It must be obvious, indeed, to all attentive observers of the course of modern history that the power which the Church once possessed of controlling the movements of nations has long since vanished. The mediæval Papacy could quell the intestine quarrels of European kings, and unite them in resistance to the common danger of Mussulman invasion. But with the fall of the Papacy the guidance of international forces passed into the hands of statesmen and philosophers. Clergymen had for the future to content themselves with a diminishing sphere of action in private life.

From social questions the Encyclical passes to the consideration of the internal organization of the Anglican Communion. The fatal weakness of this organization could not fail to show itself. An effective centre for it there neither is nor can be. The English bishops recognize formally the supremacy of the Queen—in other words, of Parliament. It has been a Parliamentary Church from the beginning. The State Supremacy Act of Henry VIII, the two Prayer Books of Edward VI, the restoration of Catholicism under Mary, the reversion to the Prayer Book and the Articles under Elizabeth—all these things, succeeding one another in the space of thirty years, were the doing of Parliament. But with the supremacy of Parliament and of English Prime Ministers, American bishops obviously can have nothing to do. A committee of bishops was appointed to consider “in what ways under present circumstances the unity and responsibility of the whole body may receive practical recognition.” It is not surprising to find that, after two very vague and tentative resolutions had been framed by the committee with the view of establishing a “tribunal of reference,” it was decided by the Conference that these resolutions should not be put. Taking the Anglican Communion as a whole, it is a society without a government.

What is the action of this Communion on other forms of religion? Here a few rough statistics are necessary. A third of the inhabitants of the world are believed to be nominally Christian. Of Christians, 215 millions are united under the Pope; 90 millions are of the Greek Church. There may be 150 millions of nominal Protestants, of which, perhaps, 40 millions may accept the Anglican form of episcopacy. A tenth part of the Christianity of the world, a thirtieth of the world's population, thus belongs to the Anglican Communion. The Encyclical is urgent in proclaiming the “duty of

special intercession for the Unity of the Church." But in the next sentence it hastens to "recognize with warm sympathy the endeavours that are being made to escape from the usurped authority of the See of Rome." Yet the bishops who write thus went on pilgrimage to Ebbsfleet to celebrate the act of one of the greatest of the Popes¹ which called the Church of England into existence. Efforts to uphold the continuity of the Church of England, as established by Acts of Parliament between 1533 and 1562, with the Church of Bede, Boniface, Anselm, and Grosseteste, are a mere juggle of words. The sympathies of the Lambeth Conference are concentrated on the Old Catholics of Germany and Austria, and the "brave and earnest men of France, Italy, Spain, and Portugal," who have freed themselves from the "unlawful terms of Communion imposed by the Church of Rome." Difference from other forms of Protestantism, Methodist, Independent, or Lutheran, there is none, except in the narrower limitation of these sympathies to communities that accept the episcopal form of government. On the whole it would seem that the prayers of the Anglican bishops for the Unity of the Christian Church are accompanied by actions tending to make that Unity more impossible than ever.

It is not by efforts of this incoherent and inconsistent character that the great religious problem of the future, the convergence of mankind in one harmonious and united faith, is likely to be solved. The foundation-stones of such a faith were laid before Christianity was born, when Thales and Pythagoras taught the first principles of scientific method.² Its superstructure has ever since been growing, as that method has gradually been extended from the physical world to the world of man's thoughts, emotions, and actions. On this point a discordant note is struck by the fifteenth resolution of the Conference. "The tendency," it is said, of many English-speaking Christians to entertain an exaggerated opinion of the excellences of Hinduism and Buddhism, and to ignore the fact that Jesus Christ alone has been constituted Saviour and King of Mankind, should be vigorously corrected. Vigorous efforts, they go on to say, should be made for the conversion to the Christian faith of Jews and Mohammedans. Work done on lines like these is foredoomed to failure. What is true is that, amid all the drawbacks of wars of

¹ St. Gregory the Great, who sent Augustine on his mission to England in A.D. 596.—ED.

² See Dr. Bridges' essay on "Thales" in *Essays and Addresses*, pp. 143-58.—ED.

commerce and commercial aggrandizement, art, industry, science, historical study, aspirations for the highest good, are gradually bringing the nations together; and the best things of life are seen to be peculiar to no theological creed, to no language, but to belong to all. Theological religion will in the end be recognized as irreligious, because it disunites. As the creeds of Asia become known to us, we can foresee the day when China, Japan, India, shall unite with Europe and America in the Religion of Humanity.

IV

THE CHURCH CONGRESS

FROM the point of view of public morality, by far the most important utterance at the Church Congress of this year¹ was that of the Bishop of Hereford. Undeterred by the taunts of opponents on a previous occasion that in urging the adaptation of Christian doctrine to public life he was venturing beyond his sphere, and that he had better leave politics alone, the Bishop has returned to the charge, and has again maintained that States and statesmen calling themselves Christian should mould their public action on the principles of Christianity.

"All I ask," the Bishop says, "is that the rulers and ministers of a Christian State should make Christian principles their guide and rule in all their public conduct and policy." These words have a most reasonable sound; it is only when we try to translate them into concrete facts that a difficulty arises as to their meaning. Assuming that Christian principles of public conduct are contained in the New Testament, we search that volume from Matthew to Revelation; but we search in vain. If, indeed, we were to take the view that the rules of public and of private conduct were identical, we should find the Christian rules laid down explicitly enough in the Sermon on the Mount. And although no one adopts these rules practically in his own private life, although no parent sending his son to a public school, no master of that school, urges their adoption, yet it is maintained with some show of truth that they present an ideal of conduct to which everyone should strive as far as possible to conform. I do not suppose that Dr. Percival ever

¹ 1898

told a boy at Rugby that when another boy hit him he was never to hit back again. But I have no doubt he urged in his sermons that boys should be slow to take offence and ready to forgive, and that he denounced the crime of bullying unsparingly. How far it is well to inculcate upon boys or men a rule of life which is so universally recognized as a counsel of ideal perfection that can never be reached is a question which need not be discussed here. What we are now considering is whether the measure of application of which the Sermon on the Mount admits in private life can be extended to practical politics. By the confession of the immense majority of Christians since the establishment of Christianity it cannot be so extended. A few exceptions there have been. The followers of George Fox firmly maintained the doctrine of non-resistance. In our own time Tolstoy is carrying that doctrine to its extreme limits, holding that arms should not be wielded even in defence of the soil against an invading army. But the doctrine taught by the immense majority of Christian teachers is and always has been the precise reverse of this. Generation after generation they hold up as examples the conduct of the Greeks under Miltiades and Leonidas, of the Romans against Pyrrhus and Hannibal, of the Germans under Arminius, of the Saxons under Alfred, of the Dutch against Philip of Spain, of the French against the invading coalitions of Europe. We teach patriotism to our children; but we do not teach it from the New Testament. Gospels and Epistles alike leave it on one side. When Christianity came into the world the *pax Romana* was established everywhere. The only recognized public duties were to pay to Cæsar the things that were Cæsar's. Among the Jews, indeed, there was patriotism enough, and of the fiercest kind, as was shown under the Maccabees, and at the final siege of Jerusalem. But what room was there for the exercise of civic virtues in the primitive Christian churches? They lived for a future life in momentary expectation of the Millennium. While the States of Europe were forming in the early Middle Ages there arose a vast series of obligations to defend civilization against barbaric invasion, under the leadership of men like Charlemagne and Alfred. The final establishment of States with settled boundaries has confirmed and strengthened these obligations, and has evoked a spirit of loyalty and devotion to the fatherland as strong as and stronger than that displayed by the Greek and Roman Republics. But all this has little to do with Christianity as expressed in the Sermon on the Mount.

Consequently, we have to look for principles of national conduct

not in the Bible, but in the gradual evolution of modern Europe, and in the teaching of its philosophers, lawgivers, and statesmen. Questions of war and peace have to be decided by human, not by theological, methods; secular, not supernatural, motives operate in their decision. So far as theological religion has had anything to do with the matter, it has been a disturbing influence, as two hundred years of Crusades and a hundred years of Catholic and Protestant wars suffice to show. When America was discovered, Christian principles influenced the conquerors of Mexico and Peru in their treatment of the native population, but not in the direction of justice or humanity. Who can say that Christian missions in China during the last century have done anything but aggravate and embitter the relations of the East and the West? Their principal object has been to implant disrespect for the customs and institutions which the Chinese hold dear, and on which the whole fabric of their social state is founded. Whatever the value of the Christian churches in the West—and it has been overwhelmingly great in the past, and still remains considerable, with all its drawbacks—yet among the vast Buddhist and Mohammedan populations of the East these churches have always been agencies of disorder and discord.

No one can read the Bishop of Hereford's discourse without recognition of the moral elevation by which it is penetrated, and without sharing his aspirations for a nobler social state. Nevertheless, his eloquent comparison of the mission of England with the mission of ancient Rome inspires certain apprehensions; and these are not diminished when we read the address of the bishop-designate of Calcutta, who followed him. "To him it appeared that the Church of England was a divinely appointed instrument for carrying the Christian faith in its purity and integrity to the far places of the earth. That was the imperial Christian mission of our State and of our race." This is the climax of the new Bishop's harangue. The future of the world, he had said, belonged to the Christian nations. But among the Christian nations, he went on to say, only to those that were Protestant. And of all the Protestant churches it was the Church of England which, "like a pillar of fire, should go before the movements of the national life." Dr. Welldon's climax reminds us of Mr. Thwackum. "When I mention religion I mean the Christian religion; and not only the Christian religion, but the Protestant religion; and not only the Protestant religion, but the Church of England."¹

¹ Fielding's *Tom Jones*, bk. iii, ch. iii.—ED.

The Bishop of Hereford has less of the crusading spirit. Nevertheless, he holds that the "United States did the work of a Christian nation in putting an end by war to long-continued and barbarous misgovernment at their doors." These are ominous words. The Americans themselves have come to recognize by this time that the Cuban insurgents who, with the help of a continuous series of filibustering expeditions from the United States, kept their island for some years in disorder, were far less worthy of respect than the Spaniards against whom they fought. And if internal disturbance in any country is to justify its neighbour in declaring war against it with the view to its conquest and annexation, we are far indeed from the reign of peace to which the Czar's message has invited the nations. Let us, however, willingly recognize the elevated tone of many of the Bishop's remarks, which may be taken as a protest against recent wrong-doing in South Africa. "Is it not morally wrong to possess ourselves of any country, and to take no sufficient safeguards for the humane treatment, for the civilizing and the uplifting of its inhabitants, who are presumably its owners by right of immemorial possession? Is it not morally wrong to fail to protect those inhabitants from forced labour or practical slavery to selfish and unscrupulous adventurers? Is it not morally wrong to honour and promote those who, by betrayal of public trust, have helped to debase the moral currency of public life, and to bring discredit on the national honour?"

CHAPTER III

THE SPENCERIAN UNKNOWABLE

I

THE UNKNOWABLE

FEW points in Mr. Spencer's philosophy have stirred more general interest than his claim to have solved the conflict between Religion and Science, by assigning the region of the Unknowable as the common ground on which they could meet. The main position laid down was one that could hardly be contested. For, on the one hand, religious belief, in whatever age or country, has always concerned itself with dogmas which obviously lay outside the powers of human intellect either to verify or to dispute; and, on the other hand, the scope of science has always been known to every scientific student who possessed a grain of common sense to be rigorously limited, even though the precise position of the limits could not always be assigned, and was frequently shifted. Every extension of the scientific horizon has revealed vaster regions of the unexplored which had previously been unsuspected. Man's knowledge of his ignorance has grown *pari passu* with every increase of his knowledge. Thus much, then, must be allowed at starting. Science admits the Unknowable. Religion, or at least those forms of Religion which have hitherto held dominion over the souls of men, is very largely concerned with it.

How far does this first step carry us? Will it serve as an eirenicon between Science and Religion? Does it solve the controversy between faith and reason which has been carried on since the days of Augustine's spiritual struggle; which gave birth to the Inquisition, the Reformation, the Thirty Years' War, the murder of Calas, and Voltaire's crusade of tolerance? Will it satisfy the spiritual needs of the generations to come? To these questions the answer must be, No; and for the plain and obvious reason that Religion, as we have seen it and as we know it, whatever its concern with the Unknowable as its source and its goal, has had far deeper, more constant, and more manifold relations with the things of Earth

and with the life of Man. It is with human life and human duty that Confucius, the theocrats of Egypt and India, Moses, St. Paul, and Mohammed have mainly concerned themselves.

Read any treatise of Catholic theology—the *Summa Theologiae* of Aquinas, for instance. How many pages of that great work are occupied with transcendental disquisitions on the attributes of the Supreme Being? One, perhaps, in every hundred. The rest lay down wise and elaborate counsels as to the conduct of life, private and public; as to the regulation of passions, the government of the family and the State, the guardianship of the marriage bond, the ordination of Church rulers, the observance of due forms in sacraments and ceremonials. Further, the operation of supernatural force is treated of not as something that takes place in an extramundane sphere, but as a series of events that have occurred in this world of ours, amenable to proof or disproof, like any other facts of human life. The conflict between Religion and Science turns not at all, or to a very small extent, upon transcendental things that went on before the world began, but upon alleged historical facts, such as the miraculous birth, resurrection, and ascension of Jesus. For these evidence is produced which one side think sufficient and the other not.

Thus the existence of an Unknowable universe beyond the ken of human sense, which the man of science is as ready to acknowledge as the theologian, offers no ground for expecting a settlement of the matter at issue between them. It is not on this that the controversy hinges. Not in an outside and unseen world, but here on this earth of ours, is the arena of conflict. Can the facts of man's political and moral life be regarded, or can they not, as the result of an orderly evolution, such that, the earlier terms of the series being known, the later may with a due measure of probability be anticipated? Or are we constrained to look at them, as in days of old men looked at the facts of physical nature, as liable to unforeseen interventions from a supernatural will? Such is the problem for solution. In this century¹ and in the next the debate has been, and will be, between the supremacy in man's spiritual and social life of God or of Humanity.

If this be so, the claim put forward by Mr. Spencer to have reconciled the opposing forces of Religion and Science must be held to be unwarranted. But are we, therefore, to infer that the conception which he puts before us as the essential factor of Religion,

¹ Written in 1895.—ED.

the thought of the Infinite unknown which surrounds us, is to be set aside as of no account? This, indeed, has been the view of many Positivists, especially of those for whom the political side of Positivism has been of absorbing and exclusive interest. But there are considerations that point in another direction. One of them is contained in the well-known saying of the great thinker Kant, that there were two spectacles in the world that stirred his soul—the starry heavens and the sense of duty in the heart of man. In the stir of practical life, in the crowded friction of overgrown cities, in the imminent conflict of powerful nations, and the threatened overthrow of all that toil and genius have slowly built up, little can be seen or thought of but the struggles, the sufferings, and the aspirations of those around us. But we are impelled to intervals of solitude. There are times when the craving to leave the paths of men for mountain or sea becomes irresistible. And when this is unattainable, yet for all of us the daily revolution of the heavens brings the sunset and the stars.

When the history of the last two centuries is written, one of its most striking features will be brought into stronger prominence. In the direct ratio of the decline of theological faith grew up the worship of nature. The love of flowers that shows itself in every cottage window in town or country; the craving for open spaces where grass can be lit with sunshine; the concentration of the painter's art on landscape; the endowment of air, mountain, and sea with human emotion; above all, the intangible influence of music piercing to depths beyond the reaches of our souls—all these things have been slowly transforming modern life, and counteracting the destructive and sterilizing forces of revolution, of disorganized industry, of the rabid craving for luxury and pleasure. Wordsworth's lines on revisiting Tintern Abbey, Byron's *Manfred* in the Alps, Shelley's lyrics of the Cloud and the West Wind—these things will remain when the wasted energy and futile struggles of the nineteenth century shall have become a bad dream half-forgotten.

All this side of life and thought is dealt with in one of the most remarkable conceptions of Comte's *Positive Polity*: The Union of Positivism and Fetishism.¹

Fetishism is the spontaneous philosophy of childhood—the childhood of each one of us, and of the race to which we belong. We endow with life, by instinctive impulse, things in the world around us that touch us nearly, and that stir our antipathy or our

¹ See *Pos. Pol.*, vol. iv, pp. 37-40, 180, 450.—ED.

love. Such, in multiform phases, was the simple faith that satisfied the early tribes of men. It had much to do with those first and all-important stages of human progress which are unrecorded in history. It bound wandering tribes to a fixed position on the earth's surface, and thus laid the first foundations of civic life. Ultimately its simple dogmas were overshadowed, though not uprooted, by a new faith that grew up as large aggregations of men were formed, and as the necessity for stronger and more elaborate law and government was felt—the faith in invisible beings, not embodied in the world around us, but standing apart from it, and ruling each his own special department of nature. Then, again, after long periods of polytheistic civilization, the commonwealth of gods gave way to an isolated omnipotent monarch. But the reign of the gods has passed. Mankind is now on the eve of the reconciliation of intellect and love under the beneficent sway of Humanity.

During the long dominion of the gods fetishism has always continued to subsist as an underlying force. The worship of shrines, of household images, of Caaba stones, of relics of saints, of the tombs of those we have revered and loved, has never died out. As theology has decayed such worship has been carried on far more zealously than ever, and this within the border of the official churches no less than without. The harvest festival is celebrated now in almost every church in England. Under Positivism all such feelings will be stirred to new life. What we are tending to is this: the primal and the ultimate forms of religion are becoming one. The intermediate religions of the gods will have served their purpose in developing the intellectual powers and in ordering the civic forces of men; this done, they will become memories of the past.

These thoughts assume their final shape in the prefatory chapter¹ to Comte's final work, his *Subjective Synthesis*. Humanity, embodying the thoughts, energies, and sympathies of all who in all ages have worked for the service of man, occupies the foremost place, remains the highest object of human reverence. But with Humanity are joined, as in the immortal lyrics of Shelley's *Prometheus*,² the Earth, whose physical energies have after long ages built up a fitting habitation for man, and the vast unknown environment of Space, which is the seat of human destiny. Feeling

¹ See *Introduction to the Subjective Synthesis*. Tr. by R. Congreve. (Kegan Paul, Trübner, and Co.; 1891.)—ED.

² See especially the Song of the Earth in act iv, 370–423.—ED.

may reach where action cannot pierce. The soul of him who gazes on the afterglow of a summer sunset or on the unfathomable dome of the midnight sky may be filled no less than Dante's by "the love that moves the sun and all the stars."¹

II

POSITIVISM AND THE UNKNOWABLE

M. BRUNETIÈRE'S articles on Comte in the *Revue des Deux Mondes* of June 1 and October 1, 1902,² deserve attention, if only for the reason that this organ—representing the academic and literary world of France—has for the last half-century systematically held aloof from any recognition of Comte's claims to rank as a European thinker. As a criticism of the current movement of thought, what M. Brunetière says is entitled to grave consideration. It is in any case significant as an indication of a changed attitude in relation to the great renovation of thought and feeling which Comte has instituted in European life.

M. Brunetière finds himself in agreement with Comte on many points. On the negative, or critical, side he is struck by the contrast between Comte and the Encyclopædists of the eighteenth century in their explanations of the source of social suffering. The tendency of eighteenth-century thinkers was to account for all social complications by defective legislation. Change our laws, they said, reform our institutions, reconstruct our forms of government, and you will have done all that is wanted—you will have renovated human nature. What came of such theories when put into practice in the French Revolution we all know. Comte worked upon wholly different lines. "Who can change men's opinions?" said Marcus Aurelius; "and yet, unless you can change their opinions, their subjection will be all force and dissembling."³ Comte believed in the possibility of changing opinions; and he saw that, unless and until opinions were changed, change of institutions was of small account. Not that he claimed to effect this change by his own unaided effort; but he conceived himself to have discovered the law according to which opinions change,⁴ and until

¹ *Paradiso*, canto xxxiii, 145.—ED.

² The article of June 1 was entitled "Pour le Centenaire d'Auguste Comte"; that of October 1 being on the subject of "La Métaphysique positiviste."—ED.

³ *Meditations*, ix, 29.—ED.

⁴ The Law of the Three Stages. See p. 90 (note 1).—ED.

opinions had been transformed in accordance with that law he thought it futile to hope much from mere alterations of laws and modes of government.

M. Brunetière expresses strong approval of Comte's protests against the "subjectivism" of Victor Cousin and his school, by which he means the pretensions of that school to arrive at truth by introspection and the interrogation of consciousness, thus making each individual the measure of truth. This method, as Comte forcibly showed,¹ has been condemned by the utter sterility of its results no less than by its intrinsic irrationality. To think, and at the same moment to observe ourselves thinking, is an attempt not likely to lead us far. We must look outside us, and not within, for the criterion of truth. Hence our critic thoroughly approves of Comte's construction as resting on a co-ordination of scientific truth. He appreciates, moreover, the organic character of Comte's synthesis as contrasted with the unchangeable and dogmatic science of eighteenth-century physicists, whose conceptions, he remarks, were far narrower and more obstructive to progress than the dogmas of any Church. This narrow notion of science, he considers, no one has done more to dissipate than Comte. Science in his hands passed from the statical to the dynamical point of view. Before Spencer, before Darwin, he introduced the principle of evolution, of a gradual approach to truth which would never be completely reached.

This brings us to the principal features of Comte's social conceptions—their historical character, the filiation of successive generations, and the consequent relativity of all positive judgments. Human actions and institutions have to be looked at in connection with the degree of development reached by the social environment in which they took place. They will therefore vary at different periods—not arbitrarily, but in accordance with an assignable law of change.

M. Brunetière argues that this relative character of Positivism leads by a direct path to the recognition of the Absolute—in other words, to the recognition of the Unknown Reality behind the world of phenomena which Mr. Spencer holds to be the ground on which Religion and Science can be reconciled. "From the conception," says Mr. Spencer, "of the relativity of all knowledge flows inevitably the belief in an inscrutable reality, in an Unknowable lying behind it." "An ever-present sense of real existence is the very basis of

¹ See pp. 212-14.—ED.

our intelligence.....There ever remains with us a sense of that which exists persistently and independently of conditions." "From the very necessity of thinking in relations, it follows that the Relative is itself inconceivable except as related to a real Non-relative." "To say that we cannot know the Absolute is, by implication, to affirm that there is an Absolute. In the denial of our power to learn *what* the Absolute is there lies hidden the assumption *that* it is.....The Noumenon, everywhere named as the antithesis of the Phenomenon, is throughout necessarily thought of as an actuality."¹ Again, speaking elsewhere of ultimate scientific ideas, Mr. Spencer observes: "By the Persistence of Force we really mean the persistence of some Cause which transcends our knowledge and conception. In asserting it we assert an Unconditioned Reality without beginning or end."²

How this conception of an Unknown Absolute could have been regarded by any thinking man as a meeting-point on which positive science and theological religion could be reconciled passes comprehension. But Mr. Spencer would reply that he never held out the hope that science and theology could be reconciled. It was of peace not between science and theology, but between science and religion, that he had spoken. Yet nowhere, throughout the long series of volumes in which his *Synthetic Philosophy* is set forth, is any clear definition to be found of what is meant by the word *religion*. In those parts of his treatise to which reference has here been made he does, indeed, state what religion is not. He says that religion has trespassed on the ground of the knowable; that it has maintained dogmas which directly conflict with the teaching of science, and that therein it has become irreligious. "Volumes," he says, "might be written upon the impiety of the pious. Through the printed and spoken thoughts of religious teachers may almost everywhere be traced a professed familiarity with the ultimate mystery of things, which, to say the least of it, seems anything but congruous with the accompanying expressions of humility. And, surprisingly enough, those tenets which most clearly display this familiarity are those insisted upon as forming the vital elements of religious belief."³ It is, indeed, abundantly clear that these encroachments on the sphere of the knowable form the great mass of the doctrines of which the religions of the world have hitherto consisted. Abstracting from these creeds all that is anthropomorphic, all that is common to man and to the objects of his

¹ *First Principles*, § 26.—ED.

² *Ibid.*, § 62.—ED.

³ *Ibid.*, 2nd ed., § 31.—ED.

worship, what is left? The barren truth that there is something beyond the reach of our senses that we do not and cannot know. What theologian, what pious believer, can be grateful for this *caput mortuum*? What feelings of love and veneration can be stirred by the thought of an unknown Force of which we cannot say whether it be personal or impersonal, whether it have anything in common with those attributes that we call just or unjust, wise or unwise, benignant or malevolent? To a mere Mystery, even though infinitely potent, who can bow the knee?

Comte, says M. Brunetière, has endeavoured to realize the Unknowable, or to make it concrete, under the form of Humanity. He goes on to remark, obviously enough, that "Humanity is not the Unknowable," and, less obviously, that "the religion of humanity cannot be thought of as a religion." Nevertheless, he admits that Comte's religion is at least excellent sociology, and that it may be studied with much profit by those who cannot regard it as a religion. It will be found that this admission will lead us a long way. "Sociability," he continues, "being the most prominent characteristic of man, the highest goal of our efforts should ever be to develop, confirm, and bring it to perfection." He is much impressed by Comte's defence of marriage, by his maintenance of the ethical spirit through the whole course of education, by his great principle of the separation of spiritual from temporal power, by his substitution of the sense of duty for the sense of right, by his appreciation of mediæval Catholicism, and of de Maistre, its most vigorous expounder. Above all, he appreciates the subordinate position accorded to intellect in man's life as contrasted with that given to character. He accepts Comte's great principle that the function of intellect is to serve, and not to reign. When it imagines itself supreme it is in reality swayed by some personal passion. "A life of pure intellectual culture," said Comte, "is a culpable abuse of opportunities afforded by civilization and destined for a wholly different purpose."¹ M. Brunetière is careful to remark that, in asserting the supremacy of the heart, Comte was preaching no gospel of sentimentality. What he wished to strengthen was the sense of solidarity linking man with man; the instinct which makes men of us—the faculty of loving something other than self. He quotes with deep approval Comte's final conclusion: Positivism, springing from active life, and gradually embracing all regions of the speculative world, comes at last in its full maturity to take in

¹ See *General View*, p. 12.—ED.

the whole region of affective life, in which we find the centre of the final synthesis.¹

Comte, it need not be said, was well aware of the mystery that lay beyond the world of phenomena. He felt it at every step, as the sailor is aware of the unfathomable ocean across which he steers his path. But since it is not given to man to penetrate that mystery, he has to turn his activities to the region where they will bear fruit. He has to survey the facts of human life, to study the relation that each bears to each, to find out how man may adapt himself to their yoke or mould them to his advantage. The ultimate source of gravitation, the ultimate constitution of matter, the full and final explanation of heat, electricity, chemical affinity—these things are for ever hid from us; not less darkly hid are the origins of life and the first promptings of love. The *why* and *whence* of these things we cannot know; enough for us to see something of the *how*—of the laws of their working. Love has arisen upon the earth, from low and humble beginnings, as the rose from the miry soil. It has built up the family, knit together the tribe, kept alive the memory of heroes, founded States, lifted temples to the sky. It reveals to everyone of us unimagined hopes, it sustains in sorrow, it dissipates despair. It is the principle on which social order rests, from which social progress flows. On its growth depend our highest purposes, our deepest happiness. If this be not religion, what more has religion to bestow?

The right word was said long ago by the great Roman naturalist: *Deus est mortali juvare mortalem*.² Where man helps man, there is God. It is futile to think that the best things become better by withdrawal into the gloom of nescience. Healing is in the well-known streamlet of Jordan, not in the far-off rivers of Damascus. Of what avail is it to dwell on the thought of an unknown—possibly impersonal—Force from which has issued an assemblage of facts, noble and base, hideous and lovely, mischievous and beneficent? What we cling to is the fact of beneficent Love, endowed with no omnipotence, but ever growing stronger, and wielding a plastic stress which sweeps through the dull, dense world, compelling there—

All new successions to the forms they wear,
Torturing th' unwilling dross that checks its flight
To its own likeness, as each mass may bear;
And bursting in its beauty and its might
From trees and beasts and men into the Heaven's light.³

¹ *Ibid.*, pp. 12-13.—ED. ² Pliny the Elder, *Naturalis historia*, bk. ii.—ED.

³ Shelley's *Adonais*, xliii.—ED.

III

COMTE AND SPENCER ON RELIGION

A COMPREHENSIVE glance at the philosophic schemes of these celebrated thinkers reveals some remarkable points of similarity, on which it is profitable to dwell before examining their points of contrast. In the first place, it is to be remarked that both of these thinkers aimed at bringing all departments of thought under a uniform method of inquiry. All were, in their judgment, amenable to scientific treatment. In all alike uniform laws of succession and coexistence were to be looked for. Philosophy meant unified truth.

Secondly, in both thinkers there was a deliberate and complete abandonment of all search for absolute truth, a recognition that all truth attainable by human beings was *relative* to human faculties, was conditioned by limitations of human nature. This acceptance of relativity was common to the philosophies of Hume, of Kant, of Comte.¹ By Herbert Spencer it was insisted upon with careful and emphatic elaboration.

Thirdly, in the serial arrangement of the truths to be presented there is a conspicuous likeness between these two thinkers. It is true that Mr. Spencer wrote a pamphlet with the express purpose of showing that his views of the Classification of the Sciences were fundamentally different from those of Comte.² But, on reference to the Prospectus circulated in 1860 among intending subscribers to the *Synthetic Philosophy*, it will be noted that the proposed arrangement of material corresponds in a very marked way to that adopted in Comte's *Philosophie Positive*. After distinguishing between what is knowable and what is unknowable, he proceeds with the statement of "those highest generalizations 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." It is obvious that this section corresponds almost exactly with the *Philosophie Première* of which Comte drew the outline, leaving it to his successor, Pierre Laffitte, to fill in the details.³ Next in logical order, Mr. Spencer goes on to say, should come the application of these *First Principles* to Inorganic Nature.

¹ Cf. pp. 206-8, and see p. 23 of Comte's preface to the *Early Essays on Social Philosophy*.—ED.

² See p. 187 (note 1).

³ See p. 47 (note).

But this great division he decided to pass over, partly because the scheme even without it was too extensive, partly because the interpretation of Organic Nature was of more immediate importance. He therefore passes successively to Biology, Psychology, Sociology, and Ethics. Bearing in mind that most of what Spencer includes in Psychology is included in the higher division of Biology, as Comte conceived it, we find that in the general arrangement and successive order of parts there is a very striking similarity between these two philosophic schemes.¹

Nevertheless, a very superficial study of them is enough to indicate divergences greater than the resemblances; and closer attention will but intensify the contrast. On one of these contrasts something will be said in this paper, and others may be pointed out subsequently. The one here selected meets us at the outset. Mr. Spencer's treatise opens with a discussion of the antagonism between Religion and Science, and of their final reconciliation. The author discourses at great length on "ultimate religious ideas." We are compelled, he tells us, to speculate on the origin of the Universe. We can think of it only in one of three ways: (1) That it is self-existent; (2) it is self-created; or (3) it is created by some external agency. But each of these theories, when looked at closely, turns out to be inconceivable, unthinkable. "Self-existence means existence without a beginning; and to form a conception of self-existence is to form a conception of existence without a beginning. Now, by no mental effort can we do this." Again, "to conceive self-creation is to conceive potential existence passing into actual existence by some inherent necessity; which we cannot do. We cannot form any idea of a potential existence of the universe, as distinguished from its actual existence.....This involves the idea of a change without a cause—a thing of which no idea is possible."² Equally unintelligible is the theistic hypothesis—creation by external agency. Creation is commonly assimilated to manufacture. But the artisan does not make the iron, wood, or stone he uses; he merely fashions and combines them. And even could we get rid of the mystery of the production of matter out of nothing, there would remain the question: How came there to be an external agency? We have to go back to the same three hypotheses by which we strove to account for the universe; and thus are driven again round the same circle.

Further, on looking at the facts around us, we are compelled to

¹ Cf. p. 127.—ED.

² *First Principles*, § 11.—ED.

attribute them to a cause, and ultimately to a first cause. This cause must be infinite, since otherwise there would be something beyond it. But how can the infinite give rise to the finite? "If the condition of causal activity is a higher state than that of quiescence, the Absolute.....has passed from a condition of comparative imperfection to one of comparative perfection, and therefore was not originally perfect. If the state of activity is an inferior state to that of quiescence, the Absolute, in becoming a cause, has lost its original perfection." If the two states are equal, and "the act of creation one of complete indifference, we must admit the possibility of two conceptions of the Absolute: the one as productive, the other as non-productive."¹ We see, therefore, that the three possible theories of the Universe, known as "Atheism, Pantheism, and Theism, when rigorously analysed, severally prove to be wholly unthinkable."²

A religious creed, says Mr. Spencer, is definable as an *a priori* theory of the Universe. A theory assumes two things: that there is something to be explained, and that such and such is the explanation. "Religions diametrically opposed in their overt dogmas are perfectly at one in the tacit conviction that the existence of the world, with all it contains and all which surrounds it, is a mystery calling for interpretation."³ On this point, if on no other, there is entire unanimity. The ultimate truth, he concludes, to which Religion, as distinct from any special form of belief, leads us is that the Power which the Universe manifests over us is utterly inscrutable. "We are obliged to regard every phenomenon as a manifestation of some Power by which we are acted upon. Though Omnipresence is unthinkable, yet, as experience discloses no bounds to the diffusion of phenomena, we are unable to think of limits to the presence of this Power; while the criticisms of Science teach us that this Power is Incomprehensible. And this consciousness of an Incomprehensible Power, called Omnipresent from inability to assign its limits, is just that consciousness on which Religion dwells."⁴

What effect on human life can result from this constant contemplation of an insoluble mystery Mr. Spencer does not explain, and it is hard to see. Can it stir intellect? No; for every attempt to think of it lands us in insoluble contradictions. Can it kindle emotion? Can love, affection, veneration, be felt for an Unknown, an Unknowable? Can it link man with his fellow-men? A sense of paralysing ignorance overwhelms all alike. Can it rouse him to

¹ *First Principles*, § 13.—ED.

³ *Ibid.*, § 14.—ED.

² *Ibid.*, § 14.—ED.

⁴ *Ibid.*, § 27.—ED.

action? This would imply that he could in some sort foresee, and mould his activity by his foresight. Religions, as commonly understood, have implied certain definite beliefs, have instituted rules of action. But beliefs imply knowledge; they assume that the Unknowable can be known, and thus degrade the Incomprehensible to the level of what can be comprehended. Accordingly, we are not surprised to find that though Religion, in Mr. Spencer's judgment, has conferred upon Humanity the inestimable benefit of keeping alive the sense of the incomprehensible mystery of the Universe, yet that its shortcomings in this respect have been very great, and that it has continually tended towards irreligion, by maintaining definite beliefs, by claiming to know what cannot be known, and thus contradicting its own teachings. To assert that the Cause of all things possesses personality, or any other attribute, is to admit that the Incomprehensible can be so far comprehended. Religion has never, says Mr. Spencer, adequately realized its own central position. "In the devoutest faith, as we commonly see it, there lies hidden a core of scepticism; and it is this scepticism which causes that dread of inquiry shown by Religion when face to face with Science. Obligated to abandon one by one the superstitions it once tenaciously held, and daily finding its cherished beliefs more and more shaken, Religion secretly fears that all things may some day be explained, and thus itself betrays a lurking doubt whether that Incomprehensible Cause of which it is conscious is really Incomprehensible."¹

It is impossible to conceive of a greater contrast to this conception of Religion than that which is presented to us in the teaching of Auguste Comte. Taking for his point of departure the truth on which Spencer insists with such earnestness, that knowledge of the Absolute is for ever and utterly unattainable, the Positivist builds his faith frankly and consistently upon the Relative—upon Man's life with all its conditions and limitations. Of the Universe regarded as a whole we know nothing. Of man and his environment we know something, and hope to know more; that something bearing such relation to the Universe as the Finite bears to the Infinite—a relation mathematically assignable as zero. Infinitely little though it be, that something is nevertheless our life—it is what we have to make the best of. And Religion is neither more nor less than the business of making the best of it. It is the Ideal of Life.

¹ *Ibid.*, § 28.—ED.

So far from Religion consisting in a perpetual contemplation of the Unknowable, it is in the sphere of the Knowable that it lives, moves, and has its being. What we mean by it is that state of complete unity in social and personal life in which all aspects of that life, physical or moral, converge to a common end. It implies the control of each personality and the harmonious union of all.¹ All forms of religion, each in its own way, have tended to this result. The final and complete form is that which realizes it completely; although we are constrained to speak of this as an ideal state to which we may approach indefinitely without hope of entire attainment.

The conditions of this state of unity are two—the one internal, the other external. If there is to be harmony among our conflicting desires, that one must predominate in which all can share simultaneously without antagonism. This is the moral condition. Recognition of an external power to which our life is subject—this is the intellectual condition.² This external order governing our life has nothing to do with the Unknown and Unknowable. On the contrary, the essential condition of its efficiency is that it shall be known. Love and Faith are the two factors of Religion. Unity within resulting from Love; union without produced by Faith.

Between the infinitely various forms of belief which have prevailed among mankind it seems at first sight paradoxical to search for anything in common. Yet one purpose is discernible in all of them—that of forming a definite conception of the order which dominates human life, so that our relation with this order may be understood and modified to our benefit. We shall best understand this central similarity between all modes of religion by studying that in which they culminate—the Religion of Humanity. We find ourselves from birth to death under the dominion of some form or other of civilization. We speak a certain language; we inherit certain traditions; we are subject to a certain government. We can no more escape from these things than we can leap off our shadow. When we look at this dominion of social life over individual action, we see it to be of long duration in the past and future. Following it back into the remotest past, we find the simplest and most primitive phases of social life to result from the physical organization of man, and from the fundamental impulses which he shares with the lower animals. Analysing life in all its phases, we see it to be dependent on the physical nature of the

¹ See *Pos. Pol.*, vol. ii, pp. 8-10.—ED.

² *Ibid.*, p. 11.—ED.

world, on the chemical constitution of soil, air, and water, on temperature and light, on the gravitational relations of the solar system. In fine, we are dominated by an order of things from which we cannot escape, but which we have, within certain limits, the power of modifying. Though we cannot change our position in the solar system, yet by clothing, by building, by artificial warmth, we can endure rigorous climates, we can provide ourselves with tools and weapons, we can till the soil and secure the survival of the most useful plants and animals. Lastly, by education, by self-culture, by devotion, by influence of personal character, we can work upon our fellow-men, and do much to ensure the preponderance of those aspirations and desires in which all can share without antagonism; in other words, the dominion of unselfish over selfish love.

Towards this complete type of social and personal life which we call the Religion of Humanity all foregoing religions, each in its own more or less imperfect way, from primitive fetishism to Christianity, have striven to approximate. Based on the natural tendency of man to explain the movements in the world around him by the instincts and passions that vibrate within his own soul, they gave birth to tribes of imaginary beings who swayed human destiny, and whom it was man's most urgent duty to appease and propitiate. Step by step, as the laws that ruled the world were revealed by science, their power lessened; and when at last science culminated by expounding the orderly evolution of man and Humanity, they disappeared as stars fade before the dawning day.

Thus the progress of Religion is seen to follow, not the path that Mr. Spencer marked out for it, but a direction precisely the reverse. Not from the known to the unknown and mysterious lies its course, but from the mysterious and unknown to the clear and certain. Its hold on human life grows with the growth of man's thoughts, widens with the scope of his activity. As the years pass on man tends to become more and more religious.¹

¹ See p. 208 (note 2), and Dr. Bridges' address on "Religion and Progress" in *Essays and Addresses*, pp. 34-64.—ED.

IV

WORSHIP¹

THERE was a sentence—and it was only a sentence—in the January² number of the *Positivist Review* to the effect that a synthesis which took no account of Worship as a permanent element of man's life was as incomplete as Shakespeare's greatest play would be with the principal part left out. A few more words to justify and explain a somewhat strong assertion which might easily be misunderstood.

What is the meaning of the word? The presence and the recognition of dignity, worth, excellence, in some thing or person we may take as one of its first meanings, and this will suffice as a starting-point.

Now, what is here maintained—and, though many may count it a paradox, yet with Comte it was a fundamental part of his teaching—is that Worship fills an even more essential place in human life than Doctrine. The first and most essential condition for raising poor human nature to a higher level is submission,

¹ The circumstances that gave rise to this paper on "Worship" were as follows. Dr. Bridges' paper on "Mr. Spencer's Theory of Evolution" appeared in the *Positivist Review* of November, 1895, and his paper on "The Unknowable" in the next issue. In the meantime Mr. Spencer had sent a letter to the *Review* (p. 184 of this volume) with the following postscript: "P.S.—When the above was written I had not seen Dr. Bridges' second article ['The Unknowable']. The difference he emphasizes seems to me in large measure nominal. In *The Principles of Ethics*, and I think elsewhere, I have referred to the fact that in the course of human progress Religion becomes differentiated into Theology and Ethics; of which the Ethics acquires a continually increasing importance. The word *Religion* was originally used to cover all which concerns our relations to the Power (or powers) behind things, then considered as personal; and I have continued to use it in relation to that Power considered as unknowable. At the same time, such part of Religion as embodies rules of conduct towards fellow-creatures (at first obligatory only by divine command) I have dealt with under the head of Ethics, and have regarded as obligatory in virtue of conduciveness to human welfare. Thus the difference is simply that what Dr. Bridges, in pursuance of the Comtian conception, regards as religious obligation I regard as ethical obligation. Anyone who reads the closing passages of *The Principles of Ethics* will see that, if the element of worship is left out, the two views become substantially the same." Dr. Bridges thereupon appended the following postscript to his reply to Mr. Spencer's letter: "P.S.—Mr. Spencer's postscript raises larger issues than can be dealt with in a paragraph. I note only his closing remark that, 'if the element of worship is left out, the two views become substantially the same.' That may be true; but would not a synthesis from which the element of worship were left out be like Shakespeare's *Hamlet* with the principal part omitted?" This paper on "Worship" must therefore be regarded as Dr. Bridges' reply to Mr. Spencer's postscript.—ED.

reverence, the capacity and the habit of looking up to something better than ourselves.

Every simple statement of a truth, from the definitions of Euclid upwards, is liable to be misinterpreted, especially when the truth touches man's highest interests nearly. So it has been here. It has been often said, and the late Mr. Huxley used to amuse himself and his friends by repeating, that Comte at the end of a long life which began with much scientific promise showed signs of impaired mental power, one of the signs being that he set up an artificial religion with rites and ceremonies borrowed from the Catholic Church. Though this is a mere legend, yet colour was given to it by the fact that some disciples of Comte have really tried to establish a ritual of this kind. But such attempts remind us of impatient children who, wanting a flower-garden at short notice, put cut flowers in the soil because they cannot wait till the seeds grow. Carlyle's chapter on "Organic Filaments" in *Sartor Resartus* may be read by such with advantage.

No; liturgies do not grow up in a night like Jonah's gourd. They are not manufactured to order, like wax flowers. They have to grow, and to grow slowly. How slowly will depend, as with other growths, on soil and climate; but not speedily, in any case, if the plant is to be perennial. The one thing needful is that the process should be one of growth, not mechanism; evolution, not fabrication. Free spontaneous impulse should prompt it. In a word, it should be living, not dead. What we have to ask ourselves at the present time is not whether we shall at once set about founding a Positivist ritual that shall take the place of the liturgies and hymn-books used in chapels or churches round us, but whether we have hold of something which, while it guides our feelings, thoughts, and actions for the present, gives promise of continuous growth and fuller guidance in time to come. We have to ask, further, whether this that we hold is something that appeals to a few learned and cultivated people only, or whether it is something that all can lay hold of, as Nelson's humblest cabin-boy understood the watchword at Trafalgar.

Here lies the difference between a speculative philosophy and a rule of life. The two things may coexist in the same person with little or no connection between them. Between Faraday in the laboratory of the Royal Institution and Faraday in his Sandemanian chapel, what was there in common? Francis Bacon's philosophy and Francis Bacon's practice of law and pursuit of worldly honours were as far apart as though they were things belonging to two men

living in different countries. A greater thinker than Bacon offers us a different example. With Descartes philosophy was the centre to which every function of life converged. Of Aristotle and many another the same may be said. The truths sought and found by such men had, as they felt instinctively, an ultimate bearing on the elevation of man, though how and when this would be they did not know, and did not always ask. We may well believe that the consciousness of this sustained them in many a lonely hour. They were citizens of the world, of Humanity—not always of their country, sometimes not even of their generation.

That something more than this was wanted the best of the Greek philosophers knew well; and Pythagoras made a memorable attempt to supply the want, to combine the study of speculative truth with enthusiasm for the reform of life.¹ But the study of truth for its own sake was too new in the time of Pythagoras—it had touched only the simpler facts of number and form; it had not reached, and could not for centuries reach, the region of man's organic and moral life. So the noble effort failed; and Aristotle, a greater intellect than Pythagoras, knew the cause of failure too well to strive to renew it. But he knew also, and told men very clearly, how idle was talk about a life of virtue unless there were some means provided for surrounding young lives with an atmosphere of pure and righteous habits from the cradle.

What followed we know. Supernatural belief had to do again for the world what the old beliefs of Assyria, Egypt, and Judæa had done; what had been done by the early creeds and traditions of Greece and Rome, before revolution, conquest, and luxury had ruined them. After a thousand years of blind faith, in which speculation slumbered, while yet on the practical side of life things of infinite value were germinating, another attempt was made by the great schoolmen of the thirteenth century to harmonize the conflicting elements of life. It was the worthiest and weightiest effort ever made to reconcile science and supernatural religion. These men found their sacred poet. Careful readers of Dante's *Paradiso* know how much of it is Aquinas clothed in burning and prophetic language. But before Dante's death the decline of the Papacy had set in. Protestantism followed with its religious wars; and then came the destructive and creative eighteenth century, crowned by the Revolution. Many old things had passed away by

¹ See Dr. Bridges' biography of Pythagoras in the *New Calendar of Great Men*, pp. 98-102.—ED.

this time; many more were becoming new. And at last, in the nineteenth century, it began to be clear to those that had eyes to see that as conquest, feudalism, and empire were being superseded by peaceful republican industry, so would the place once occupied by the gods be occupied thenceforward by Humanity.

Humanity, as most readers of the *Positivist Review* are well aware, is no new figment of a thinker's fancy. Faith in Humanity underlay all that was good and great and lasting in the creeds of antiquity. Veiled under strange disguises, we find this faith in the Egyptian *Book of the Dead*, in the immemorial traditions of China, in the Second Table of the Mosaic Law, in the righteous wrath and pity of Æschylus and the Hebrew prophets, in Cicero's assurance of the kinship of the human race, in the supreme object of Catholic veneration, in the last words of the Arabian lawgiver. What has to be done now is to gather in this harvest of the ages, and to strip the husk from the grain. We revert to the simple meaning of Worship before spoken of—reverence for worth wherever we find it. No reconciliation of Science and Religion is needed. They converge spontaneously.

The reconciliation spoken of by Mr. Spencer in his *First Principles* lies in the common recognition by men of science and by theologians that the ultimate cause of things is inscrutable. On this there are many things to be said, one of them being that, if theologians ever came to admit it fully, theology would disappear. It will be noted that religion, in Mr. Spencer's work, is always spoken of in a theological, or at least a supernatural, sense. Positivists cannot complain of this, since Comte himself began by using the word in the same way. It was not till the last ten years of his life that he found it expedient to retain for permanent use, though stripped of every mystical sense, a word which he thought to be of great value, and to which he attached a perfectly precise and intelligible meaning.¹ By Religion he understood the state of unity resulting from the concentration of feeling, thought, and will on a definite purpose.² Such unity implied union, since otherwise the inward harmony would be troubled by the passions of conflict. Union, again, implies that the dominant impulses are generous, unselfish, social. Unity within, union without—such is the ideal

¹ In the *Early Essays on Social Philosophy* and the *Philosophie Positive* Comte uses the word *religion* as equivalent to *theology*; but in the *Positive Polity* he adopted the former word as representing a permanent human need, that of a synthesis of Thought, Feeling, and Action.—ED.

² See the Introduction to the *Positivist Catechism*, p. 34.—ED.

state called Religion by Comte, towards which, with many sad drawbacks and reversals, man is gradually tending. This conception, again be it said, needs no forcing to bring it within the domain of science. No reconciliation need be thought of. It is itself the apex, the crown of science.

Still it may be asked, Is not this state of inward and outward harmony included in Ethics? Not as Ethics is commonly understood. Always avoiding to make too much of words, yet it must be said that to lay down the rules of right conduct is one thing, the culture of the impulses which make for such conduct is another. Foremost among such impulses is reverence—the recognition of something nobler, higher, better than ourselves. Unselfish devotion is another—the impulse which prompts men to throw away wealth, comfort, even life itself, for the sake of their fellows. Yet another is the bright, cheerful gaiety and joy of life which leads to friendship and genial intercourse. All these impulses, summed up by Comte under the word *altruistic*—a most needful word, which he has brought into universal use—are spoken of by moralists; but they are stimulated to action by every form of religion that deserves the name. Not that the ethical teacher is to be undervalued. It is one of the weaknesses of Englishmen to undervalue theory in all departments, as our extreme slowness in founding technical schools may show. And so there is a tendency to pass by inquiries into moral problems as idle. But, in reality, such inquiries—which, when rightly instituted, have just the same claim to be called scientific as those of chemistry or biology—deserve, and will receive in the future, far more attention than has yet been given to them. Let me take this opportunity of acknowledging a personal obligation to Mr. Spencer for many of the noble and elevating thoughts contained in his ethical volumes. What he says of the unknowable that surrounds our little life, though not new, or claiming to be new, and though not, as it seems to me, containing a solution of our religious struggles, is yet so true and is stated with such clearness and force as, by checking intellectual pride, to tend towards spiritual concord.

But, again, it has to be said that to point out the lines of right conduct is one thing, and a thing most needful to be done; to cultivate the impulses which prompt such conduct is another thing, and even more important, because more closely allied to practical action, by which course men must finally be judged. And this was what Comte meant by saying that such culture—Cult, or Worship, if the old word is to be retained—was of more consequence than

Doctrine.¹ Only let us bear in mind what he meant by the word. The highest art, the best poetry, all that could tend to give joy or nobleness to life, was included. The festivals which he forecast for the future dealt with every phase of man's life and work—his family relations, his government, his industries, his memories of great struggles for freedom.²

The time for such public manifestations, presupposing, as they do, wide diffusion of strong personal convictions, has not yet come. Comte himself made no attempt to realize them. He entirely repudiated attempts to mesmerize men's emotions by outward performances corresponding to nothing within. But cultivation of the inner life by his rule, or by other analogous rules, such as saints and sages have followed from times long past, can begin at once. The men who marched from Marseilles to Paris at the supreme moment of the Revolution were chosen because they "knew how to die." Knowing this, the song they sang kept their courage at full height.

V

SACRAMENTS

It has been pointed out to me by a friend, whose judgment I greatly value, that in my recent paper on "Worship,"³ in which I hinted at the inexpediency of attempting premature manifestations of Comte's ideals, nothing was said of those institutions to which he applied the word *Sacraments*, and which on many occasions during the last half-century, both in Paris and London, have been actually put in practice. In the present confused state of the world it is hard indeed to use any such word without the risk—or, rather, without the certainty—of being misunderstood by many. The use of the word *Religion* by Positivists has been a stumbling-block both to sincere Christians and to sincere Atheists; and it is hard to say which resent it most. And yet, if religion be a real force in the world (and who, whether Christian, Mohammedan, or Atheist, can doubt it?), it must be eminently fit to be considered from the

¹ This subject is dealt with fully in the last section of the paper on "The Seven New Thoughts of the 'Positive Polity'" in this Part.—ED.

² These festivals are described in subsequent papers belonging to this Part.—ED.

³ The preceding paper.—ED.

Positive standpoint; since it is of the essence of Positivism to take account of all that is real.

Similar misunderstanding must be expected in the Positivist use of the word *Sacrament*. The word, as all know, is of Roman origin. Its adoption by the Christian Church is secondary, and, of course, of far later date. It was the Roman military oath; and round this formal declaration of obedience to the Roman standard were grouped all the feelings that ennobled the life of that great nation—patriotism, discipline, loyalty, devotion of life and energy to the public service. It is the Roman rather than the Christian use of the word that is adopted and enlarged in the Positivist use. If human life is ever to be again lifted and permanently sustained above its present level of selfish affections, narrow thoughts, and frivolous pursuits, something of the old Roman sense of obligation must be restored in ways and forms appropriate to our complex and varied society. Needless to say, such forms must be wholly disconnected from the work once ennobled by necessity, but now hateful, of slaughtering our fellow men, unless on the rare occasions of defence of hearths, homes, and native soil against criminal assault. Sacraments, in Comte's use of the word, are plain and simple recognitions that the principal events of private life have more than a private bearing; that the life of each human being, young or old, humble or exalted, is part of the common life; and that service received should be, so far as may be, repaid by service done.¹

It is well to feel and to speak with due respect of the form of religion at present prevailing in our country. But it is well also to avoid confusion and insincerity. With the mystic meaning of the word *Sacrament*, as used in the Catholic Church, the Positivist use of it has little in common. The Roman word and the Roman meaning are far too precious to be lost. If human life is ever to become again organic, vigorous, and noble, the union of private with public life which the Roman institution symbolized must be re-asserted and maintained in such ways and forms as may be found best suited to our modern time.

¹ See *Pos. Pol.*, vol. iv, pp. 109-16.—ED.

CHAPTER IV

THE RELIGION OF HUMANITY

I

THE MEANING OF PROGRESS¹

WHEN we look back on the stream of history it does not appear to us quite unbroken and continuous. Indeed, most historians dwell so exclusively on the accidents of history, the collisions of governments and nations, the crimes of rulers, the miseries of those they rule, that the true spectacle which we come to see, the growth of Humanity, is altogether hidden from us. Till the time of Condorcet it was not really recognized. It is most imperfectly recognized even by students and philosophers now. Alone among European thinkers Auguste Comte has conceived the whole meaning of that series of changes.

Condorcet saw the progress of the human *mind*, the growth of scientific discovery—beginning in Greece, continued by the Arabs, reviving at the Renaissance, and carried on with astounding rapidity by Kepler, Galileo, Newton, Bichat, Faraday, Darwin, and by the practical inventors, Gutenberg, Columbus, Watt, Stephenson. But the meaning of the Middle Age, that thousand years of stagnation in material and mental growth, he utterly failed to see.² Hume failed and all the thinkers of the eighteenth century. Many of the nineteenth century have failed also. Comte alone saw the meaning of that thousand years of darkness, its connection with what went before and came after it, because he alone, while maintaining the claims of science more audaciously than any thinker since Aristotle, yet upheld with equal audacity against the fanatics of science the subordination of the Intellect to the Heart, the subordination of Politics to Ethics—that is, of material civilization to noble and upright life.

Now can we, with the advantage of Comte's teaching, sum up

¹ A posthumous paper which formed part of a lecture.—ED.

² Cf. pp. 231, 241.—ED.

his conception of Progress as the goal of human energies in such a way as to steer clear of the vague, misleading meanings or no-meanings which are so often attached to the word? I think we can. I think Comte's meaning has already been summed up in a very definite and concrete way in the Syllabus of the Course of Lectures on the History of Civilization by Professor Beesly and others.¹ "The ruin of Western civilization can be averted only by the spread of a Universal Religion and the general adoption of Home Rule." Here you have in a word the Positivist ideal of Church and State. On the one hand, cessation of war, of conquest, of vast imperial systems, whether English, French, German, or Russian. Patriotism of the true kind rendered possible by limitation of the State within natural boundaries—citizens acting together politically with just pride in the traditions of their forefathers and with mutual respect—purged of all desire to suppress and tyrannize over and govern alien civilizations, whether in Ireland, in Lorraine, in Africa, or in Asia. We are the foes of Imperialism. Where it exists and where there is no way of immediately replacing it without disorder, there we wait its euthanasia, and take every opportunity of helping its peaceful dissolution. All attempts to extend it we shall continue vigorously to resist. On this matter our minds are made up. It is a fundamental part of our religion. We cling to our fatherland. It follows that we respect the fatherland of others. For us patriotism and imperialism are two contradictory words.

For the union of the nations of the world we rely on no imperial systems, however wisely conducted, but on the Religion of Humanity. In every nation, Eastern or Western, Buddhist, Confucian, Moham-medan, no less than Christian, we see the germs of that religion. We have not got to sow the seed. The seed is in the soil already. We have but to cultivate it. With a little more energy than we have put forth already, I can see that the time will soon be ripe for establishing such a society as Comte projected in the last chapter of his *General View of Positivism*²—a committee consisting of men of every nation, Eastern and Western, formed for the purpose of contributing in many and various ways to the establishment of the Universal Religion. One can see already what the Japanese, Chinese, and Indian members of such a society might do in extracting each from his own sacred books and traditions such sentences

¹ A course of twenty lectures on the General History of Civilization, delivered at Newton Hall in 1888-9. The words quoted are taken from the syllabus of the lecture given by Professor Beesly on March 31, 1889.—ED.

² Pp. 284-90.—ED.

and wise sayings as would be found wholly convergent with the teaching of Socrates and Cicero and Seneca, of Jesus and Saint Paul and Saint Francis—in showing how institutions in part obsolete, and commonly thought obstructive, have worked in establishing law and that spirit of reverential submissiveness to an external order which lies at the root of all moral growth. Such a society would do incalculable good in teaching the various civilizations of the world to know and to respect one another. It would sound the note of alarm when the stupidity and blindness and avarice connected with commercial and material progress were likely to bring nations into hostile collision. It would show the speculators who are so greedy to drive straight lines of railway across China why the Chinese do not desire that their graveyards should be desecrated by railway cuttings; and in countless other ways such a society would do immediate and temporary good while paving the way for the Universal Religion by which the whole race of Man will one day be firmly knit together.

But we are under no illusions; we live in no fool's paradise. It will be through much tribulation that we shall enter the kingdom. What fearful and sanguinary struggles lie before the nations in a near future we know not. What suffering may be caused in England by the decentralization of the commerce of the world, now so largely concentrated in London, and the consequent forced migration of its inhabitants elsewhere, we know not. But amidst all the confusions and perils of the coming time there is a fixed goal before us, a light which cannot lead us astray. The victories of Humanity over countless obstacles in the past assure us of her triumph in the future. We are taunted that we shall never realize our hopes, never see that future. This we know well; and it is precisely this knowledge which consecrates our work by redeeming it from the taint of self-love.

II

FAITH IN HUMANITY

It is a very trite metaphor, first used, I think, by Dr. Arnold some fifty years ago in his lectures on History, that political and social progress is like the coming in of the tide. On a steeply shelving shore you may watch the forward and backward motion of the waves for some minutes without being sure whether the rise

or the fall is in excess. You have to ask a fisherman, or look at your tide-table, to be sure that in an hour's time the water will stand higher than it does now.

Reading decades for minutes, we may apply the parable to the progress of Humanity. It is said and felt by many of us that the present time is a time of reaction.¹ Some of the reasons for thinking so have been very forcibly stated by the Editor in the last number of this *Review*;² and Mr. Frederic Harrison's vivid picture of Lourdes³ suggests others. It is needless and wearisome to repeat what has been said already of the enormous quantity of wealth sunk yearly by the nations of Europe in fleets and armies; of the revived pretensions of England to the government of the sea; of theocratic Russia dominating South Eastern Europe, and laying her veto on the reform of Turkey; of the paralysis of the European Concert involved in the scramble of France and England for territorial aggrandizement. Religious reaction, now as always, goes side by side with political. During the eighteen years of the third Napoleon lay schools were almost impossible in France; the prefects and the bishops were always on the same side; and the wealthier employers were ardent supporters of what Comte, the ardent sympathizer with every form of genuine religion, stigmatized as "the hypocritical conspiracy to divert the popular mind from all serious attempts to make things better in this world by holding out chimerical hopes of compensation in another."⁴ It is not unlikely that here in England we may witness the systematic renewal of attempts of this kind. The project of increasing the enormous revenues of the Church of England by increased grants to denominational schools will probably be realized. The further step of giving such grants not where schools are most wanted, but where school boards are most effective, is too cynical to be realized; but that it should have found influential advocates among the clerical party shows the prevailing temper.

Bad as these things are, it is no use shutting our eyes to the possibility of yet worse. In this highly critical and unstable state of European equilibrium, as a strong statesman of high principles, like Cromwell or Richelieu, may do much for public salvation, so, and

¹ Written in 1897.—ED.

² The reference is to Professor Beesly's article on "Russia and Turkey" in the *Positivist Review* of December, 1896.—ED.

³ In his article on "A Pilgrimage to Lourdes" in the *Positivist Review* of December, 1896. Reprinted in *Memories and Thoughts* (1906).—ED.

⁴ See *General View*, p. 294.—ED.

more easily, may a strong man of low principles, like the first Napoleon, lead men down the paths of destruction. A European war may adjourn the highest hopes of mankind for a generation. It is needful that men who think at all should face the possibility of this; and yet should learn not to despair.

How, then, are we to learn the lesson? By the belief in an all-wise Providence, in a Being of infinite power, wisdom, and goodness? Of such a belief we can but say that it transcends our knowledge. We know that our knowledge is limited. It is of the very essence of Positivism to acknowledge its limits; nay, to insist upon them far more emphatically than is done by many of the scientific teachers of our time. But, using such knowledge as we have, we see every reason for belief that this is a most imperfect world; no reason for assurance that we shall ever know any other. And to the Christian or the Mussulman who tells us, "If I held your creed I should destroy myself," we are constrained to reply: "Is your creed, then, brighter?" It is written in every orthodox manual of the Churches, whether Roman, Greek, or Anglican, that spiritual and corporal torment is eternal. From pictures of a blissful minority, standing out against so lurid a background, we can derive no comfort. If Lazarus be indeed a saint, he will spend eternity in striving to carry water to the rich man's tongue.

Driven back, then, to the purely human standpoint, forced to seek our highest happiness in this earth of ours, so loved yet so imperfect, so faulty yet so dear, we ask ourselves again the question, Where lies our hope?

It is best to take the lowest ground first, and so be sure that we build on the solid rock. Resignation to the supreme law sounds cold and barren. But it has sustained the bravest and the humblest in time of need. We all know something of the Stoics, for the thoughts of Marcus Aurelius and Epictetus form part of the Bible of Humanity. Those who have not read Seneca's essays¹ on the Blessed Life, and on Peace of Mind, would be surprised to find how many of the thoughts that we read so gratefully in St. Paul's Epistles or in Thomas à Kempis are to be found in the writings of that remarkable teacher, commonly thought in the Middle Ages to have been St. Paul's personal friend. Submission to the Supreme Will, wholly apart from personal hope, is the dominant tone in these writings. It is commonly said that such thoughts are possible only to literary men living a life of ease and leisure. Nothing could

¹ *De Vita Beata* and *De Tranquillitate Animi*.—ED.

be wider of the mark. Seneca was in that position, for a time at least, though his death was violent and was bravely borne; but Epictetus was a slave. It is a grave error to suppose that culture has anything to do with the matter. Stoic courage is for the most part dumb. It is limited neither by sex, nationality, nor rank. Every fisherman who puts to sea in a gale to save drowning men from a wreck, every fireman who plunges through smoke and flame to reach children in a four-pair back, is well provided with it. Never was a mining explosion but revealed it in abundance. It lies at the root of manhood, called, by men of old, virtue. What brave men have felt from the beginning Comte put into words thus: "If we knew that the earth was soon to be shattered by collision with a star, to live for others, to control self-love by social devotion, would remain to the end the highest good and the highest duty."¹

So much being common to the Positivist with all men, what has he to encourage him that other men as yet have not? Let us grant at once what is obviously true—that all men are not heroes, and that heroes are not always heroic. For most of us—I do not speak of those who are content to live in easy-going indifference to the future fate of their country or of their race—hope is as needful as our daily bread. Such hope the Positivist possesses. He is sustained in times of depression and reaction by distinct prospects of a better future for the world, grounded on patient study of the history of Humanity. Through all the foam and mist raised by the storms around him he sees the stream of life bending, now to this side, now to that, sometimes even seeming to retrace its course, but on the whole moving steadily in one direction. Scientific reasoning is at one with social aspiration in pointing to a future in which tillage shall take the place of carnage; in which men's strength will be spent, not in preparations for mutual slaughter, but in making this earth a beautiful and abiding dwelling-place for those that come after them, in which hopes of saving our own souls and bodies in a future world will give way to systematic efforts to save the bodies and souls of others in this.

When we say we have *faith* in such a future, what do we mean? The Apostle tells us, "Faith is the substance" (that is, the underlying foundation) "of things hoped for, the evidence of things not seen."² Looking at it closely, we shall find that there has been a great deal of faith of this kind in the world, quite apart from

¹ See *Pos. Pol.*, vol. i, p. 410.—ED.

² Hebrews, ch. xi, 1.—ED.

theological beliefs of any kind. When Hannibal encamped outside the walls of Rome after a victory which laid all Italy at his mercy, his camping-ground (the place can be identified now within a few yards) was put up by the citizens of Rome to auction, and was bought in at a high price. Such was the faith of Romans in the future of Rome. Those who think it impossible for men to be strongly stirred by hopes of a future which they themselves will never see will do well to read their history over again. If ancient history is too far off, let them begin with the story of the Swiss and the Dutch Republics.

If men can feel such faith in the future of their fatherland—a small space of territory, a fraction of the human race, liable to attack, invasion, even conquest—as to let their blood be shed like water in its service, is it so fantastical and idle a dream to suppose that men will give their lives, and far more universally and willingly, to the service of Humanity, the victorious survivor of so many nations and empires? Humanity herself, the preachers often tell us, may perish. Undoubtedly. And this is held to be a conclusive and triumphant argument against us; as though the prophets of Judæa, and sages innumerable from Confucius and Buddha downwards, had not taught millions to live true and honourable lives without hope of personal immortality; as though the story of every nation, the life of every good man and woman, were not ennobled by devotion to perishable things; as though the poet had never told us—

This makes thy love more strong,
To love that so which thou must lose ere long.

But again, we are told, your faith is not certainty. Assuredly it is not; if mathematical certainty is meant, or the certainty that comes from the direct evidence of sense. Faith is one thing; knowledge is another. But has it ever been otherwise? In times when Christian doctrine was more fervidly and universally accepted than it is now, were not the lives of pious men and women shadowed by the fearful doubt whether the future life of themselves, and of those they most loved, was to be a life of endless bliss or endless pain? Faith, in our sense of the word, is founded on science; but it is not science. Columbus had never seen the New World when he set out on his mighty voyage. Nansen could not be sure that his frozen ship would be carried from Siberia to Greenland with the ice-drift. But both these men had solid grounds for doing what they did; and their faith sustained themselves and their comrades through long weeks and months of trial. Not otherwise does the past of Humanity,

rightly studied, sustain us with the promise of her glorious future. And if it be said that men can never feel enthusiasm for what they will never see, it has to be replied again and yet again that the facts of life around us prove the contrary. When there are no longer any brave men and women left on the earth, when soldiers have ceased to rally round their flag, and no fishermen or miners can be found to risk drowning or suffocation for comrades or for strangers, it will be time to ask whether men can be stirred by other hopes than of profitable operations on the Stock Exchange in this world and eternal prolongation of their existence in another.

III

THE FOUNDATIONS OF A UNIVERSAL CHURCH¹

MAN, as Aristotle said twenty-five centuries ago,² is a political animal. He is one of the social races. He is, indeed, the social race in a very special sense. Other races, as dogs, horses, cattle, deer, beavers, elephants, many kinds of birds, and even of insects, live more or less in society. But human society is distinguished from these by its far wider extension in the first place, and still more by its continuous existence through a long series of centuries and millenniums. As a result of this continuous social life two institutions have arisen—Language and Capital. Language had its first origin in men's instinctive cries under the influence of passion. When the passion, whether fear or joy or hate, was felt in common the cries were common too; and when the passion was called out by actions in which all joined, the cries became the signs of those actions and of the things connected with them. Language has gradually become the storehouse for the thoughts of successive generations of men. Capital is the result of successive generations of labour. Each man, each generation, produces more than is consumed. Hence energy is set free from hunting and fishing, and spent on work that will not bring in profit for many weeks, months, or even years; on sowing the land, on house-building, on spinning and weaving, on roads, on canals, on costly machinery of all kinds.

Association, then, is of the very essence of Man's life. All that marks him off from other animals comes from continuity with the

¹ A posthumous paper.—ED.

² In his *Politics*, bk. i.—ED.

past and association in the present. How is this association maintained? By a combination of the highest and lowest passions, by love and by self-interest, by family affection, by association in breadwinning, in the chase, in fishing, in keeping sheep, in agriculture, in war, and by a common religious life. The religions of the old world established moral discipline, appealing to the highest and lowest motives, reverence and fear. In a way they embraced the whole nature; but they had their imperfections. They were tribal; they were too much bound up with the constitution of the State. But some 2,500 years ago there was a change in this respect in many parts of the world at once. Men rose up wholly unconnected with the State, to exercise spiritual functions, to moralize those around them. In Greece there were the philosophers, Thales, Pythagoras, Socrates, Plato, Aristotle, and others; in Judæa, Hosea, Isaiah, and the rest of the prophets, preaching righteousness apart from ceremonial or legal enactment; in India there was Buddhism, triumphant under Asoka¹ 250 years before Christ. Then, still later, there came the Christian Church and the great religious community of Islam. St. Paul gave shape to the conception of a Church—*i.e.*, an organized body to promote righteousness and purity of life, irrespective of nationality.

We judge the Catholic Church in its decay. But take its first twelve hundred years from St. Paul to Dante. Take Benedict, Bede, Boniface, Bernard. What would Europe have been without it? It did not do everything. We owe much to Roman government, much to the energy of the old Northmen; but amid the fierce conflicts of the time it upheld a standard of righteousness and purity. It failed from weakness of doctrine. Two centuries before Luther it began to fail. New thoughts and hopes dawned on men—industry, discovery, art, science. Since then scepticism has gone on ever increasing. Though the Church may still offer a shelter to the weak and the timid it is no longer a rallying point for the strong. They leave it more and more. It controlled feudal strife; can it control modern industrial strife? It could mitigate the invasion of the Northmen; but what of the invasion of the steam-engine, of modern competitive commerce, of the over-crowding of modern London, of the cry of the workers to be admitted to a reasonable share of the blessings which civilization is every year bestowing more bountifully on the rich?

A Church is a society that exists for the purpose of making

¹ The Buddhist emperor of India, whose reign began in 264 B.C.—ED.

Man's life in all its phases—public, domestic, personal—as perfect as possible; an association of those who aim at helping one another to lead noble and useful lives. What are the conditions of the existence of such a society in the modern world if it is to be Catholic or Universal?

It must, in the first place, be non-theological. People must be able to join it whether they believe or whether they do not believe in the existence of a divine being such as is described in the Christian or Mohammedan Scriptures. This condition must be patent at the outset. You may have, and for a very long time will continue to have, innumerable societies, each of which has some kind of theological creed. There is nothing to prevent this; there is no reason why we should try to prevent it. We cannot disprove the existence of a God. We can repeat with the Psalmist, "The fool sayeth in his heart there is no God." But on the other hand we see more clearly than ever that no belief or disbelief in the existence or non-existence of God helps us one step forward in building-up the Church of the Future, because the foundations of that Church must be laid, not on what men differ about, but on what they agree about. Suppose you bring together in one room a score of Christians, the same number of Jews, of Mohammedans, of Hindoos, and of Chinese. Let each group be fairly representative of the country they come from. Now, what kind of agreement on theological matters could you expect from the hundred men who form this assemblage? The twenty Christians would have among them one or more Catholics, Anglicans, Methodists, Independents, Quakers, Unitarians, and Sceptics. The Mohammedans would have members of the two great sects, Sunnites and Shiites, and some Sceptics also. Of the Jews, some would be orthodox, others indifferent. The Hindoos would represent different forms of their religion. Of the Chinese, some would be Buddhists, some pure Confucians. What would be the result of bringing these people into a room and asking them to compare notes about their various beliefs and see whether they could agree? Evidently on all matters connected with the divine world there would be hopeless wrangling and confusion. Meanwhile it would be noticed that a few in each group held aloof from the discussion and took no part in it. And after a time these silent people from each group would come together seeking some common refuge from the noise. They would begin by exchanging courtesies, and then would exchange thoughts, until at last it would be found that these—the Sceptics from each group—would be the only people who had any chance of arriving at a

common understanding. On matters of justice, of kindness, of peaceful relations between man and man, and nation and nation, on respect for parents and for age, on hatred of treachery, on admiration for heroism and fidelity, they would find they had very much in common. And while they were finding this out a lull would perhaps occur in the theological wrangle at the other end of the room, and one by one the tired disputants would join the peaceful group, and so at last a new harmony might arise out of what threatened to be hopeless discord.

But this first condition is not enough; it is too purely negative. It was a point of view common in the eighteenth century. All that was wanted was—not to believe theology. But human beings can never be knit together by negation only. Slaves may unite to break their fetters. This is good—even glorious. But what then? When fetters are broken, they are broken. You cannot go on breaking them for ever. Unions for the sake of not doing something—not believing a creed, not drinking gin, not smoking tobacco, and so on—are rather precarious. What unites man is doing something in common—not the mere abstaining from doing. The enlightened people of the eighteenth century thought that little more was necessary than to knock down idols, to remove shutters from the windows of the mind, to let in light. Enlightened self-interest was their watchword. All this turned out to be in great part a fool's paradise. The Revolution came, and it was soon seen that men were driven along, not by calm, intellectual inquiry, but by fierce passions. The Reign of Terror followed. The Revolution devoured her children. Finally, all Europe was given over to war and mutual killing for twenty-five years. The first condition of the Church of the Future is, as we have already found, that it must be non-theological, perfectly tolerant of theological doctrine of every kind, yet standing entirely outside it. But this first condition, though necessary, is quite insufficient. Voltaire, Diderot, and the Revolution had failed for want of two things—(1) want of solid faith; (2) want of *sustained* enthusiasm.

Do you remember that wonderful passage in the New Testament from the letter, not written to the Hebrews, about faith and its power?¹ Generation after generation had an ideal before them, a saviour that should come to regenerate the world and establish righteousness upon it. The writer of the Epistle traces the history of his people from Abel to Enoch, Noah, and Abraham; then he

¹ Hebrews, ch. xi.—ED.

goes swiftly through the whole chain of events that made the Jewish nation, knit together by an unseen ideal, called faith: "The substance of things hoped for, the evidence of things not seen." That is to say, there were things which, as far as your senses go, did not exist; they were not seen or heard or felt, for they were not yet born; but the substance of them was possessed by those old Jewish heroes. They held to the unseen ideal as though it were seen. That holding to the unseen ideal that they felt sure would come, even though they should never live to see it, is faith. Thus the writer tells how this holding to the unseen ideal made heroes of them. The men of old gained an honourable name by it. "By it the elders obtained a good report." "Through faith they subdued kingdoms, wrought righteousness, obtained promises, stopped the mouths of lions, quenched the violence of fire, escaped the edge of the sword, out of weakness were made strong.....others had trial of cruel mockings and scourgings; yea, moreover, of bonds and imprisonment; they were stoned, they were sawn asunder, were tempted, were slain with the sword.....All, having obtained a good report through faith, received not the promise." No, they never saw their ideal realized; but they believed in it all the same, clung to it to the last.

Many of us in childhood have read all this, and it comes back to some of us with a sense of unreality like "a tale of little meaning though the words are strong." What we shall have to come to see is this—that all great things in the world have been done in this way. A far finer chapter than that I have read might be written about the old Romans, who felt that their small republic, smaller at first than the county of Middlesex, had a great destiny before it which they, as individual citizens, should never live to see, but which they lived and worked and fought and died to realize for those that should come after them. So was it with Mohammed and his followers, with Cromwell's Puritans, with Danton's Republicans, for even these had faith—not pure negativism; although it was only transitory, still it was faith. A belief capable of stirring enthusiasm, such is the second condition of a Church in the modern world. If we put the two conditions together, we get as the result a common belief, disconnected from theology, capable of stirring men's noblest impulses.

Faith, then, is something more than intellectual conviction; it is that, but something more—it is also the tenacious clinging to an ideal. That ideal may be theological enthusiasm for the triumph of a mystical doctrine; or it may be national enthusiasm for the

future of our country; or it may be universal enthusiasm for the future of Humanity. And if men and women of different nations and different theological convictions are to be united together, this last is the enthusiasm of which we are in search.

But a little thought will show us how insufficient even this is, if it stand alone. The strongest excitement of the noblest sympathies has often led men woefully astray. Men see some terrible suffering; they rush without thought to the first remedy they find; and perhaps all they have done is to prune the head and top branches of the evil, thereby making the root grow more vigorously than ever. We see someone in distress, or some class of people. We move heaven and earth to get a new law or a new society to relieve them. We never ask ourselves whether the change will not create new difficulties. We establish *crèches* to enable mothers to go out to work, and thus lower women's wages. We interfere with nations badly governed, and the result is the destruction of their national vitality. Generally, we may say, blind impulses to do good, if allowed to take their course, will lead to evil. Philanthropy has been described as one of the seven curses of the world; and this paradox contains a truth. We want *light* as well as *love*, *principle* as well as *impulse*.

Where are principles, convictions, to be found? Formerly, in the revelations of the Divine Will; now, in the study of the Order of the World, in the true scientific spirit, the spirit of quiet, steady, patient looking at the facts to see what their real meaning is, clearing the mind of all preconceived fancies, of all self-will, the humble subordination of one's own opinion to the teaching that the facts themselves bring. This is the true spirit of Baconian philosophy as seen in Newton, in Faraday, and in Darwin. This spirit, so fertile in the study of the material world, we have to bring to the study of the social, political, and moral world.

In the scientific world a man begins, not by thinking out everything for himself afresh; he goes to the best masters and sees what has been done before him. In mathematics, in physics, in chemistry, in physiology, there are books which are condensations of the work of many centuries. We begin by accepting that. We find the best teacher we can; and we begin by accepting him too. We take an immense number of things on trust to begin with, as, for instance, the multiplication table. We say, eleven times seven is seventy-seven; but how few of us have put down a row of eleven sevens and added them up, to see whether it is so. We first find out what has been done in each science; and then we look and work for ourselves,

if we have time and faculty. Now, as it is with arithmetic, electricity, chemistry, medicine, so it is with politics and human conduct. They must be studied in the scientific spirit.

This was the starting-point of Auguste Comte's work. Social anarchy, in his view, was caused by the lack of convictions to unite good men. Ten righteous will save the doomed city; but the ten must work together, must rally round the same standard. Comte did not merely say, "Let us try to study social phenomena scientifically." He laid the foundations of the science. He urged the scientific study of the Social Order as the foundation of all wise effort, as the basis of Progress. Had he only done this, it would have been much. But he did far more. He worked for the many as well as for the few. The Religion of Humanity is now a common phrase. It is used by numbers who know nothing of Comte's teaching and hardly know his name. Yet it was he that first brought it into use. And he meant more by it than others mean. By many these words are used very vaguely. The Religion of Humanity is described as "the essence of Christianity," whatever that may mean. Everyone uses the word Christian in his own way. Do you mean the Christianity of the Popes? Do you mean the Christianity of the men who persecute the Jews in Russia? Do you mean a general spirit of benevolence without any creed at all? I have already shown how dangerous mere philanthropy can be.

No, Comte meant something very much more distinct than this. He meant intelligent gratitude, clear-sighted, thankful acknowledgment of the services of the great and good in the past—clear-sighted, intelligent enthusiasm for a future definitely recognized as following from that past. He meant by Humanity the work done by Moses and by the Egyptians, by Homer, Aristotle, and Archimedes, and the other great poets and thinkers of the old world. He meant Scipio, Cæsar, Trajan, and the founders of the Roman State. He meant St. Paul, St. Augustine, St. Bernard, the founders of the mediæval Church. He meant Dante, Shakespeare, and the whole choir of painters, poets, and musicians. He meant statesmen who have defended justice and free thought like William the Silent, and Cromwell, and Frederick. He meant the great philosophers and scientific revealers of the modern world like Descartes, Bacon, Kepler, Galileo, Bichat, and Darwin—these and also all the unnamed good and brave.

And again, by Humanity is meant not only communion with the Past, but communion with the Future. Study of the structure of

Humanity reveals more or less clearly what institutions are permanent and constant and what are changing and modifiable, so that in the Religion of Humanity is included all aspirations for the Future and hopes of Progress, all the more sure that they are founded on the laws of growth. We walk not blindly and unsteadily, because we know whither we are going, although we do not know it perfectly.

Here, then, we have the third condition necessary to a universal Church in the modern world—a belief founded on science. A small number may suffice to stir and guide the world, if only they are sure of themselves and remain faithful to their principles.

IV

THE SEVEN NEW THOUGHTS OF THE "POSITIVE POLITY"¹

INTRODUCTORY

BY the seven new thoughts of the *Positive Polity*,² I mean the seven principal thoughts that distinguish it from Comte's previous work. What he had done in 1842, when the sixth and last volume of the *Philosophie Positive* was published, was to show that the facts of Sociology, of Man and Society, were—like the facts of Biology and Astronomy—*amenable to law*. They followed regular laws of coexistence and succession, and therefore they afforded scientific basis for action. By observing what were the permanent conditions in every state of society, Comte showed what were the institutions it was necessary to preserve. This was the basis of Order. By pointing out laws of growth followed everywhere and in all times, he indicated true principles of change. Here was the foundation of Progress.

To take elementary instances, Family and Government are uniformly persistent. They belong to Order, which is the Basis. On the other hand, the belief in God is not uniformly persistent. In Chinese civilization and in Buddhist societies it does not exist. It is therefore not part of the permanent fabric of human civilization.

¹ Posthumous paper, from a course of three lectures delivered in 1883.—ED.

² *Système de politique positive: ou traité de sociologie, instituant la religion de l'humanité*. Four vols.; 1851-54. Eng. tr., entitled *System of Positive Polity*, in four vols. (Longmans, Green, and Co.; 1875-77.)—ED.

Indeed, on further examination, a law of change shows itself—the Law of Three Stages faintly perceived by Hume and Turgot.¹ Progress in all conceptions is from Fictive to Positive, first in simple thoughts such as those of astronomy, later in complex thoughts such as those which deal with society.

At the end of the *Philosophie Positive* Comte had shown the application of these principles to many of the problems of society and of life. In particular he had dwelt on moral education, consisting in the

wise regulation of *habits and of prejudices*, destined from childhood to vigorous development of the social instinct and of the sense of duty, and afterwards to be supplied with a rational basis, by instruction in the laws of human nature and society; so as to fix firmly and definitely the universal obligations of civilized man, beginning with personal morality, passing thence to family and social morality, and then studying the various modifications due to the different positions created by modern civilization.²

Comte points out the extreme incompetence of theology in dealing with moral education. For, in the first place, theology no longer unites. It is one thing to a Unitarian, another to a Catholic. Secondly, the doctrine of personal salvation was never very favourable to the highest morality. Thus this great problem had been present to Comte long before he wrote the *Politique Positive*. The same is true of Social Commemoration, and also of that vast aspect of the problem of reorganization which may be called *temporal or material*. The great conception that in a healthy state of society every citizen will be regarded as a public functionary holding his proper place in the industrial army—that conception which contains the germs of the solution of the whole problem of Wealth and Labour and Poverty—this too is to be found clearly stated in the first work.³

We may ask then, What was left for the great afterwork? The answer is given in the Final Invocation to the *Politique Positive*.⁴

Six years elapsed between the conclusion of the *Philosophie in*

¹ See p. 91.—ED.

² See *Phil. Pos.*, vol. vi, ch. lvii, p. 464. The italics are due to Dr. Bridges.—ED.

³ *Ibid.*, p. 482. On the question of the permanent importance of what Comte always called his *ouvrage fondamental*—the *Philosophie Positive*—see p. xii of the Preface to vol. iii of the *Pos. Pol.*—ED.

⁴ See *Pos. Pol.*, vol. iv, pp. 473-76.

1842 and the publication of the *Discours sur l'ensemble du positivisme* in 1848.¹ In the interval he published the *Geometry*² in 1843, and the *Astronomy*³ in 1844. In 1845 there came the great crisis of his life, his friendship with Madame de Vaux. In 1846, six months after her death, he wrote the Dedication of the *Politique*, and in the next year he delivered the course of lectures corresponding to the *General View*.

What was the renovation now effected in Comte's life? It was this. The moral realities of human life were brought nearer to him. Society was no longer a distant astronomical object pursuing its way through the ether in obedience to a fixed law. It was a complex of human lives, each real, swayed by stirring desires, needing guidance, support, consolation. He had seen life, as a wise philosopher sees it, from a distance, from a height as in a bird's-eye view. He now saw it as a good and merciful woman sees it, at first hand, glowing with warm blood, quivering with pain and passion. On the one hand his abstract thoughts were now translated into the language of common life; on the other, a moral renovation was effected in himself, with a new purity, gentleness, patience.

The Final Invocation recalls the way in which this moral renovation had reacted on his teaching; and he associates the inspiring influence of this personal affection with the principal thoughts which distinguished the *Positive Polity* from his former work. These thoughts, the seven essential steps in his religious construction, were (1) Humanity, (2) The Subjective Method, (3) The Cerebral Theory, (4) Ethics as the highest of the Sciences, (5) Sociocracy based on the separation of Church and State, (6) The Affinity between Fetishism and Positivism, and (7) Service weightier than Creed. Each of these we must consider in turn.

1. HUMANITY

In the *General View of Positivism* you may read the greater part of the book without coming to the religious conception of Humanity. It does not occur till the last chapter. We have the intellectual character of Positivism; its social purpose; its action on the people; its influence on women; its affinity with Art; five-sixths of the book—and yet no reference to the Religion of Humanity. This

¹ The Eng. tr. of this work is known as the *General View of Positivism*.
—ED.

² *Traité élémentaire de géométrie analytique à deux et à trois dimensions*.
—ED.

³ See above, p. 216 (note).

is very instructive, and throws light on its real meaning. Comte has, in fact, been talking of the Religion of Humanity all the while without uttering the phrase.¹ He has been speaking of a Philosophy in which the Intellect voluntarily and freely places itself at the service of the Heart by endeavouring to establish firm scientific convictions as to right and wrong—making this the final science towards which all the rest converge. He has been speaking of the social purpose of this Philosophy, showing how the glorious aspirations of the French Revolution were abortive owing to the want of any coherent principles—how Positivism opens out an endless sphere of social applications by giving a firm basis for every virtue, personal, domestic, civic. He shows how Positivism tends to form a society, a guild, a church, outside the ordinary political fabric—not trying to upset this, but recognizing it, and modifying it for good, regulating it, moralizing it.

He has been showing how in such a society the People will find their highest aspirations realized. The education which Positivism aims at giving is itself the solution of the great problem of our time—the incorporation of the great mass of the people into the fabric of civilization. The public opinion created by such an education is the strongest force available for such a rational distribution of wealth as will make the material conditions of life tolerable, and thus make it possible for life to be beautiful. And in such a society women, too, will find their highest aspirations realized, because the culture of the heart holds the highest place, the formation and purification of character being recognized as far more important than the increase of knowledge or the multiplication of industrial inventions. In such a society, how noble is the field laid open for poetry, for Art in all its branches! Art has henceforward a social function of incomparable value, that of helping forward the highest form of progress by embodying great conceptions in such a distinct and living form that they shall become palpable and tangible. And when he has said all this, he adds that it is summed up in the word *Humanity*.²

¹ Some slight verbal changes necessary to the sense have been made in the first few lines of this paragraph. This being a posthumous paper, Dr. Bridges had no opportunity of revising it himself.—ED.

² See *General View*, p. 242. It is an interesting fact that in the first five chapters of the *Discours sur l'ensemble du positivisme* (1848) Comte uses the word *humanité* in the sense of society or the social organism; but in the last chapter, entitled "Culte systématique de l'Humanité," the word is invariably written *Humanité*, the *Grand-Être* as the true religious centre. This point is obscured in the Eng. tr. of this work by the fact that throughout the *General View* Dr. Bridges wrote the word as *Humanity*.—ED.

Now this seems to lead us to a rather different way of regarding Humanity from that in which it is usually represented. Humanity is described often as a being standing outside us, made up of all the lives of the Past, governing our own individual life by a rule from which it is impossible for us to escape—by the ties of family, language, law, custom, manners, industry, poetry, art, and so on. But in what sense can Humanity be said to stand for our ideal picture of life as it should be, as it is the effort of our lives to make it? Can Humanity represent, not merely our veneration of the Past, but also our inspiration and striving for the Future? Can it call forth not merely respect, admiration, reverence, but also ardent longing for progress? Assuredly it can, and the conception of Humanity would be wholly mutilated if we left this aspect of the matter out of account.

Let us take the definition of Humanity given by Comte. "Humanity is the sum of the beings, past, future, and present, who freely work together in rendering the order of the world more perfect."¹ He condenses this shortly afterwards, defining Humanity as the sum of convergent beings. But now we want the fuller definition. Note that, while the Past comes first, next to the Past comes the Future. Beings not yet born are considered as existent, no less than those who have done their work and who seem to have passed away. This seems at first sight paradoxical and fanciful; but in truth it is extremely real and obvious, being indeed one of those truths so obvious that they escape our notice till some one comes to lift back the veil of familiarity—*i.e.*, to reveal them.

What are the elements that go to make up Humanity? We cannot reduce these to individual men and women, for an isolated life has no meaning. We can, however, see that Humanity is made up of different communities—England, France, China, and so on—and that each of these is in turn made up of numberless families. Let us take the Nation first, and then the Family. Consider ancient Rome or modern England as the object of patriotic feeling. "England expects every man to do his duty." How very real and at the same time how very complex is that word *England*! All her past and all her future are focussed in it. The past renown is called to witness: the future hopes are felt to be at stake. Both these are necessary; for of itself the worship of the Past is barren and useless, and the hope of the Future is unmeaning except as a continuation of what has gone before. In the effect of such an

¹ See *Pos. Pol.*, vol. iv, p. 27.—ED.

appeal we see the power of Past and Future together to regulate and govern the Present. And the Family shows the same thing on a smaller scale, but more constant, more vivid—in a word, more *familiar*. A family is a collective life, of which the members now living by no means form the whole, or even the most important part. Those who live in provincial neighbourhoods where life is more settled know the meaning of the words "family pride," not at all connected with aristocratic birth—sometimes a potent influence for good, sometimes distorted, as with the Dodsons in *The Mill on the Floss*. It is very necessary to dwell on these illustrations drawn from Country and Family; for a clear conception of Humanity can hardly be obtained without looking at other and simpler collective forms where subjective, invisible life acts on objective, visible life.

But yet these illustrations are inadequate. The man without a family, the orphan outcast, is still human. The exile who is deprived of his country has still his manhood left. But if we try to conceive Man without Humanity, we strip off from him, feature by feature, every mark that separates him from the higher vertebrate animals. Imagine Bible and Koran suppressed, Homer and Greek Art non-existent. Do without Greek Philosophy and Greek Science, do without Philosophy and Science at all, and therefore without Modern Industry. Wipe St. Paul and the Christian Church off the face of history. What have you left? A few nomad tribes who can make fires, and weave and keep flocks and herds and kill wild beasts, and who above all can communicate with one another in language. But even this must go. This primitive civilization needed centuries, nay thousands of years, to grow—it belongs to Humanity.

This may enable us to realize that half of the life of Humanity which lies behind us. But, as in the case of Country and Family, we have to combine with this infinitely great past an infinitely greater future. We need something to live for, to work for. From this point of view Humanity is the meeting point of all our highest aspirations. The Past represents Order, the government of the dead; the Future represents Progress, duty, the purification of life. Thus Humanity really represents everything that is venerable and precious. It is a firm foundation; it is an anchor of hope, a centre of religion. It unites love and duty.

There still remains one question. What image can most fitly condense all these thoughts, and make them visible to us at a glance? What should be the Emblem of Humanity? It must fulfil certain conditions. It must represent Love, unselfish sym-

pathy ; Order, government and guidance ; Progress, growth, purification, ennoblement of character. It must be universally intelligible. Thus allegorical figures representing the growth of Science, Philosophy, and Art would be quite inappropriate and inadequate. So, too, the Crucifix, though a symbol of devotion, raises a painful image of torture and stirs up wrath against injustice. It is a symbol of disunion among men. In Hungary it has been a torch for the destruction of Jewish villages. The Catholic Church put forth in the Middle Ages another image which in some parts of the Catholic world, in Southern Europe, and perhaps still more in Southern America, has superseded the crucified Christ. I speak of the Madonna and Child. The conception sprang up spontaneously in the eleventh century, took root and grew all through the time of the Crusades, and for the mass of Catholics has been the embodiment of their faith ever since. To Comte, no more complete and sufficient type of Humanity could be conceived than this of the Mother and Child.¹ It represents Love in its purest and most unselfish form. It represents Order, guidance, providence, direction. It represents Progress of the highest and most essential kind, the development and formation of character. So beautiful is the conception that Raphael painted it fifty times. Lastly, it is universally intelligible among all nations and in every stage of civilization.

Such, then, is the first step forward taken in the *Positive Polity* : the condensation of the whole scheme of Positivism, doctrine, aspirations, work, in the religious conception of Humanity.

2. THE SUBJECTIVE METHOD

The question of human knowledge, apparently so abstruse, is really less difficult than it seems. Knowledge has two elements, the knower and the thing known, subject and object. Kant first brought this into prominence.² Comte generalized it as coming under the definition of all life ; the continuous adjustment of Organism and Environment.³

The first conception of the World is mainly subjective—drawn from Man's inner consciousness. Men construct the world of the gods in the likeness of the world of their own passions. But from Greek times to our own there has been a gradual growth of positive science. The objective method, beginning in Cosmology,

¹ See *General View*, pp. 256, 286 ; *Positivist Catechism*, p. 99.—ED.

² See the paper on "The Centenary of Kant" in Part V.—ED.

³ See *Pos. Pol.*, vol. i, p. 575, and vol. iii, pp. 15-16.—ED.

has finally been applied not only to the element that is known, but to the element that knows. Life, Society, and Ethic have become matters of positive science. The impulse given by Bacon has been continued by Hume, Turgot, Condorcet, Gall. Objective science has reached Humanity, and these studies have led to a revival of the subjective method in a new form. Under this aspect all subjects of inquiry are to be viewed in their relation to Man; for Man is the only centre possible. The stars are infinite. This concentration implies no narrow utilitarianism, no thought of immediate application to practical purpose or of material well-being. It means that the question will be asked of any investigation, What light does it tend to throw on Man and his work on earth? The subjective method asks questions, guided by a sense of human needs; the objective method answers them.

Logic in its true conception must include "all instruments calculated to reveal to us the truths which human necessities require,"¹ the combination of means for discovering the truths which we need. This definition of Logic was afterwards enlarged till it became: "The working together of feelings, images, and signs, to inspire us with thoughts corresponding to our moral, intellectual, and physical needs."² Thus poetry enters into it; moral aspirations enter into it. When the heart is raised to its highest and all the powers of imagination are strongly stirred, then the energies of pure thought are turned to the greatest account. Questions are raised, suggestions are prompted which could never have arisen otherwise. But when the questions are raised they must be solved by rigid applications of the objective method. There is no possibility of evolving solutions out of moral consciousness.

The number of questions that may be asked of Nature is infinite. Our powers are finite, and so also are our needs. Of the millions of problems that present themselves, ninety-nine per cent will profit us little. The Subjective Method consists in the wise choice among this infinite labyrinth. Moral elevation, poetic imagination, are needed to prompt this choice.

The most important facts have been left unstudied because men had lost the sense of them. People could not speculate about music, if they had no ear for it; or on painting, if they were colour-blind. So with human sympathies. How can the man who has no fine sense of honour or of justice, who has no experience of unselfish

¹ *Pos. Pol.*, vol. i, p. 364.

² *Synthese Subjective*, p. 27; p. 23 of the Eng. tr.

devotion, turn his thoughts to such things as these? They have no existence for him. The highest and most difficult field of positive science needs, therefore, the culture of the Imagination and the culture of the Heart.

3. THE THEORY OF HUMAN NATURE

Art, if worthy of the name, calls out love quite apart from faith. It is sometimes of secondary concern what the subject is. A sonata of Beethoven has none; yet it raises hidden feelings of admiration and awe and tenderness, and calls noble memories to life. The humblest picture, if true and good, gives us something to admire outside ourselves—be it a cottage by a stream, or an ancient building, or ships by the shore, or a few children playing on a village green. They are enough to call out love and sympathy for something outside our own selfish interests. So with poetry; be it only a beautiful arrangement of words, it is something. A word is an element of beauty in itself, and skilful arrangements of words, like arrangements of colours and sounds, call out hidden sympathies and associations far beyond their direct meaning. And if this be so with the simpler and humbler forms of Art, how much more deep and potent is the force when all those living, kindly sympathies, under the influence of the greatest poets, become as streams converging into a mighty river of reverence for the highest deeds of Humanity and enthusiasm for her highest hopes!

Love, then, is the Principle,¹ the source, and may be evoked independently of faith. Order is not an end in itself; it is only the basis. There is a positive danger in knowledge for its own sake. Much cant is talked as to the moralizing influence of training the intellect. The tendency of much modern teaching is unsocial. Stimulus to the intellect is useful only as a means to an end. The problem is to combine the most *generous* sympathy with the widest, the most *general* thoughts. From Sympathy and Synthesis we shall get Synergy; in other words, we shall feel together, think together, work together.

These thoughts are necessary for our present subject—the Theory of the Brain, or of Human Nature, which concerns the highest Order and the highest Progress. We have to study Human Nature in order that we may make it better. Simple as this seems, it has been by no means always recognized. Theological morality could

¹ For a full exposition of this statement see Dr. Bridges' address on "Love the Principle" in *Essays and Addresses* (pp. 96-113).—ED.

dispense with knowledge. The soul was saved by divine grace. For what was knowledge wanted? Believe and be saved. Of course the Christian Church did not act thus in practice. Otherwise, it would have been of no account. Its work—what of it was good and durable—was founded on real and solid knowledge. Remember that Positivism has been always in the world in the sphere of action. Whatever ideas men have had about the world, their practical action has always been in very many things positive. Their boats were made to keep afloat, their axes to cut. And so it has been with human nature. They had all manner of fanciful reasons and explanations for all institutions connected with the family and society. But they followed natural, scientific laws of social organization, though unconsciously. They established families, governments, and so on, in accordance with practical needs, as though they had been positivists. Prophets, reformers of all kinds and all ages, have had knowledge more or less real of the matters they had to deal with. It was so, for example, with Confucius, Isaiah, Mohammed. So, too, the poets' knowledge, though empirical, practical, instinctive, was none the less real.

The true founders of the Catholic Church, St. Paul and his successors, had a profound insight into human nature. They aimed at the discipline of the animal passions, the stimulus of veneration and love. St. Paul saw, instinctively and through the medium of a strange and to us unintelligible doctrine, that man was a compound of rebellious instincts with very feeble unselfish sympathies, and very insufficient of themselves to hold the lower instincts down. Thus, while the faith in the crucified God called forth emotions of love, reverence, and pity, there was still the difficulty of "keeping down the body and bringing it into subjection." It was possible, however, to appeal to one set of selfish instincts in subduing another. Amidst the extravagance of the doctrine, and over and above the appeal made to the fear of Hell and hope of immortal happiness in another world, there were present always these two permanent and real positive influences, the stirring up of the higher impulses and the repression of the lower. It was because the Church was so superior to its doctrine that it maintained its hold on society in the West for so many centuries. Fasting, for instance, was a recognition of the influence of body on soul, of digestive organs on brain—one of the most important problems in higher medicine. But asceticism was foolishly made an end in itself. Prolonged suicide is no more noble or laudable than instantaneous suicide. And there entered into it the secret gratification of vanity and love of power, as in the

case of St. Simeon Stylites. There were practical errors in other points. There was the Christian neglect of the body, as seen in Thomas à Becket, filth being counted as a sign of holiness. Positive science and modern social life have combined to establish a higher standard. Personal cleanliness is a part of republicanism, of the dignity of manhood. Asceticism takes its place as a part of hygiene—as an occasional aid to health. Digestion involves a great expenditure of nervous power. If more is spent on it than is absolutely necessary for the maintenance of the body in full vigour, then the organs of digestion are themselves injured and the brain is weakened. I speak of habitual excess, not of occasional conviviality, which in due measure has its good side.

I have said enough to indicate some of the complications and difficulties of the problem. But there are others. At present the study of human nature is split up between three classes of persons: physicians, who study the body; philosophers, who study the mind; and priests, who study the heart. It is essential that these three should become one; and for this Biology had to be constituted as a distinct science and carried to the threshold of Sociology. This was the great work of the eighteenth century and the early part of the nineteenth, when the life of nutrition, as seen in the plant, was distinguished from the life of animality, which is superadded and subordinated to the life of nutrition.¹ Now, the first purpose of the animal life, of nervous and muscular tissue, is to destroy in order to feed. Hence we have development by survival of the fittest. This is incontestably true; the mistake is in thinking that it is the whole truth. By concentrating our attention on the origin of life or its primitive forms, we forget its advanced stages. The fact that meets us in the advanced stages of life is that animals have, in addition to eating and destroying instincts, instincts which prompt them to cling together and sacrifice their lives for each other.² Still more evident is this in human civilization. Man tends to exist not for his own sake, but for the sake of the community. And for the study of the tendency the constitution of Sociology is necessary.

In 1825 Gall published his treatise on the *Functions of the Brain*. In this he put forward three principles of great importance in the theory of human nature. The first is that all psychical phenomena have their seat in the brain, a point on which Bichat had fallen into error. The second is that the brain is not one organ, but a collection

¹ See pp. 5-6.—ED.

² Cf. pp. 79-80.—ED.

of organs. This is still contested. The third is that the benevolent instincts are innate. This last is especially important. Hitherto, of the only two theories accepted, one, the theological, had held the innate corruption of human nature, the other its innate selfishness. St. Paul's doctrine of *Nature* and *Grace*, more fully developed by St. Augustine and others, involved the *total corruption* of human nature. The highest impulses came from a divine source wholly independent of us, and were given forth only at the will of the Creator. This doctrine is in itself very strange and seemingly immoral; but it was turned to good account by the teachers of the Church. Through them, as the representatives of the Divinity, Grace could be found. When, however, the controlling power of the Church had gone, the doctrine was distorted, as we see in the antics of some extreme revivalists. The philosophers who succeeded the theologians were not much better. According to Hobbes, Mandeville, and Condillac, human actions were the result of mutual fear, or were determined by the balance of pleasure and pain. Hobbes considered that a healthy state of society in which the magistrate was armed with the most undisputed authority. Strong government was the only source of virtue.

As usual, the highest truth was found in the poets who painted what they saw, just as in Greek sculptors, who knew nothing of anatomy, but watched the movements of the limbs. Among philosophers the truth began to appear about the middle of the eighteenth century in Bishop Butler¹ and Vauvenargues,² and more especially in Hume's *Essays* on human nature³ and Leroy's *Letters on Animals*. But Gall first put it into systematic form. He gave coherence and precision to it by attributing to the unselfish sympathies a distinct place in the structure of the brain. It is noticeable how rich were his observations on this point, showing the innate propensity to do good or to revere.⁴ But his general scheme of localization and classification was extremely faulty and incoherent, especially in all that related to the intellectual functions. Comte's method was avowedly subjective, so far as the localization of organs went. He took functions as seen in animals and developed in the growth of human society. He assumed the connection of function with organ, and that like organs would be near together. On this he built up his cerebral hypothesis, very much of which he frankly avowed was not anatomically proved.

¹ See p. 64 of Dr. Ingram's *Human Nature and Morals*.—ED.

² See his *Maximes*, placed in the last section of the Positivist Library.—ED.

³ Cf. above, p. 137.—ED.

⁴ Cf. pp. 73, 80.—ED.

It may be asked, Why not wait? But we cannot wait till anatomists have investigated and defined each one of fifty million cells. That may or may not come in the course of the next thousand years. We want, for our practical necessities, the *best working hypothesis* as to the organization of the human body and its relation with moral and intellectual functions.

Comte took a calm survey of human nature as a whole. Then he examined the parts. He was led to a threefold division—first, the Heart, impulses, desires; second, the Intellect, the reasoning and observing powers; third, the Character, the practical qualities. The first he subdivided into seven self-seeking impulses and three altruistic ones. The Intellect he divided into Conception and Expression, and the former he divided again into Observation and Meditation, each of which was further subdivided, Observation into concrete, relative to Beings, and abstract, relative to Events, while Meditation could be either Inductive, leading to Generalization, or Deductive, leading to Systematization. Finally, the Character was analysed into Courage, Prudence, and Firmness.¹ The problem is how to act so that the resultant actions shall be harmonious with those of our fellows. This can only be by the supremacy of the social sympathies over our selfish feelings; and for this the sole way is that the intellectual functions should be subordinate to the social sympathies. The Intellect must present an ideal which kindles the sympathies, and must then in turn show the ways in which that ideal may be realized. Progress will result from the union of Love with Order.

4. ETHICS, THE CROWNING SCIENCE

In Comte's first arrangement of the Sciences they were six in number in the following order of succession: Mathematics, Astronomy, Physics, Chemistry, Biology, Sociology. The last-named, Sociology, dealt with the laws of the growth and structure of society, and therefore included implicitly the laws of the growth and structure of each element thereof. Intrinsically, he recognized this by proposing to conclude the educational course by a year's teaching of the art of life, the practical application of scientific knowledge to Morals.² But in the second volume of the *Positive Polity*³ Ethics is separated from Sociology and appears as a distinct science, so that the scheme now stands thus: Cosmology (Mathe-

¹ Cf. pp. 71, 74.—ED.

² See *General View*, p. 130.—ED.

³ See *Pos. Pol.*, vol. ii, pp. 50, 352.—ED.

matics, Astronomy, Physics, Chemistry), or the study of the inorganic world; Biology, or the study of life, including man as the highest of the animals; Sociology, or the study of continuous social existence and the laws of filiation; Ethics, or the study of the individual as the creature of Humanity,¹ including in that study all the differences of age, sex, temperament, etc., which distinguish one man, woman, or child from another, and ending with the rules of practical conduct and of education.

Great progress was involved in this change. It means that the perfection of political organization is not the be-all and end-all. You may have good government and just statesmen, yet the people governed may be mean and poor. This is seen in the best days of the Roman Empire. The ultimate test and the ultimate aim is that the individual human unit in any given state of society shall be noble, brave, intelligent, energetic, self-denying. This is the first goal—all else is secondary and subservient to this.

But, on the other hand, there is no possibility of separating Morals from Sociology, as was done, or attempted, by Christians, whether those of the earliest days of Christianity or of the present time. Read the New Testament, or the *Imitation*, or the *Pilgrim's Progress*, or a volume of sermons by Cardinal Newman—you will find in the last, no less than in the others, beautiful and deep thoughts on the emotions of the heart, on love and reverence and tenderness and repentance for sin, on control of animal passions; but of counsel for wise and just action in practical problems almost nothing—and that little usually wrong. I take Newman as the purest and most elevated of the Christian moralists of his age. But during fifty years his practical advice to the citizen as to public action would have been almost always wrong. His morals were connected with a theological Sociology which would have supported theological opinions by force, kept Jews and Dissenters out of Parliament, and in all ways maintained State protection for his own beliefs.

Positive Morals are inseparable from Sociology, just as Sociology is inseparable from Biology and Biology from Cosmology. Free action springing from noble motives and cultivated intelligence in a justly ordered Society—such is the Positivist ideal; and to this all efforts, speculative and practical, are subservient. Morals or Ethics thus viewed is the final science, including all other sciences, as it includes also every one of the arts of life.

¹ See Dr. Bridges' essay on "Man the Creature of Humanity," in *Essays and Addresses* (pp. 65-95).—ED.

5. SOCIOCRACY, BASED ON SEPARATION OF CHURCH AND STATE

Comte, having analysed the structure of Society into its various elements—material wealth, family, language, government, etc.—proceeds to consider in the sixth chapter of the second volume of the *Positive Polity*, the volume devoted to Social Statics, how these elements are combined and how they work together in practice.¹ The three chief forms of association are the Family, the State or City, and the Church. A man is a son, a husband, a father of a family; he is a citizen, he is a member of a church. The question then arises: Which of these is to take precedence, which is most important? Many would answer at once that Humanity must be supreme, that the Church, as the widest form of association, must be predominant, reducing the others to insignificance. This was not Comte's view. The Church, taking the word in its broadest significance, exists for the propagation of ideas and ideals. But man is born by the necessities of his existence to do solid, practical work—and the widest association that can directly co-operate in practical work is the State. Therefore, for practical purposes, the State, the City must be predominant, and the man must be before all things a citizen. It is impossible to give greater emphasis to the *positive* character of Comte's views of life and society. They are before all things real and founded on fact: in this case, the fact that man has to work for his living.

The State, however, in this connection, must not be conceived of as a vast Empire, where, as in India, some thousands of officials dominate—or even as a great nation like Germany, France, or England. Comte was thinking of a political community like Holland or Denmark, where citizens can know something of one another, and work together practically, and develop real civic feeling in their daily intercourse in the workshop, and it may be in the club. We are far from this here, and perhaps London or Birmingham offers a nearer approach to it than the United Kingdom. Gradually, the great centres of life in England and Scotland—Liverpool and Manchester, Newcastle and Leeds, Edinburgh and Glasgow—will gather this kind of civic feeling round them.

The State, then, is the dominant form of association, but it is not the only one. The others are indispensable. Over the State, modifying it, moralizing it, but in no way subverting it, comes the Church. Underneath the State, penetrating each element of it with

¹ The chapter is entitled "Positive Theory of Social Existence, systematized by the Priesthood."—ED.

strong emotions and affections, moulding the character of each citizen, comes the Family. The Church and the Family continue to mould and modify the State; but they will never displace it. The Family gives affections; the Church supplies ideals; but the State supplies each man with the conditions that render his daily work possible, and that is a paramount necessity of life. In the ancient world Rome gave us an imperishable model of patriotism, of common civic action for the good of the Roman State. But the old Roman ideal needs transformation from military to industrial civilization, from the conquest of men to the conquest of Nature, the moulding of raw substance into solid products of use and beauty. In the future, work must be made noble, and between the States of the future noble emulation must take the place of ignoble and wasteful and destructive competition—emulation in making the Earth beautiful, in subduing Nature most effectively, in building houses and temples that shall endure, in rearing strong and vigorous breeds of cattle, in culture of soil, in painting, music, and sculpture. Here lies the field for the patriotism of the future. In the brotherhood of nations one will surpass another in glory.

On this central association the smaller and the larger will constantly rain their beneficent influences, the Family filling the citizen with tender and generous impulses, the Church supplying him with noble ideals, bringing nations into wholesome, self-respecting, friendly contact, dissipating antagonisms and jealousies, ever developing and spreading new thoughts and new ideals of action.

Now, the very essence of a Church is that it should be free. *Libera Chiesa in libero Stato.*¹ A Church that domineers or a Church that is enslaved, neither of these deserves the name. When the Church of Humanity is spread throughout the world, as it may be far sooner than we think, all kinds of religious organizations will go on, very likely, for a long time to come side by side with it, some of them drawing nearer and nearer to it, some perhaps holding out to the last. Positivism will insist that these organizations should have every inch of freedom which we claim for ourselves. So far as they are genuine expressions of human ideals, they will be really working with us under other forms; so far as they are merely obstructive, they are foredoomed to failure.

This, then, is the fifth new feature of the *Positive Polity*—the relation of the three chief forms of human association in the

¹ "A free Church in a free State." The favourite political maxim of the Italian statesman, Cavour.—ED.

Sociocracy of the future, wherein the Family represents Love, and the Church represents Order, scientific thought and poetic ideals, both acting on the State to urge it along the path of true Progress.

6. AFFINITY OF FETISHISM AND POSITIVISM

The words, *Love, Order, Progress*, which we have seen to be so intimately connected with the first five steps, the five new thoughts already spoken of, are still more closely associated with the last two. In the sixth step we see how the Heart intervenes in our conception of the Order of the World through every stage of human Progress; and in the seventh we are taught that a right state of the Heart is even more helpful to Progress than a right state of the Understanding.

The third volume of the *Positive Polity*, which deals with the historic evolution, is full of remarkable thoughts, as, for instance, that all history, from that of Greece to the French Revolution, is a transition from Theocracy to the Positive stage, or, to take another instance, the description of Theocracy itself. But perhaps the most essential thought of all, containing the germ of all the others, is the affinity between Fetishism and Positivism.¹ All the other phases pass away: this endures and will endure: it is the only permanent element of the fictive stage, considered as a whole. The word *Fétichisme* was first used by the President de Brosses in the eighteenth century,² but a recognition of the thing is to be found in Hume's *Essay on Religion*,³ and even earlier.⁴ In its essence it is man's tendency to attribute his own emotions and volitions to the world around him. It is distinct from Theism, for, though the Deities under Theism may be fashioned in the likeness of men, they are not identified with any particular object: they may control a whole class of objects. Astrology, the worship of the heavenly bodies, or of the vault of heaven itself, is at once the highest phase of Fetishism and the transition to Theism. The worship of the heavenly bodies needed a priesthood because of their inaccessibility, their regularity, their universality; and the rise of a priesthood prepared the way for the still more inaccessible Gods. In China

¹ See *Pos. Pol.*, vol. iii, pp. 99, 128-29.—ED.

² C. de Brosses used the word to denote this stage of religious thought, in his *Du culte des dieux fétiches* (1760).—ED.

³ *The Natural History of Religion* (1757). See sect. ii on the "Origin of Polytheism."—ED.

⁴ Vico appears to have been the earliest known writer to give a systematic exposition of the subject in his *Scienza Nuova* (1730).—ED.

this transition did not take place. The Heaven, the Earth, the Wind, etc., are still, with Ancestor-Worship, the basis of the national religion. To some, indeed, the worship of ancestors has seemed to include the whole religion of primitive man, but it is really a particular case of this tendency. To the dead are attributed the passions of the living. The broad result is that unknown phenomena are interpreted by attributing to them human emotion. In practical matters real knowledge, however limited, an incipient Positivism, always dominated; but it was modified by Fetishistic awe, of which we can still see the traces in such words as *religio*, *sacer*, *taboo*.

To Fetishism we trace the beginnings of spiritual government, due to the combination of the instinct of reverence with the instinct of self-preservation. Archdeacon Gray, in his book on China,¹ gives an account of Chinese worship which shows how Fetishism can supply much that Monotheists claim as belonging solely to their religion. He says there are two annual festivals in the third and the ninth months.

Worship is imperative on all classes of society. The prayers to their ancestors are such as those which Christian men present to the God of all good, when they ask that they may receive grace to preserve them safe in the midst of life's temptations, and to prepare them for eternal glory. It is sad to think that the Chinese should be so blinded by the god of this world as to suppose they can obtain from the creature what emanates from the Creator alone. It is usual for them, at any time of perplexity and trouble, to repair to the tombs and consult the spirits of their ancestors. . . . I have several times seen widows weeping by the graves of their husbands; relating their troubles to the dead, and seeking consolation from them.²

To Fetishism we trace also the love of the soil, the *dolce nido* of Petrarch, the first germs of patriotism; the training of animals; the observation of plants.

Fetishism depends on two principles: (a) What touches us nearly moves us to love or fear; (b) In the absence of true knowledge these emotions mould our beliefs. This explains the persistence of Fetishism throughout Polytheism, as seen in the worship of the Nile in Egypt, of the Ganges in India, of Fire in many religions. Even in Jewish life, in the Hebrew scriptures, we see the same

¹ J. H. Gray, *China: A History of the Laws, Manners, and Customs of the People*, two vols.; 1878.—ED.

² *Ibid.*, vol. i, p. 322.

survivals and read of Rachel's gods, High places, etc. In Roman life, too, we find Fetishism still represented by the god Terminus, the Lares and Penates, the fire on the hearth, and the power of words. It survives to modify abstract Monotheism: under Mohammedanism, the Caaba at Mecca is still held sacred; and in the Middle Age we have the honour paid to the Shrines of Saints. And in modern life we see the same feeling surviving in even greater strength, as is shown by the worship of the tomb in sceptical and revolutionary Paris, and by the worship of Nature—of earth and sky—by the painters and poets, by Turner, Wordsworth, and Shelley. Take, for instance, Shelley's *Ode to the West Wind*:—

Wild Spirit, which art moving everywhere;
Destroyer and preserver; hear, oh, hear!

Or Wordsworth's *Lines at Tintern Abbey*, or the skating scene at Windermere in the *Prelude*.¹

Comte's final conception of the relation between Positivism and Fetishism is put forward in his *Synthèse Subjective*.² We are ignorant of the Universe in itself. We only know it as it affects us. Space is but a form of thought; objectively we know nothing of it. In regard to these, Logic of Signs we have none, Logic of Images we have none; the Logic of Feeling alone is left. It is open to us to give way to it, provided we are without any illusion as to the reality or unreality of its conclusions. Under this condition, we may conceive Space as the seat of Destiny, and the Universe as instinct with Love.³

7. CULT BEFORE DOCTRINE: SERVICE WEIGHTIER THAN CREED

The *Synthèse Subjective*, Comte's last work, opens with this passage:—

To subordinate Progress to Order, Analysis to Synthesis, Egoism to Altruism; such are the three statements, practical, theoretical, and moral, of the problem which man has to solve, and by solving to attain a complete and stable unity. Severally peculiar to the three parts of our nature, these three distinct ways of stating the same question are not merely closely connected, but equivalent, by virtue of the interdependence of activity, intellect, and feeling. They necessarily coincide, and yet the last of the three surpasses the two others, as being alone in relation with the immediate source of the

¹ Cf. above, pp. 275-77.—ED.

² See pp. 8-26 of the Introduction; or pp. 6-22 of the Eng. tr.—ED.

³ See on the whole subject of this sixth step the paper on "Fetishism and Positivism" in the next chapter.—ED.

common solution. For Order presupposes Love, and Synthesis can only be a consequence of Sympathy; intellectual unity and practical unity are then impossible without moral unity; thus Religion is as superior to Philosophy as it is to Politics. The problem for man is in the last resort reducible to the construction of unity of feeling, by the development of altruism and the compression of egotism; and therefore improvement is subordinate to conservation, and the spirit of detail to the genius of synthesis.¹

Thus we see that, however important is the question of precedence, we must bear in mind that both Cult and Doctrine still remain essential, even though the first may be of greater weight than the second.

What is Cult? "Worship" is a most imperfect and inadequate rendering of the French word *culte*. Worship suggests almost irresistibly the attitude of petition to a powerful being outside us who is able to grant or refuse our requests. Hence there has arisen a tendency among some Positivists to address Humanity somewhat in the way in which Christians or Mohammedans address God. I think a more careful reading of Comte would have led to a different path. The subject we are now treating is dealt with in the second chapter of the fourth volume of the *Positive Polity*.²

Cult or culture is simply tilth, in its primitive meaning of the artificial modification of the soil so that it may bear better fruit, as in such words as agriculture, horticulture, pisciculture, the first beginnings of Man's modification of the world, the origin of Progress. Carry this meaning a step further to the modifications of our own nature, physical, intellectual, emotional. Of these the last is the most important; the culture of the Heart is central. Cult, then, is culture of the highest thing we have: the Heart within us.

But can we have Cult without dogma or discipline? Can culture of the Heart go on alone? On one hypothesis it could: that the function of nutrition was as easy as respiration. Then there would be no work in the world but Art, and we should live in an eternal Golden Age. This could only be if Man were set free from material necessities. But we have to strive against a hard destiny. The struggle has inevitably strengthened the selfish passions. Man is

¹ *Introduction to the Subjective Synthesis* (1891), p. 1.—ED.

² The chapter is entitled "General View of the Affective Life, or definitive systematization of the Positive system of Worship."—ED.

not born corrupt; but he is born with an immense preponderance of self-love over love of others. And the material situation is still formidable, the intellectual and political still unsettled. We have a distracted Europe and war of creeds. We have modern London and its problems. We have our own idleness, sloth, and selfishness. Under these circumstances, to concentrate our whole attention on the culture of the higher sympathies, to dissociate this from deep study, and from wise political and social activity, would be to build a Paradise of Fools. Mysticism, considered as the culture of the heart apart from intellect and character, deserves severe blame; as much so as the culture of the reason apart from the sympathies.

Besides, if we do not have a care, this culture of the heart alone, this mysticism, defeats its own ends. It leads to barrenness and hardness. Bishop Butler puts it thus:—

And in like manner, as habits belonging to the body are produced by external acts, so habits of the mind are produced by the exertion of inward practical principles: *i.e.*, by carrying them into act, or acting upon them—the principles of obedience, of veracity, justice, and charity. Nor can those habits be formed by any external cause of action otherwise than as it proceeds from these principles; because it is only these inward principles exerted which are strictly acts of obedience, of veracity, of justice, and of charity.....But going over the theory of virtue in one's thoughts, talking well, and drawing fine pictures of it; this is so far from necessarily or certainly conducing to form a habit of it in him who thus employs himself that it may harden the mind in a contrary course, and render it gradually more insensible—*i.e.*, form a habit of insensibility to all moral considerations. For, from our very faculty of habits, passive impressions, by being repeated, grow weaker.¹

Butler's law may be stated thus:—*Practical habits* are formed and strengthened by repeated acts; *passive impressions* grow weaker by being repeated. He adds:—

Resolutions also to do well are properly acts. And endeavouring to enforce upon our own minds a practical sense of virtue, or to beget in others that practical sense of it which a man really has himself, is a virtuous act. All these, therefore, may and will contribute towards forming good habits.²

Passive impressions, then, are positively dangerous, except as they lead to active exertion. The kindling of the highest emotions, accompanied by personal effort, leads to good; unaccompanied by effort, it hardens.

¹ *The Analogy of Religion*, pt. i, ch. v.

² *Ibid.*

This brings us to two conclusions. First, the practice of good works must come before any kind of Cult: to do good is the most powerful of all agencies for feeling good. Secondly, private cult should come before public both in time and in efficiency. It is a necessary condition of the genuineness of public cult. It implies greater effort. It is not, as in some other religions, the mere repetition of prayers. It is a distinct effort to recall the dearest objects of personal affection, to clear away all crust of irritation, to revive pure and sacred memories, to strengthen every feeling of veneration for what is above, of pity and protection for what is below, of warm friendship for what is equal; and with the strength that issues from those sacred impulses to form for oneself an ideal of life, and daily to renew that ideal. This calling up of noble images, this kindling of unselfish sympathies, this purging the soul of ignoble suspicions or mean desires, this framing of an ideal of life, this renewal of the resolution to subdue self-love and to serve Humanity—this, in the Positive meaning of the word, is Prayer. It needs strong effort of the will; it is no series of "passive impressions" growing weaker with each repetition. It is a "practical habit," growing stronger with exercise.¹

Now, of the three forms of Cult—private, domestic, public—Comte, as we know, put in practice the first two; private confessions and prayers, and the Sacraments, the intervention of Society in the events of family life.² The third—public cult—he did not inaugurate. When pressed to institute liturgical forms, he remarked that, till the public mind was better prepared, such a thing would be, like the formulæ of freemasonry, wanting in reality. His successor, M. Laffitte, instituted two public festivals—that of Humanity,³ indicated by Comte as the first of those for which the time was ripe; and the commemoration of Comte's death.⁴

The provisional historical Calendar is avowedly imperfect and temporary—avowedly imperfect because of thirteen months it gives only one to Theocracy, while giving twelve to the transition.⁵ It is a still more serious imperfection that hardly any mention is made of Fetishism, the only permanent part of the fictive era. The

¹ For Comte's account of this subject see *General View*, p. 260; *Pos. Pol.*, vol. iv, pp. 101-7; *Positivist Catechism*, pp. 74-75, 87-89. See also Dr. Bridges' address on "Prayer and Work" in *Essays and Addresses*.—ED.

² See pp. 293-94.—ED.

³ On New Year's Day.—ED.

⁴ September 5, 1857.—ED.

⁵ By "transition" Dr. Bridges means the centuries of recorded history through which the Western world has passed in its transition from the initial Theocracy to the final Sociocracy.—ED.

Calendar had for its primary purpose to penetrate men's minds with the sense of continuity, to show that we are not of yesterday, and to stimulate reverence for the great men who have led us on.¹ But it does not pretend to cover the whole of life. It is thus important to make ourselves familiar with the abstract and permanent Calendar. This, like the other, consists of thirteen months, divided here into three groups. The first six months represent the bonds that knit society together—Humanity, Country, City, and the Family in all its relations. The next three months commemorate the preparatory stages of Humanity—Fetishism, Polytheism, Monotheism. The last four are devoted to the normal functions of Humanity—Womanhood, the Priesthood, the Direction of Industry, Labour. The abstract, like the provisional Calendar, ends with the Day of All the Dead, to which is added in leap-years the Day of Noble Women.² Now, it is hard to see what aspect of Humanity is here left out. We have a series of eighty-one festivals, in some weeks—one, in others—two, giving a complete picture of the whole organization of life at which Positivism aims.³ We have the central conception—Humanity. We have the family tie very copiously insisted on. We have the long struggle of Humanity through infancy and youth to maturity; the strife of creeds, the rivalry of nations; the long, painful transition from theology to Positivism, from the civilization founded on war to the civilization founded on work. In this struggle every brave toiler has his place, on whatever side he fought; the castes are glorified, and the Greeks who broke through caste; Scipio who conquered, Hannibal who succumbed; Mohammed and Saladin on one side, Godfrey and Saint Bernard on the other. Finally, we have the permanent action of each representative of Humanity—Womanhood, the moral providence; the Priesthood—including thinkers, artists, even the wise, experienced old men of a country village—the intellectual providence; the Directors of Industry, bankers, merchants, manufacturers, cultivators, superintending the production of the world; and the Proletariate, the vast working class, bringing their practical experience of the hard facts of life, keeping all the rest in the grooves of reality and common sense, and throwing out from their body men

¹ See p. 62 (note 7). For Comte's account of this historical Calendar see *Pos. Pol.*, vol. iv, pp. 346-50; also *Appeal to Conservatives*, pp. 174-76.—ED.

² For Comte's explanation of the abstract Calendar see the *Positivist Catechism*, pp. 100-12, and *Pos. Pol.*, vol. iv, pp. 116-38. Both of these Calendars will be found in the pocket edition of Tables mentioned on p. 167 (note 1).—ED.

³ The reader will find a more detailed description of these festivals in the paper on "The Day of All the Dead" in the next chapter.—ED.

like the Arkwrights, the Cromptons, the Jacquards, the Stephensons, or again poets like Robert Burns, or naturalists like Edwardes, or enthusiasts like Saint Francis, to correct the narrowness or the pedantry of the recognized authorities by native wit and untaught wisdom and energy. I say that in this conception of the Positivist cult there is a vivid, palpable, synthetic mode of implanting the vital truths of Positivism into heart and head alike, of making them part of the very fibre of our being, which transcends infinitely all that the best and clearest systematic teaching could do. It is for this reason that Comte summed up the whole of the fourth volume of the *Positive Polity* in the conception that in Positivism the Cult stood before the Doctrine.¹

And, indeed, this final seventh step sums up all the others. Humanity; the Subjective Method; the picture of the Functions of the Brain; the supremacy of Ethics; the Sociocratic State, moralized by the Family and guided by a free Church; the permanent alliance of Fetishism and Positivism—these are all contained in this final truth, the precedence of the Cult, conceived as Comte conceived it, over the systematic Doctrine. The Doctrine is necessary, let me again repeat. Without the systematic intellectual teaching mapped out for us by Comte, and continually growing with the growing years, we should lose firmness and clearness of conviction, we should give way here, we should wander into extravagances there—the Doctrine is a systematic appeal to the Intellect to recognize the ascendancy of the Heart and freely to devote itself to the Heart's service. But the Cult is an appeal to the whole nature of man at once—an appeal to bodily sense, to deep thought, to strong emotion, in order that the whole man and the whole community may act together for the service of Humanity.

¹ See *Pos. Pol.*, vol. iv, p. 459. Consult also pp. 76-81 of the same volume.

CHAPTER V

THE RELIGION OF HUMANITY—*continued*

V

SYMPATHY AND SYNTHESIS

IF I had to choose among the chapters of Comte's *Positive Polity* that which was most original, or at least most distinctive of a teacher of a new way of life, I should point to the first chapter of the second volume.¹ No doubt scanty justice is done to any section of this work by separating it from the rest. Yet it seems to demarcate the writer more definitely than any other—not merely in philosophic method, but in temper of mind, in tone of feeling, in the standpoint from which he looked on life—from any teacher that the world has seen. I well remember its falling in my way at Oxford forty-five years ago.² I had not read any of Comte's writings before, and this no doubt may partly account for the depth of the impression made. But every subsequent reading has made it deeper.

What was there to explain the strange fascination of those pages? Assuredly it was not due to their literary qualities, for these at first reading were singularly unattractive. Ornament, wealth of illustration, rhetorical devices of any sort or kind, there were none. A patient and persistent reader became gradually conscious of condensed thought expressed in language almost wholly free from technical terms; but, on the other hand, it was abstract in the extreme, and the reader felt that the transition to the concrete was left to be effected by special efforts. But what was new, what was profoundly impressive, what marked the teaching from that of other philosophic or religious treatises, was the combination established, in ways consistent with modern thought, between Sympathy and Synthesis. Nothing of the kind had been attempted before; and, amid all that has been written on the subject since, it still seems to me to stand alone. Observe that I lay stress on the

¹ Entitled "The General Theory of Religion; or, the Positive Theory of Human Unity."—ED.

² Written in 1898.—ED.

words *consistent with modern thought*. Attempts to concentrate the emotions and thoughts of men on a supreme and central object have abounded in the world's history. Every form of religion is such an attempt; the most effective by far hitherto having been the Catholic Church of Western Europe in the thirteenth century, as portrayed in the *Summa Theologiae* of Aquinas and the *Vision* of Dante. But though Aquinas is still studied by many, and the *Paradiso* of Dante has probably more readers now than in any previous time, it is a truism to say that the modes of belief of these two thinkers are no more our own than are those of the Homeric poems. What we have in common with Dante is doubtless more important than our points of divergence; and the same may be said of Homer. But the divergence is vast. Try to imagine a modern poet glorifying an eternal hell. "The Divine Power made me, the Supreme Wisdom, and the Primal Love. Before me were no things created save those that are eternal, and I eternally endure. Leave all hope aside, ye that enter here."¹

Or, if the words of a poet are to be treated as parable—though Dante's parables were always built up on a rigid substructure of literal fact—what can we say of Aquinas's systematic explanation of the coexistence of eternal evil with omnipotent wisdom? "Since God is extremely good, he could never suffer evil to exist in his works unless he were so all-powerful that he could bring good even out of evil. It belongs, therefore, to the infinite goodness of God that he should allow evil things to exist, so that out of them he may extract good things." And it need not be said that he was at one with Dante in believing that evil things were of eternal duration. I repeat that belief in an omnipotent permitter of *eternal* evil is absolutely alien to modern ways of thought and feeling. Nominally upheld, it is in fact rejected by the most religious of the worshippers of God. Can any woman be found who will say that she fully and sincerely accepts it?

For these and for other reasons the monotheistic synthesis of the Middle Ages collapsed. Destructive inroads had been made upon it two centuries before the times of Luther and Calvin. Orthodox Protestantism was followed by the deism of Socinus and Voltaire, and this again by the various phases of pantheism, materialism, and agnosticism so familiar, and, it may be added, so wearisome, to most rational thinkers, to say nothing of the vast mass of men and women occupied with the practical business of life. Of these a large number

¹ Dante, *Inferno*, canto iii, 1-9.—ED.

are deeply interested in religious questions. But most religious people make a broad and deep distinction between religion and theology. Not that they repudiate explicitly any article of theological faith; on the contrary, most would rally round it, if attacked, as soldiers round their flag; but in the absence of such a crisis they have grown practically indifferent to all articles of belief, whether of the Church of England or any other. Where do we find the most strenuous religious enthusiasm at the present moment? Evidently among the high Ritualists and in the Salvation Army. The indifference of both to systematic theology is notorious. Their religion is mystical, in the strictest and most respectful sense of that word. It affects their inward emotions: the belief inspired by it is often of the vaguest kind. It has sometimes, though not always, a very powerful influence on their conduct; but on their conduct as individuals rather than as citizens. Public action requires definite principles—in other words, a dogma, a theory of life; and these things they have not. They hold with St. Francis, Thomas à Kempis, Molinos, Madame de Guyon, Bunyan, George Fox; not with St. Dominic, Aquinas, Calvin, or Knox. In a word, their religion is Sympathy without Synthesis; they choose Love rather than Light. And if one of these must be rejected, it cannot be denied that they choose rightly. But that it should be needful to choose at all—there lies the tragedy. To the purity and devotion of their lives, to their efforts to lighten the load of suffering on victims of the struggle for existence, to their rescue of individuals from physical or moral peril, let those who cannot share their labours at least pay a due tribute of respect, and let them do likewise when and where they can. Yet none the more can we help seeing, by the light of each year's experience, how powerless all mystical religion is and must be in handling the stupendous problems which are now threatening the fabric of man's civilized existence. First among these is the labour problem, formidable throughout the nineteenth century: more formidable in recent years, now that it has become the principal stimulus to the rival rapacities of Western nations in their contact with the civilizations of the East.

Turning from religion to the other great spiritual force of our time—science—the outlook is not more satisfactory. A suspicion has been widely diffused of late that science, with all its astounding applications to industry and commerce, has done much to raise new social problems, but next to nothing for their solution. Comte's supreme contribution to special science, his foundation of sociology

in the years 1822-42,¹ is obtaining every day wider acceptance from European thinkers. But hitherto most of them have made a wrong use of it. Accepting the principle that sociology had a biological basis, but ignoring the equally important truth that sociology had inductions of its own with which biology could not interfere, they have twice in the nineteenth century—first in the case of the Malthusians, and again in that of the Darwinians²—distorted an undoubted biological fact into a principle of political action. Men born two generations ago remember how hard a struggle it was to break through the trammels of the old political economy, and how those who took part in it were met with the taunt of fighting against the laws of nature. The new statesmanship, based on one-sided deductions from truths of natural history indicated by Darwin, has still to await a similar reaction; and, till it comes, bitter results will follow. On the whole, it has to be owned by those who look, as does the present writer, to science as the foundation on which the future of civilization must rest, that modern science, splendid as its achievements have been and permanent as is their value, has done hitherto as much to promote social discord as to prevent it.

What explains so startling a paradox? It is that so few teachers have arisen who have attempted any tolerable Synthesis of scientific truth; few, indeed, who can be brought to recognize that it is worth attempting. Be it understood that by "Synthesis" is meant not a mere bringing of various truths into juxtaposition, as in the pages of an encyclopædia or in the annual report of the British Association. It is far more than this. It implies the recognition that, while no scientific conclusion is unimportant, the importance of some is far greater than that of others. It implies a co-ordination, a hierarchy of the sciences. This was the purpose of Comte's *System of Positive Philosophy*,³ and it will be seen that two things were involved in it. First, his intention could not have been carried out but for his discovery that the facts of human society and human conduct were not less amenable to scientific method than the facts of number, of form, of motion, molar or molecular, or of living

¹ In 1822 Comte's famous essay appeared, entitled "A plan of the scientific labours necessary for the reorganization of society." It contained the first statement of the Law of the Three States and the exposition of Social Physics as a distinct and independent science. In 1842 the last vol. of the *Phil. Pos.* was published, with the concluding chapters of the Social Philosophy.—ED.

² A full exposition of this point will be found in the chapter on "Politics and the Darwinian Theory" in Part IV.—ED.

³ The title of Comte's philosophical work was *Cours de philosophie positive*, but in later years he spoke of it as his *Système de philosophie positive*. See note on p. 1 of *General View*.—ED.

bodies. Secondly, it followed, this discovery once made and recognized, that this new science must take its place as the supreme and central science. In other words, it became the keystone of any true scientific Synthesis. So far-reaching a proposition must obviously be left for future treatment. Let it be assumed for the moment as proved, and see what follows. If the study of Humanity comes to be regarded as the supreme object of intellectual research, not superseding other departments of work, but stimulating them and inspiring them with new life; and if, while this philosophic change is proceeding, the emotions and aspirations of mankind be directed no longer towards an incredible divinity, the omnipotent permitter of evil, but towards the supreme Love, the foe of oppression and injustice—the champion through the ages of the suffering and the downtrodden, whom Positivists call “Humanity” and mystics call “Christ”; if such a revolution as this take place—and perhaps even now it is silently going on—then the religion of the future may be nearer than most men dare to hope.

Thus Comte's doctrine reconciles, as no other doctrine known to me reconciles, Sympathy with Synthesis. In the Catholic system, as set forth by its great doctors, notably by Aquinas, we have the nearest approach to it. But intellectually that system fails to satisfy the conditions of modern thought; and the moral failure is hardly less striking than the intellectual. By the best women of our time, no less than by the best men, essential parts of it are practically rejected. This sounds paradoxical, since among the best women I count many whose orthodoxy is unchallenged, and whose devotion in every sense of that word is beyond dispute. Yet it is true nevertheless. Their point of view has changed without their knowing it. They no longer believe in an omnipotent permitter of eternal evil. Old words remain; but in reality the first person of the Trinity has passed out of their ken, and their thoughts are fixed on the second. Their faith in Christ—by which I mean not a cold Unitarian belief in the man Jesus, but faith in a superhuman friend and defender of the downtrodden, living and working from age to age—is as strong as ever, in some ways stronger. But the Christ they worship is more akin to the Humanity of the Positivist than to the God of Aquinas or of Dante. And in the worship of the Virgin, so operative in southern Catholic countries, so beautifully depicted in Manzoni's novel,¹ and now in course of revival in the Anglican Church, their approach is even nearer.

¹ *I Promessi Sposi* (1825-27). *The Betrothed* is in the first section of the Positivist Library.—ED.

Obviously, religion of this kind, beautiful in all the aspects of private life, fruitful in good works, in tenderness, in purity, in self-control, in compassionate and delicate thought for the sick and suffering, is not all that is needed. It is much, but not enough. It does not deal effectively with that vast order of things in which men have to act together. Of the social and political field it leaves the greater part untouched. Admit—and it would be gross injustice to deny—that it purifies and ennobles individual conduct. Can it be maintained that it does as much for public life? Can it claim to make clearly and definitely for political righteousness? I shall be told of the many efforts of public philanthropy which Christianity has inaugurated, from the emancipation of serfs in the Middle Ages to the setting free of slaves, white or black, in our own day. There is truth in this, though some reserves are to be made. Not all these things were begun by the Church; not all have been done wisely. Some of them have served as cloaks for iniquitous aggression—without the assent of the promoters, indeed, but also without their resistance. Are we sure that pity for the Swazis will not be used by interested statesmen and financiers as an engine of aggression against the Transvaal? In public life, even more than in private, justice should take precedence of generosity; and the first needs more thought, and is less involved in self-deception, than the second.

To sum this up in a word, what is best and purest in the theological religion of our time is Sympathy without Synthesis. That the majority of men and women in Europe and America call themselves Christian; that in a minority of these, yet still a notable minority, what they believe operates for good on their private conduct—this is surely obvious. Equally obvious is it that Christian theology, as a scheme capable of guiding public action, has broken down. Beneficent as it often is in private life, it fails utterly in public. Applied to political action, and above all to action between the nations, it is sometimes barren, sometimes chaotic and subversive, sometimes a cloak for conspiracies of the strong against the weak. To stir vague sympathies is not enough. What we want is useful guidance towards the attainment of man's highest hopes, the establishment of peace and justice on the earth. And this theology does not supply.

Does Positivism hold out a better prospect? Looked at from the moral side, the answer cannot be doubtful. Positivism concentrates thought, feeling, and effort on the highest interests of man—those that relate to the Family, the Fatherland, and Humanity—

with the purpose of making human life on this earth more noble and more just. Few will deny that the assemblage of the brave, the loving, and the wise who have worked for us through the past, and who shall arise in a future yet unborn, stirs our deepest reverence and kindles our purest hopes. Once explain what Positivism means—that the Religion of Humanity means the Service of Man—and the *sympathy* aroused by it admits no further question. But what of it as a *synthesis*? In other words, do we gain from it, not merely enthusiasm, but guidance?

Some of the critics of Positivism have thought its emotional side so unduly prominent as to throw the intellectual into the background. As Spinoza was called by Novalis "God-intoxicated," so Comte was spoken of by Mill as "morality-intoxicated." We have, therefore, to ask ourselves: "Would the triumph of the Religion of Humanity involve a narrowing of human interests, like that which took place between the fifth century and the fifteenth?" For, although the restriction of intellectual progress during the Middle Ages was far less rigorous than is commonly thought, no one can deny that it was real. It was the price to be paid for ethical progress of transcendent importance—a high price, though not too great. Yet the prayer of everyone who cares for the future of mankind must be that it shall not be required again. Were it otherwise, many would echo the prayer of Ajax: "Give light, and let us die!"

Put in other words, the question is: "Does the philosophy known as Positive embrace all that is of real interest to mankind? Would its acceptance slacken, or would it stimulate, intellectual progress?"

The answer would need a volume; but the outline of the answer may be given in a few words. In the Positive Synthesis the final object of study is human nature and human activity—Man and his Work. Therefore one of the first questions to be asked about it is this: Does the study of human nature conducted in the Positive spirit tend to throw other studies unduly into the background? It will be found that the result is exactly the reverse of this. Positive method applied to the investigation of human nature and society tends to give new life to the other sciences, and to indicate new fields of research of which nothing hitherto had been heard or thought. Let us see if this be so.

Moral science, cultivated by the methods of metaphysicians and theologians, is obviously not stimulating to biological and physical research. It stands wholly aloof from these; and if all our mental energies were given to it, physical science would be discouraged and

neglected, as in the Middle Ages. Roger Bacon, Grosseteste, and a few others, were but exceptions to a general rule. But in the Positive Synthesis such exceptions become the normal type. Positive study of man and his work implies scientific investigation of man's surroundings, social, biological, and physical. Comte's remarkable conception of the *milieu*, well translated by Mr. Spencer as *environment*, included every force of whatever kind acting on an organism. Man's action—his conduct—is not action in a vacuum. He is a member of a given community, the members of which belong to the highest order of animals. How much of man's nature, as we now see it, is due to his historical evolution in the social state? How much to his position as a highly organized vertebrate? Here lies a vast field of research, which the best minds have hardly begun to cultivate. Yet the importance of it is manifest. One of these two sets of conditions is evidently less modifiable than the other. For instance, man may, and probably soon will, abandon the military state and content himself with aiming at the peaceful subjugation of his planet. Yet, though he may leave off the business of soldiering, the instinct of anger will never be rooted out till the circulation of his blood ceases. So much by way of illustrating the close connection of Positive Ethics with the sciences of sociology and biology.

On the chemical, physical, and astronomical conditions of life it is hardly needful to dwell. Comte has reminded us of Milton's bold fiction that after the Fall of Man the angels were ordered to change the inclination of the earth's axis upon the plane of its orbit, as an indication of the dependence of man's life on astronomical relations. How deeply astronomical discovery has touched the beliefs and institutions of mankind is obvious to the most elementary student of the evolution of thought and society. From whatever point of view we look at it, we shall find that the study of human nature, when carried on in the Positive spirit, is the keystone of a Synthetic Philosophy. It embraces every subject of human interest; the microcosm involves the macrocosm. Again be it repeated that of man as an isolated object of academic study there is no question here. The aim of the Positive Synthesis is to throw light on Man and his Work; on man set free from supernatural fears and from the vile craving to subdue his fellow men, striving to amend the imperfections of his nature, thankfully accepting the gifts of beauty and affection which life affords, resigned to its sorrows, and without other ambition than to render the earth a fitter dwelling-place for those who shall come after him.

VI

THE POSITIVIST CATECHISM

WHICH is the book—or is there any?—in which the elementary principles of Positivism are explained in moderate compass, and in simple language which any ordinary reader to whom the subject is quite new can easily follow? Perhaps there is none that fulfils all the conditions completely. To a student prepared to devote some time to the subject I should advise perusal of the earlier works of Comte, reprinted as an appendix to the *Positive Polity*,¹ and published lately as a separate volume by the Paris Society at 10 Rue Monsieur-le-Prince.² Written some years before his *Philosophie Positive*, and in an easier and more attractive style, they bring into prominence what in that work remains in the background—the constructive aim which occupied his whole life; the restoration of moral government on the basis of human science. Two things in this series of short treatises stand out clearly. First, that every orderly society requires for its maintenance some form of spiritual, no less than some form of State, government. Secondly, that social and moral facts are under the dominion of natural law no less than the facts of the world around us, organic and inorganic. To bring sociology into line with biology and physics is shown to be the first condition of establishing moral order; because, once this result obtained, the same trust can be reposed in scientific teachers of politics and ethics as is already yielded to scientific teachers of astronomy and chemistry. In old times the planets were believed to be moved by divine agencies, and thunder indicated the wrath, or, it might be, some other message, of a deity. Step by step the facts of nature have been shown to follow an orderly process that can be more or less precisely foreseen—the simpler facts first, afterwards the more complex. With the subjection to scientific law of man's political and moral life the main problem is solved, the foundation of the new and permanent Order is laid.

Many would be more attracted by these early works of Comte than by those of his maturity. They are written, as has been said, in a more flowing style, are less abstract, and are more copiously illustrated by examples than those of later date. The fifteen years

¹ *Pos. Pol.*, vol. iv, pp. 491-653.—ED.

² The Eng. tr. has also been published in a separate form entitled *Early Essays on Social Philosophy*. See above, p. 95 (note).—ED.

from 1828 to 1842 were occupied with his *Positive Philosophy*. Not, however, that he abandoned then or at any other time the attempt to present his principles in popular form. During all these years he was delivering a course of lectures on Popular Astronomy, to which was prefixed an elaborate *Discourse on the Positive Spirit*, published separately in 1843, and printed also in 1844 as an Introduction to the *Astronomy*.¹ Comte held very strongly that logical principles could not be effectively taught apart from their application. In many ways astronomy seemed to him a model science for the illustration of Positive principles. It was more perfect than any other; the facts contained in it were more amenable to precise prevision—the crucial distinction of science properly so called from mere learning and erudition. Its historical reaction on the movement of European thought had been singularly marked. Some of the best of Comte's disciples were drawn to him by this course of teaching, notably Fabien Magnin. It must, nevertheless, be admitted that at this period of his career Comte was too fully occupied with the intellectual side of his teaching to make it possible for the political and moral side to be adequately presented.

In 1845 a crisis in his personal history roused strong emotions,² which, while lending new force to his intellectual and social ardour, revealed aspects of life, of individual life especially, which he had hitherto passed by. Then came the great earthquake of 1848,³ a significant reminder of the unstable foundations on which European society rested. Under the influences of this stormy time appeared Comte's *General View of Positivism*,⁴ afterwards prefixed to his *Positive Polity*. Little need be said here of this work, which has been widely circulated by the Positivist Society of Newton Hall.⁵ It presents Comte's synthesis for the first time as a message not merely to philosophical students, but to all men and women of Western countries. It takes cognizance of the vast modifying force exercised by women through the family upon the social fabric. It appreciates the labour question as the principal problem for states-

¹ See above, p. 216 (note).

² Comte's intimate friendship with Madame Clotilde de Vaux commenced in April, 1845.—ED.

³ Dr. Bridges refers to the general democratic movement which took place in Europe at this time, characterized in France by the abolition of the monarchy and the establishment of the second Republic.—ED.

⁴ *Discours sur l'ensemble du Positivisme*, 1848. Eng. tr. by Dr. Bridges entitled *A General View of Positivism*; 1865. 2nd ed. in 1880 (Reeves and Turner). Also published by Messrs. Routledge in their New Universal Library (1908).—ED.

⁵ Written in 1897, when this Society still met at Newton Hall.—ED.

men; but as one which statesmen cannot solve unaided, since the solution needs a deep change in opinion, guided by thinkers capable of scientifically estimating the forces of modern life, and thus of forming a true conception of the path of progress. References to contemporary events sometimes perplex the reader. But on the whole it must be regarded as the best introduction to the study of Positivism for those who approach it from the outside. For those who have already accepted its fundamental principles, and wish to find them gathered together in a small compass, the book I have next to speak of will be found more useful, in spite of what very many readers will regard as a most unattractive mode of presentation.

The *Positivist Catechism*¹ appeared in 1852, four years after the *General View*; the first volume of the *Positive Polity* had appeared in the previous year. Most people think of a catechism as a series of short questions and answers. But this work is in the form of dialogues between a priest and a woman—a form notoriously repellent to Protestant imaginations, and not much more acceptable in Catholic countries. We need, indeed, to be constantly reminded that the priest in question is not a young Seminarist endowed by his Church with supernatural powers, but a married man of mature age, claiming no prestige except such as may follow from proved education and character. Indeed, the correspondence of Euler with a German princess on mathematical and physical subjects² gives in some respects a more adequate notion of Comte's purpose than the title of the work would convey. Comte's life was lonely, and his surroundings had not tended to give his genius a dramatic turn; so that, looked at artistically, the dialogue differs far too little from monologue. But obviously such criticisms are quite secondary.

What is really important is that the *Positivist Catechism* is the completest view within a short compass of Comte's principles and scheme of life. Looked at philosophically, it has three distinct advantages over any previous work. 1. *La morale*, the science of human nature, for the first time takes its place at the summit of the scientific scale, as distinct from Sociology, the science of the structure and evolution of society.³ In the *General View*, as in the *Philosophie Positive*, only six sciences are spoken of—Sociology,

¹ *Catéchisme Positiviste*. Eng. tr. by R. Congreve, entitled *The Catechism of Positive Religion*; 1858. 2nd ed. 1883 (Trübner and Co.).—ED.

² *Lettres à une Princesse d'Allemagne sur quelques sujets de physique et de philosophie*; 1768–1772.—ED.

³ Cf. above, p. 321.—ED.

Biology, Chemistry, Physics, Astronomy, Mathematics. Sociology included Ethics implicitly. But in the final science of Ethics our attention is concentrated, not on Humanity, but on man as the product of Humanity, contrasted with man the pre-historic savage. Attaining the best possible government and political organization, we have not yet reached the goal. Man was never governed better than in the age of the Antonines, but the individual product left much to desire. What is the individual man or woman, is the final question; what the standard of purity, truth, and courage; what the capacity for the highest intellectual and social ideals? Comte never lived to finish his two projected works on the Theory of Human Nature and on the Art of Education conceived as a process lasting from birth to old age.¹ But the germs of his thoughts on these subjects are more visible in the *Catechism* than in anything written previously.

2. In the *Catechism* we find the first methodical statement of Comte's psychology, as set forth in his *Tableau Cérébral*, or schedule of the functions of the brain.² Correcting the crudities of Gall's work on the same subject by his philosophical insight into the complex combinations of elementary passions framed during man's historical development, Comte has here supplied an instrument for the study of human nature that can be handled by every intelligent observer; all the more effectively if unversed in the subtleties of the schools. The supreme problem of human life, the harmonious working of the self-regarding passions under the control of those that prompt to the love of others, assumes thus a definite and palpable shape that no other mode of presentation could have given to it.

3. The last two dialogues of the *Catechism* are devoted to a History of Religion—an anticipation, in fact, of the philosophy of history contained in the third volume of the *Positive Polity*. No words are needed to point out the value of this admirable condensation, in less than sixty pages, of the "History of Humanity from Fetishism to Positivism."

On the purely philosophical side, then, there is much in the *Positivist Catechism* which is not to be found in previous abridgments of Comte's works. It differs from them yet more obviously in the definiteness with which his thoughts on religion and on the organization of individual no less than of social life are presented. Religion is distinctly defined as "the state of complete unity in personal and social life resulting from the convergence of all its

¹ Cf. pp. 166-67.—ED.

² See above, p. 167 (note).

functions, moral and physical, to a common purpose."¹ It is pointed out that this state is an ideal towards which we may continually approach, but which can never be attained; and that the various creeds that have prevailed among men are so many attempts, suited to time and place, to reach it more or less perfectly.

Take another fundamental point. The pupil in the third dialogue asks the master, What place can prayer have in Positive Religion? Comte replies that such a void, if it were real, would be fatal. Prayer, he continues, is the most essential element in every form of religion.² In Positivism prayer is purified from every trace of the self-regarding taint which too often clings to it in theological systems. It does not consist in petition. It is the formation and daily renewal by love, by meditation, by spoken word, of our ideal of life. Since the surroundings and experience of every one of us are so different, it is plain that the forms which such meditation may take are infinitely various. No human lot is so destitute as to have in it nothing to love and to cherish. Positivist prayer consists in reviving such personal affections, in strengthening and purifying them, as the strongest stimulant to social service.³ Doubtless the formation and the constant renewal of an ideal is itself the first step to its attainment; and in this sense it may be truly said that there is an answer to prayer. But from all material taint, all hope of personal advantage, Positivist prayer is, as the best Christian and Mohammedan prayer has long been, absolutely free. It should be added that, until the habit of such personal devotion should have become sufficiently confirmed and extended, it was Comte's view, constantly repeated throughout this work, that all attempts to organize public ceremonial must be premature and abortive. He carefully abstained himself from any attempt in this direction. Though some of his disciples have gone beyond the master in this respect, it may be doubted how far they have advanced the cause of Positive religion by doing so—whether they have not diffused a sense of unreality over something which to Comte himself was intensely real.

In the third part of the *Catechism*, Comte puts forward his vision of the future organization of society. None but the blindest adepts can refuse to admit that he was entirely mistaken as to the time needed for its realization. When he wrote⁴ the abolition of war between civilized nations seemed within easy reach. The

¹ *Positivist Catechism*, p. 34.—ED.

³ Cf. above, p. 330.—ED.

² *Ibid.*, p. 74.—ED.

⁴ 1852

forced union of Italy, the struggle of Prussia with Austria for ascendancy in Germany, the disastrous duel between Germany and France, lastly the throwing open of Africa to the reckless rivalries of colonial ambitions, were things unforeseen. Each and all of them have helped to adjourn the peaceful organization of Western Society for many a long year. Nevertheless, this vision of the future is not merely of great literary and philosophical interest, but of extreme practical value, to those who know how to interpret it. Comte has claimed for Utopias a definite place among the methods of the sociologist.¹ Rightly constructed, they present truths hitherto unaccepted with a vividness that no abstract exposition could equal; enforcing thus, to use Comte's language, the logic of signs with the logic of images and the logic of feelings. With a definite conception of the future constantly held before us, action in the present is kept steady, and is swayed less by the glamour of contemporary passions. It has not turned out to be true that the end of the nineteenth century would see France divided into seventeen republics; Ireland, Scotland, and Wales in the enjoyment of Home Rule, and Western Europe converted into an assemblage of sixty independent States. All this seems wild enough to the enthusiast for modern Imperialism. Yet, to the student of history who remembers how within a few decades the Empire of Charlemagne, or most of it, melted away into small feudal States, it need not be incredible that the empires of the nineteenth century should have no longer date. The wiser among modern democrats are beginning to see that if the citizen is not to be overridden by State officials, military and civil, the State must be of moderate compass.

Similarly with education. At present the tendency of reformers is to hand over education in all its grades to the State. They fail to see that this new State-Church which they are building up so proudly will one day become a formidable danger to spiritual progress, by stereotyping the views of the average man, and thus discouraging the propagation of new truth; since truth, in the first instance, is always held by a minority. If education is to be worthy of the name, it must be carried on by volunteer associations independently of State control. There was a time when the progressive party recognized this truth. But the temptation to use the forces of the State for overthrowing the institutions of their adversaries has been too much for them. Comte's picture, wholly Utopian at present, of the organization of education by a body unprivileged

¹ See *Pos. Pol.*, vol. iv, pp. 239-45, 266.—ED.

by State monopolies, wholly free from official trammels, and kept fresh and strong by the constant presence of rival efforts, opens out the full range of what may be done in the future to compensate the inequality of human lots by diffusion of the highest culture, to organize resistance to material oppression, and to promote every form of spiritual progress.

The *Positivist Catechism* is not the most attractive portal through which to enter on the study of Positivism. But for those who have already studied it, it is the best condensation in a short space of Comte's teaching.

VII

IS POSITIVISM A SECT?

WHAT is a sect? The first dictionary I open tells me that it means "a body of persons united in tenets, chiefly in philosophy or religion, but constituting a distinct party by holding sentiments different from those of other men." This definition, I suppose, will generally be accepted as a fair one, so far as it goes, and at least it may be taken as our starting-point. It implies a minority living in the midst of a majority which holds other views, and which is either indifferent or hostile. The doctrines advocated may be foolish and false, or they may be wise and true. Again, they may have a short life or a long one. They may pass away rapidly into obscurity, or be destined for durable and wide dominion. How this will be in each case the event alone can answer. Christianity was a sect in the days of Tacitus and Trajan. Islam was a sect, and a very small one, at the date of the *Hegira*. Of the sects which have perished either by natural decay, by persecution, or by incorporation into those that have survived, the record is very long, though of necessity imperfect.

The definition here given speaks only of tenets in philosophy and religion. But it will hold good, with an important qualification to be indicated later, of the history of science. In 1543 Copernicus revived the hypothesis advocated two thousand years earlier, perhaps by Pythagoras, certainly by Aristarchus of Samos, of the earth's rotation and orbital movement round the sun. He worked out the hypothesis in detail, and brought forward many new arguments in support of it. But he fell so far short of demonstration that many subsequent astronomers—one at least of whom, Tycho Brahé,

possessed genius and knowledge far surpassing his own—were unable to accept the theory. For at least two generations the Copernicans may be regarded as a sect. They were a minority in the scientific world of their time, and many of the arguments which they brought to bear against the very strong considerations that told the other way were unsound, and even sophistical. Not till Bradley's discovery in the eighteenth century of the aberration of light can the theory of Copernicus be said to have been really demonstrated.¹ During a large part of this long interval students of the science were influenced partly, no doubt, by their own independent powers of observation and judgment, but also partly by considerations not purely intellectual. Reverence for a stronger mind with which they had been in contact swayed some. Others—and perhaps, whether they knew it or not, all—were bent in varying degrees towards one or other conclusion by their estimate of the social results to which either might lead. It would be easy enough to find other instances in which the spirit of sect has made itself felt in the history of science, sometimes with retarding, sometimes with stimulating, results. In the history of medicine, which, though not a science, is an art striving to found itself on science, sects have abounded, and the spirit that prompts them is very far from extinct. Evolution controversies, during the last hundred years, afford like examples. Readers of Eckermann's *Conversations with Goethe*² will remember the enthusiasm of the philosophic poet at the contest between Cuvier and Geoffroy de Saint-Hilaire in July, 1830, while the so-called Revolution of that date was going on, which last he, in common with Comte, thought of minor importance.³ Contemptuous opposition was shown by the scientific world of that time, and for nearly thirty years afterwards, to evolution theories of all kinds, and notably to those of Lamarck, and to the popular and doubtless crude exposition of Lamarck in England (*Vestiges of Creation*).⁴ At the present time,⁵ more than a generation after Darwin, we may witness much in the opposition between those who deny and those who assert the possibility of the inheritance of acquired characters, which may without offence be regarded as sectarian, in the sense in which the word is here used—namely, the mixture with purely

¹ See on this subject the biographies of Copernicus, Tycho Brahé, and Bradley in the *New Calendar of Great Men*.—ED.

² *Gespräche mit Goethe*; 1836-1848.—ED.

³ The contest alluded to was a famous controversy in the Paris Academy of Sciences on biological evolution.—ED.

⁴ R. Chambers, *Vestiges of the Natural History of Creation*; 1844.—ED.

⁵ Written in 1901.—ED.

intellectual processes of impulses not purely intellectual. Happily for the world, the scientific student, generally speaking, is no "algebraic ghost";¹ he has feelings and passions like the rest of us. Of the feelings roused in this, as in every other, department of human activity, some may be more potent, but none more honourable, than the respect felt by a younger or less skilled worker for the greater experience or intrinsic superiority of a colleague. Such ascendancy of a stronger mind over a weaker is inevitable. It has always existed; it will exist to the end of time. It is as much a law of nature as the law of gravitation. Like every other function and organ of man and society, it has been abused in the past, and will doubtless be abused in the future. Such abuses may and will be corrected more completely as time goes on. Meantime the use will be, as it has always been, overwhelmingly important as compared with the abuse. Without reverence, as wise men of old times and of our own time have told us, man's life would not hold together for a moment, and would not be worth trying to hold together. That other and baser elements enter but too often into the sectarian spirit is certain—mean jealousies, Pharisaic self-esteem, and all the foul growth of envy and spite that Browning has painted in his *Spanish Cloister*.² But this is merely to say that man is man. *Qui vitia odit homines odit*. It is bad to have evil passions, but worse to be passionless.

It would seem, then, that the sectarian spirit is not likely to disappear altogether within any future that we can foresee, springing as it does naturally from the habit of forming groups for a common purpose. With this habit men cannot dispense unless they fall into the pathological condition of isolation from their kind—becoming, as the French say, *aliénés*. Nevertheless, there is, as I said at the outset, a real difference between the sectarian spirit in science and the correspondent spirit in theological and most philosophical systems. It is that science provides its own corrective, which in the end is always effectual. Contending scientific schools, recognizing as they do a common method of research, arrive at last at some new discovery which unites and reconciles what is true in each. Thus, to take the instance above mentioned, one of Tycho Brahé's strongest objections to belief in the earth's revolution, based on the fact that a star seen from two opposite points in the earth's orbit (that is to say, 190 millions of miles apart) occupied the same apparent position in the sky, has been removed in com-

¹ This was the epithet applied to Comte by T. Carlyle.—ED.

² The poem entitled *Soliloquy of the Spanish Cloister*.—ED.

paratively recent times by the discovery, which Bradley had sought for in vain, of annual parallax in several of the fixed stars. Other instances will occur to the most superficial student of the history of science. To sum up in a word this distinctive note of science, it deals with things which can be brought to the test of demonstration, whereas theology does not.

Let us apply the foregoing remarks to the immediate purpose of this paper. And, first, what is Positivism?

Positivism, looked at as a philosophical system, is an attempt to present the principal truths of science, from Mathematics to Morals, in an orderly arrangement, so framed that the simpler sciences, dealing with facts common to the world and man, shall throw light on the more complex, and specially on those which relate to human nature and human conduct. It expressly refrains from any attempt to explain these latter orders of facts as deductions from a single principle. The unity of the system depends upon its method and its purpose. The method is that of all masters in science; the purpose is the Service of Man.

Positivism, looked at practically, is a systematic attempt to bring about willing and joyful obedience to principles of right and wrong in private and public life, in ways consistent with science, and independent of supernatural belief. In other words, it aims at becoming the universal religion of mankind. Such words would need explanation in any case; they need it all the more that Auguste Comte, in his earlier works, used the word *Religion* with a theological implication.¹

This still remains a part of its popular meaning; although it is not uncommon to apply the word to any fervid agitation which stirs the souls of men, and unites them in a noble purpose. Thus it has been used to denote the feeling which prompted men to defend their national independence; it has been applied to the generous emotions that pervaded Western Europe at the outbreak of the French Revolution—emotions so powerfully portrayed in Wordsworth's *Prelude*. For us the important point is that Comte has fixed its meaning in a way that may be regarded as final; one which holds good in varying degrees of every mode of religion which has swayed mankind, and which rests upon the element that is common to all. It will be found clearly defined in language of Dantesque precision and beauty in the Introduction to the *Positivist Catechism*.² The passage, if possible, should be read in the original

¹ See p. 291 (note 1).

² P. 34.—ED.

—a remark which, be it said in passing, may be extended to other translations of Comte, certainly to those of the present writer; though translations, even to those who know French, may be useful as commentaries. Briefly, religion, as here defined, denotes the state in which man is exercising his powers in perfect peace within and without—peace between his own discordant moods, peace with his fellow-men throughout the world. Religion is not a creed; it is a state of emotion, thought, and will, guided to a purpose which can be shared by all. The various modes of religion that have hitherto guided, or that may hereafter guide, mankind, may be regarded as modes more or less efficacious of attaining to this ideal state.

Peace within—Union without; which mode of religion comes nearest to the goal? All religions that deserve the name have attained the first in some measure, and have at least aspired to the second. They have aimed at universal union. Christianity has put forward this claim; so has Islam. Each has striven to absorb the polytheism of India, the astrology and ancestral cult of China; and each has failed. Hope on either side of victory over the other disappeared with the Crusades. Why is this? Because of their reliance on transcendental doctrines incapable of proof, and mutually destructive. The condition of Union can only be fulfilled by bringing the truths that concern man's highest and dearest interests within the range of scientific certainty. To do this is the main purpose of Positivism.

So far as this purpose is really fulfilled, I think it would be unreasonable to speak of Positivism as a sect, except in that modified sense of the word above noted, in which a sectarian spirit has shown itself for comparatively brief intervals in the history of physical and biological science. In this sense it may seem chimerical to hope that, human nature being what it is, sectarian feeling should be wholly avoided in the centuries before us. If such feelings have shown themselves on questions of astronomy, of geology, of the transitions from Ascidians to Vertebrates, of the formation of Coral Reefs (not to speak of the far paltrier squabbles of Latin and Greek grammarians), how can we expect that they should be wholly absent from discussions in which the highest and dearest interests of Humanity are at stake? We may be sure that they will not, and that all that can be hoped is that those who are tempted to err in this way will be held in check by the wide grasp of scientific truth, and by the historic spirit presupposed in adequate teachers of Positive doctrines; and still more by the sympathy with every phase of human nature, heroic, tender, passionate, or humorous,

which can never be wholly wanting in those who try to train themselves and their children in accordance with the New Life.

VIII

FETISHISM AND POSITIVISM

AMONG the later thoughts of Comte, to be found in germ perhaps in the *Philosophie*, but fully developed only in the *Politique*, few are more remarkable than his indication of the affinity between the earliest and the latest stages of social evolution.¹ Civilization, as we actually know it, has been continuous from the beginning, but has followed a long and devious course, with many windings, many bends backwards, many periods at which the stream seemed to stagnate. From the rude ritual of savage tribes, in which stocks and stones were worshipped, arose theism in all its forms. Then came the polytheism of the great theocratic empires, the break-up of those theocracies under Greek intellect and Roman conquest, the rise of mediæval monotheism with its defensive wars, finally the dominion of science and industry in modern life. Such has been the sequence of stages among that part of the world's population which, by common consent, has taken the lead in civilization. Will it be needful for retarded nations, Asiatic or African, to follow painfully in the wake of their leaders? Or can they profit by experience, and raise themselves rapidly to the foremost rank? If we come to the latter conclusion, we shall evidently be led to take a much more hopeful view of the immediate future of the world. One most striking instance of rapid transition from primitive to highly developed civilization is being at the present moment offered to us by Japan.²

In this connection it will be useful to consider the principle of Comte's political philosophy to which I have referred above, and the more so that but little attention has been hitherto directed to it.

The word *fétichisme* was used in the eighteenth century by de Brosses to denote the religious beliefs and practices of negro tribes on the West African coast who regarded certain inanimate objects as set apart, as sacred, with power to confer blessings or inflict

¹ See p. 275 (note).

² Written in 1905.—ED.

harm on men.¹ Its use was extended by Comte to the whole system of beliefs and institutions characteristic of primitive man. These during the nineteenth century were the subject of extensive and elaborate inquiry, and an immense body of literature has been collected, with more or less consciousness of its significance. All that is meant by the North American word *totem*, by the Polynesian word *taboo*, by the old Latin word *sacer*, is being carefully collected, compared, and classified, with the result that light is being thrown—often, it is true, a very dim light—on the connection of these primitive ideas and beliefs with the earliest social institutions of mankind, at a time when the *family*, in the patriarchal sense of that word, had no existence. Much of this early period of man's life upon our planet is irrecoverably lost to us. The gaps in the sociological record are as great as those in the geological record. Time has undoubtedly been wasted in building up hypotheses which perhaps we may never be able to test by confronting them with facts. And this is the more true that, owing to the reckless expansion of modern commercialism, the facts themselves are disappearing. Of the most primitive races of mankind there will soon be left none to investigate. The Tasmanians have disappeared already; the Australians are swiftly disappearing.

But, without entering into disputed details, let us concentrate attention on the salient point of fetishistic belief—the tendency to explain the world by man, *transporter partout le type humain*, to conceive of surrounding objects, or at least of some among them, as animated by feelings and powers akin to those of which man is conscious within himself. It has been well said that the fetishist has no belief in the supernatural, for the best of all reasons—that he knows nothing of the natural. He explains things new and unknown to him, as other people do, by things that are better known and more familiar; and the things most familiar to him are his own fears and passions, his own dreams and shadows, the facts of sleep and death.

The first to call attention systematically to this mode of regarding the surrounding world was the Neapolitan thinker Vico, early in the eighteenth century. With Vico, as afterwards with Comte, it formed the basis of his philosophy. Let us recall a few of Vico's words: "Men, ignorant of the causes of things, and unable to explain them even by analogy, endowed surrounding objects with their own nature. So it is that when they see the magnet attracting iron they

¹ See p. 325 (note 2).

say the loadstone is enamoured of the metal." "All nature," he goes on to say, "becomes to primitive man a vast animated body capable of passion and affection." "It is noteworthy," he observes, "that in all languages a large number of expressions relating to inanimate things are taken from the human body, or from human feelings and passions. *Head* signifies summit, or beginning; *fore-head*, *shoulders*, front and back; we speak of any kind of opening as a *mouth*; the rim of a vessel is a *lip*; a rake or a comb has *teeth*; so, too, we speak of the *gorge* of a river, of the *flesh* of fruits, of a *vein* of metal. Wine is the *blood* of the grape; in a mine we descend to the *bowels* of the earth; the sky or the sea *smiles*; the wind *whistles*, the waves *murmur*; a table *groans* under the weight of provisions. Innumerable examples may be gathered from all languages."¹

The process of explaining the world by human customs and feelings is curiously exemplified in the institutions of primitive man in many parts of the world, notably in North America, West Africa, and Australia, known as totemism. "Totem," a North American word, indicates some species of animal, plant, or other object held sacred by all the members of a group or clan, who appear to regard themselves as physically in some way related to it and partaking of its nature. Most Australian tribes are divided into two classes, or, as some observers call them, *phratries*. Each phratry includes a large number of groups or clans, each distinguished by a certain totem. The phratries are held entirely distinct from each other, and are exogamous—that is to say, members of the same phratry cannot intermarry. There are yet further restrictions on intermarriage. A man of one phratry cannot intermarry with any woman of the other, but only with a woman belonging to a special class of the other phratry; so that each phratry is divided into two matrimonial classes. If A and B stand for the two classes of the one phratry, A' and B' may denote the two classes of the other. A must choose their wives from A', B from B'. The social classification of an Australian tribe is therefore extremely elaborate, far more elaborate indeed than would appear from the above statement. Now, the important thing to note for our immediate purpose is that this social classification becomes the principle for classifying things of whatever kind. In the tribes of the Bellingen River, and in those of Port Mackay,² observers on the spot tell us that all nature is

¹ The above quotations are translated from the 2nd ed. (1730) of the *Scienza Nuova*.—ED.

² New South Wales.—ED.

regarded as belonging to one or the other of the two phratries. The sun, the moon, the stars, wind, rain, lightning, as well as every familiar animal and plant, are ranged in one division or the other. In the fourfold division of the Wakelbura tribe all objects known to the tribe belong to one of the groups. In the Mount Gambier tribe¹ the two phratries are called Kumite and Kroki; each of them is divided into five totemic clans, and under one of these ten divisions all things, whether animal, vegetable, or mineral, find their place. Some of these are objects of food, and the members of a clan are usually forbidden to eat things belonging to their own totem. But these bear but a small proportion to the whole. For example, the first of the five groups belonging to the Kumite phratry is Mula (fishing falcon). With it are grouped smoke, honeysuckle, certain trees, etc. The second is Parangal (pelican). It contains blackwood, dog, fire, ice, etc. The third is that of the Crow; with it are classed rain, thunder, lightning, hail, clouds, etc. The fourth is that of the Black Cockatoo, including the moon, stars, etc. The fifth, Karato (a harmless snake), is associated with fish, seals, etc.

It is not possible, or at least it is rarely possible, to give any consistent explanation of the mental process underlying the formation of these groups. But the essential thing for the purpose now before us is to note that the earliest classifications of things were moulded on the classifications of social groups. The first logical categories were social categories. It was because men formed groups, and thought collectively, that they ranged other beings in these groups. Phratries were the first genera, clans the first species. The things of one class were related to each other—were of the same flesh and substance as the men and women of that class. The fetishist philosophy, the mode of thought and feeling common to primitive tribes, has been spoken of as centred in man—anthropocentric. M. Durkheim, one of the first to call attention to this branch of the subject, points out that it might be spoken of with more truth as socio-centric—centred in man's social life.

The passage from fetishism to theism, from the worship of visible and tangible objects animated by human passions to the worship of imaginary beings ruling over a vast province of nature, was the result, and also the source, of fundamental changes, social and intellectual. But these changes were evolutionary rather than revolutionary—many centuries were needed for their accomplishment. Primitive fetishism was wholly unadapted for the cohesion

¹ South Australia.—ED.

of large societies. The change from maternal to paternal descent, the institution of the patriarchal family, the successful wars waged by a warrior of more than usual powers, the worship centralized round his tomb; again, the growth of language to the point at which almost every abstract term became identified with a deity, as in early Italian religion; the growth of star-worship, sun, moon, planets, and principal stars uniting scattered tribes in a common object of reverence—these are some of the many ways in which theocracy arose from primal fetishism. We need not suppose uniformity in each case. By one mode or another governments arose, spiritual and temporal. Men were to submit for long ages to come to priests and kings.

This is not the place to enter into any defence of theocratic civilization against the modern revolutionary tendency to look on all submission as a sign of degradation. Sufficient to say that the rise and maintenance of great societies like those of Egypt and Babylonia, with all their industrial and intellectual results, could not have taken place otherwise. The wars of a conquering monarch were the condition of long periods of peace and industry. The codes of priests brought order and dignity into the family and into the State. But what we have to note here is that fetishism was not destroyed by theism—the old foundation of fetishistic adoration and belief still remained. The tomb of the heroic ancestor was still a sacred shrine. If we trace back, as recent discoveries enable us to do, the rise of the Babylonian and Assyrian gods from their origin, we find them in the earliest ages to be tribal gods, whose dominion steadily extended with the growing dominion of the tribe. But throughout the history of these empires, and over their whole extent, local gods swarmed everywhere. The god of Israel did not suppress the household images that Rachel carried with her in her flight from Laban, nor the “high places” that remained sacred throughout the Hebrew monarchies. The hearths of Greek and Roman households were sacred amidst the splendour of their polytheism. The hearth of Rome herself, watched by the Vestal Virgins, has become again for some of us a place of pious pilgrimage. The shrines of deities were not more sacred than in aftertimes became the shrines of saints. Who again can estimate, in the story of Islam, the unifying force of the sacred stone of Mecca?

And thus we find in the end that the primitive religion of the human race has much in common with the latest religion. Our love goes forth at last to Humanity and to Earth, the home of Humanity. But there are many steps which lead us onward to this

goal. There is our first home with all its childish memories, our native village where many a farm, cottage, church, spire, ancient tree, flowing stream, is knit to our affections with ties that are never broken. We pass into the world and tread the soil of our country. That soil becomes sacred to us; the flag, symbol of its unity, stirs more enthusiasm when the time calls for it than the Australian ever felt for his *Churinga*.¹ We overstep our country's boundaries, and visit friendly lands from whom we have received precious produce of all sorts—food for body and soul. Memories of bitter strife are drowned in memories of fellowship and kindness. Their shrines become our shrines; Rome, Paris, Athens, Jerusalem, Weimar, Washington, are added to our inheritance. Their mountains become ours, their rivers ours.

Poets and painters have given voice to these emotions. "He is made one with Nature," says Shelley of Adonais.² Wordsworth has made his hills, lakes, and skies as sacred to us as Westminster Abbey. Flower-worship is more widely diffused now among rich and poor, among wise and ignorant, than in any former age. Despite the hideousness of modern suburbs—nay, because of our growing hatred of their hideousness—we are at one with the Japanese in readiness for festivals of spring flowers. Thus the highest and the lowest phases of faith are brought together. To endow the world around us with human emotions is the religion of the savage. It will become—it is even now becoming—the religion of the civilized man. And when we cease to "think imperially," and turn away deliberately from conquest of our fellow man to peaceful dominion over the earth, we shall deal with dead matter more gently than conquerors have dealt with living men. Gardens will outnumber factories, the green life of plants and trees will not be blasted by chemical fumes, the refuse of bleach-works and dye-works will cease to blacken our streams.

We are in close contact with four or five Asiatic civilizations differing widely from each other, and from our own. We are in touch with Islam, with the faith and ritual of Brahma and of Buddha, with the ancestor-worship of China and Japan. Which of all these worshippers will find it easiest to rise to the mental level of the Western nations? Recent events³ would seem to point to those populations who have escaped the formidable difficulties

¹ The *churinga* is a soul-token or amulet of wood or stone used by the Arunta nation of Central Australia.—ED.

² *Adonais*, xlii.—ED.

³ Written in 1905.—ED.

with which theism has encumbered modern thought, and who may pass with hardly a break from the worship of the spirits of the dead to the worship of Humanity.

IX

THE DAY OF ALL THE DEAD¹

THE year that comes to its end to-night will be remembered in the world's history for two events of supreme importance: the establishment of Japan as one of the Great Powers, and the awakening of Russia from a condition of torpid despotism to constitutional freedom. Each of these events has already reacted, and will for a long time continue to react, upon opinion throughout the world in many ways. Let us examine the first of them.

During the last three centuries the conviction has been firmly established that the Eastern nations of the world were subordinate to the Western; and that the superiority of the West was connected, in some way, not always very clearly defined, with its acceptance of Christianity. In former times such a belief would have been impossible. The rivalry of Christianity with Islam endured for many centuries, until, a century after the capture of Constantinople by the Turks, the long strife was finally settled at the battle of Lepanto.² Since then the leading Powers of the world have been exclusively Christian; the non-Christian East has been, in one way or other, subordinate to the Christian West; has been understood to stand on a lower level of civilization and power.

The truth underlying this conception was, not that the West was made strong by Christianity, but that it inherited from the Græco-Roman world the germs of science and industry, which, when developed in the sixteenth and succeeding centuries, became the source of modern civilization. Through the Arabs, Western Europe received the results of Greek astronomy. Roman imperialism gave birth to mediæval feudalism, and the replacement of slavery by serfage, and, ultimately, by free labour. The inventions of the

¹ An Address delivered in Essex Hall, London, on December 31, 1905. It was first published in the *Positivist Review* of April, 1906, and was reprinted in *Essays and Addresses* (1907).—ED.

² 1571.—ED.

compass, of gunpowder, of printing, the geographical discoveries of Vasco da Gama and Columbus, and, finally, the tremendous impulse to thought given by Copernicus and Galileo, opened to the world a new era, which, as we can now see, was destined to bring about the unification of the nations under the Religion of Humanity.

The first fruit of this new era has been the uplifting of Japan to the level of the Western nations. The process seemed to superficial onlookers unexpected and sudden. In reality its foundation had been long prepared and deeply laid. An ancient and coherent civilization, built up from units of great individual energy, strengthened by long periods of internal struggle, in which a type of character had been developed, recalling the noblest examples of our own mediæval chivalry, was ready to receive the results of Western science and industry, without sacrifice of its own original powers. Japan adopted our law, our medicine, our marvellous mechanical appliances, our methods of self-defence by land and sea. She never for a moment abandoned her resolution to uphold the independence of her tribunals, and to rid herself at the earliest moment of the incubus of foreign law-courts in her cities, which hitherto had been the symbol of Western ascendancy in Eastern countries.

What is the religion of Japan? If we look into it closely, we see that one constituent of it, the most ancient, and, perhaps, not the least potent, is a development of the simple nature-worship and ancestor-worship common to all primitive nations. It has much in common with the religion of China, with the religion of primitive Rome, with the religion of ancient Israel, before the establishment of monotheocracy. Shinto, thus it is called, is a genuine product of Japanese soil. Its Pantheon is crowded with a host of deities; every stream, every mountain, every tree, has its god or goddess; every hero, every ancestor, has his place in the Shinto theocracy. Its creed may be summed up in two sentences: belief in the continued existence, real though shadowy, of the dead; and belief in the sacred origin and character of the occupant of the throne.

If we would see this religion in action, I know no better way than to quote from the description given by the correspondent of the *Standard* of the ceremonial that took place on June 20, 1904, at the funeral service performed in the presence of the First Japanese Army in memory of those who fell in the battles fought at the crossing of the Yalu River:—

The priest stood on the mountain-side facing the multitude. In his uplifted hand was a pine branch hung with strips of white paper, emblems of the soul's purity. Thrice the branch swept the air above the bowed heads in the plain below. The simplicity of this act of purification, the silence of the vast congregation, the beauty of the scene, all combined to fill with awe and reverence the alien spectator as well as the native worshipper. Behind the priest, on a green mound, was the sanctuary, an oblong enclosure hung with symbolic banners, white, blue, yellow, black, and red. The High Priest drew near to the altar, and, bowing before it, took from his breast a scroll, from which he recited these words :—

"I, Hirokage Shimizu, Shinto priest, reverently speak to the souls of Lieutenant Jiro Takuma and other officers and soldiers who died in the battle of the Yalu and elsewhere, inviting them to approach the altar which we have erected at the foot of Mount Teisen, beyond the walls of Feng-huang-cheng. When friendly ties were broken, and we came to the Russians with weapons in our hands, you marched to the front with the First Army, knowing that this was the hour of sacrifice and duty. Bravely did you endure hardship and privation on sea and land, on mountain and in valley. On the first day in May you came to the Yalu and fought with admirable courage amid hail of bullet and flash of bayonet. Some of you did excellent service in the work of road and bridge building and transport. All of you helped to achieve that brilliant victory which has added lustre to the Empire and renown to the army. Here we would willingly tell again the story of that battle and talk over the future; but, alas, you are separated from us by the dark veil of death. We cannot see your brave faces, nor hear your cheerful voices. Deeply do we feel this separation. More than worldly honour have you won. Your spirits will be for ever with the gods who guard the Empire, and your name will be cherished as an example of loyalty. Our General and we desire to pay our respects to your loyal souls by this memorial service, and by offerings reverently laid upon the altar."

It would seem, then, that men, not isolated heroes only of surpassing worth, but men in the mass, men by the thousand and the million, may be roused to heroic endurance and absolute self-sacrifice quite apart from any transcendent prospects of a personal future inspired by supernatural belief. It has long been matter of common knowledge that the Hebrews, till a very late period of their history, had no belief in a future state. The three hundred who fell with Leonidas at Thermopylæ were assuredly stirred to their immortal deed by something more potent than the worship of Zeus, or Artemis, or Hera. The poet's epitaph on their grave was just this

one simple word: "Stranger, tell the Lacedaemonians that we lie here in obedience to their commands."¹ "Winning inextinguishable fame for their beloved fatherland," he says elsewhere, "they clad themselves with the dark cloud of death. They died, but they are not dead. Valour leads them up with glory from the house of Hades."² The more closely we look into it the more clearly we shall see that what has brought men to their highest level has been the bond that united man with man. Trace history throughout, and we shall find that this is true. Pass from Greece to Rome, thence to the history of the Crusades, and onwards to the history of the Revolution. We shall see that, as the elder Pliny said, "where man helps man, there is God."³ There is the force that raises man above himself and lifts him to the highest level of manhood.

We have been led to these thoughts by considering the first of the two great events of the last year—the outcome of Japanese valour and Japanese religion, resulting in the admission of a new member into the commonalty of great nations. Let us turn now to the second: the struggle of Russia to awake from the torpor of despotic autocracy, and to take her place among free self-governing commonwealths. One or two prefatory words, by way of briefly surveying the problem. Russia is a new country; new by comparison with Western Europe, new by comparison with the two established governments of the Far East—China and Japan. She did not pass through the renovating discipline of Roman conquest. She was left outside the spiritual dominion of the mediæval Popes. Imagine Latin and Teutonic Europe, between the fifth and twelfth centuries, deprived of the moral discipline of men like Benedict, Bede, Boniface, Alfred, Charlemagne, Hildebrand, and St. Bernard, and we realize what the Slavonic world has been through all those centuries. Its religion was the second-rate form of Christianity that was left in England when Henry VIII had made himself Head of the Church. The separation of spiritual from temporal power, of Church from State, is the first condition of freedom. That freedom Russia has never possessed. The deposition of the Procurator of the Holy Synod from his power to suppress the slightest sign of spiritual independence in the remotest village of the Empire is the surest and most signal proof of the momentous importance of the crisis that is now being decided. "Through much tribulation," it

¹ Epigram by Simonides of Ceos, the Greek lyric poet.—ED.

² Also by Simonides, but it was written with reference to the Lacedæmonians who died at Plataea, not to those who fell at Thermopylae.—ED.

³ *Deus est mortali juvare mortalem.* See p. 281 (note 2).—ED.

was said of old, "must ye enter the kingdom." And fearful is the tribulation through which Russia is now passing, and has yet to pass. We can but stand by and look on as the struggle advances, and the smoke of battle becomes darker and more dense; confident that a highly-gifted race which has been slowly assimilating the science and thought of the West, which has already produced great men of science, great thinkers, great artists, great musicians, will win through to the daylight and to the blessings of peace. Her bravest blood during these past years has been shed like water; but it will not have fallen to the ground in vain. Her dead will sanctify and ennoble the living and the yet unborn.

We meet to-night to celebrate the Festival of the Dead¹; the dead of every degree and rank and worth. Other days are set apart for the commemoration of saints and heroes, those who are in a special sense the types and representatives of Humanity—the great poets, the great thinkers, the great rulers, the great spiritual guides. We are not thinking to-night so much of Shakespeare or of Aristotle, or of Cæsar and Cromwell, of St. Paul, of St. Augustine and St. Francis, of Moses, Mohammed, Confucius, and the marvellous Indian Prince² who regenerated the Asiatic world, as of the vast mass of men who have worked and toiled without fame or distinction, and the fruit of whose labours we inherit and enjoy. We think of the millions of workmen who, from the days of the Romans to the present time, made our roads, cleared our forests, drained our marsh lands, built and rebuilt our towns and villages, from century to century; of the women who bore and nursed their children, and ministered to their daily wants, kept alive the mother-tongue, handed on traditions, customs, legends, rules of life. These "fear no more the heat o' the sun, nor the furious winter's rages; they their earthly task have done; home have gone and ta'en their wages."³ The kindly earth holds them. Yet the payment of

¹ As this paper is entitled "The Day of All the Dead," it is necessary to remind the reader that the word *All* must not be taken to mean all human beings without exception who have lived upon the earth. It means only those who have co-operated in some way, however humbly or slightly, in the building-up of the great social organism of Humanity. Only such persons really form a true part of Humanity, and the eighty-one Festivals of Comte's Table represent the various aspects of her Life. The word *All* merely emphasizes the difference between the General Day of the Dead and the other days of the historic Calendar devoted to individual men and women of special eminence. Comte himself in his Table uses the expression "Fête universelle des Morts," which might be translated "A General Commemoration of the Dead." See on this subject pp. 225, 276 of this volume, and p. 53 of the *Positivist Catechism*.—ED.

² Buddha.—ED.

³ Shakespeare's *Cymbeline*, act iv, sc. 2, slightly paraphrased.—ED.

wages does not settle the matter, does not wind up the account. Their work, or the fruit of their work, remains; and is gathered in by us who follow them. Such is the vast assemblage of the Dead with whom we place ourselves in communion to-night. Let me quote Dr. Ingram's beautiful words:—

Not only those by household memories
 Link'd with our lives, for whom, on bended knees,
 Daily we yearn, and tears not seldom shed—
 Nor only the great spirits who have led
 Man's upward march to nobler destinies,
 Whose record in Fame's golden book is read—
 We reverence to-day; not only these,
 But all, in whatsoever age or clime
 (Albeit the names of most the unpitying Hours
 Have hid for ever in the abyss of time),
 Who, faithful, patient, helpful, strove to be,
 And so, while worshipping imagin'd Powers,
 True service did, Humanity! to Thee.¹

The Festival of the Dead, supplemented in every fourth year by the Festival of Noble Women, terminates the list of eighty-one festivals which constitute Auguste Comte's ideal picture of the public worship of Humanity.² It may be well to look a little more closely into the arrangement of these festivals; frankly admitting that the realization of the scheme is reserved for a distant future. Yet, regarded as an Utopia, it will be found to throw light on the structure and the life of the great Organism of which each of us is a member. The festivals fall into three groups. The first group, occupying the first six of the thirteen lunar months—that is to say, twenty-four weeks—deals with the fundamental bonds of society, that is, with the elementary social relations. The year begins with the greatest of all festivals, that which presents the idealization of our highest hopes and aspirations—the Festival of Humanity. When our numbers permit—and this may be sooner than we think—this day will probably be the first to offer an adequate combination of the resources of music and poetry with the synthetic thoughts that naturally belong to the greatest of our festivals.

¹ This is the sonnet entitled *A Positivist Solemnity*, the first line of which—"Now dawns the sacred day of All the Dead"—was not quoted by Dr. Bridges. The sonnet will be found on p. 54 of J. K. Ingram's *Sonnets and other Poems*. (A. and C. Black; 1900.) It was included, with three others by Dr. Ingram, in the collection of Hymns and Poems entitled *Service of Man*, ed. by Mrs. F. Harrison, of which a new ed. was published by the Positivist Society in 1905.—ED.

² See p. 331 (note 2).

The four Sundays of the first month are given to the various degrees of Social Union. The first to the religious bond, independent of political ties. The faiths of Christianity, Islam, Buddhism, unite many nations, which, politically, are wide apart and often hostile, by the tie of a common Church. Next in order comes the territory which unites small States by the memories of the larger political aggregate to which they once belonged: those memories being strengthened in most cases by the bond of a common language. The memory of a common origin and history, and the possession of a common language, is a strong bond of union for England with English Colonies and with the once hostile commonwealth of the United States. When Italy becomes a federation of small republics these will still be knit together by the language of Dante. On the third Sunday in this month the State, properly so called, will be commemorated: the great historical City—as, for instance, Amsterdam, Copenhagen, Edinburgh, Rouen, Bordeaux, Florence, with the smaller towns and territory belonging to each; calling forth all the historic memories and all the political energy and social enthusiasm so keenly felt where prominent citizens are well known to all their fellows, and where the deadening lust of conquest and empire is powerless to penetrate. Finally, the fourth Sunday of the month is given to the humblest form of social union, that of the village or township: in which each member of the community is brought into the close fellowship of neighbourhood.

The festivals of the next five months are suggested by the intimate ties of Family Life—the union of husband and wife, the relation of parents to children, of children to parents, the bonds of brotherhood and sisterhood, the bond of master and servant. In the third chapter of the second volume of his *Positive Polity*,¹ Comte dwells in detail on the great principle that family life is the preparatory school of ethics: the spontaneous source of our moral education. In no other department of thought does he diverge more completely from the current views of most social reformers, who are for taking education more and more out of the hands of parents and transferring it to the community. But Society, Comte tells us, is not made up of individuals. It is made up of families.²

The Family is the natural transition between pure personality and true sociability. The affections which it calls into play are not without alloy. They have, always more or less marked, an

¹ *Pos. Pol.*, vol. ii, pp. 155-60.—ED.

² *Ibid*, pp. 152-53.—ED.

element of Self, and from this they derive their peculiar energy. The educational work of the family begins with the forced submission of the infant at birth. This grows to respect and veneration for parents. On this grow the affections of brotherhood and sisterhood; and, at last, come the voluntary ties of marriage and of children. Looked at politically, we may speak of the family as the smallest of political societies, consisting essentially of the couple by which it is founded; but extended by the filial, fraternal, and domestic ties. From it we derive our best and surest insight into human nature. Speaking generally, the members of our family are the only beings whom we ever learn fully to know. And this even though our judgment be sometimes partial. It is said that love is very often blind. But we should remember that hate is blind invariably, and with more baneful consequences. We may admit that family life is exposed to the danger of promoting an aggregate selfishness. But this is a danger which attaches to all communities less than Humanity, whether large or small. A great part of history is occupied by fierce struggles of opposing patriotisms; yet who will say that patriotism is ignoble? We must face this danger as well as we can. But before everything we must arouse the instincts of sympathy from their original torpor, whatever may be the danger of their receiving at one time or other a mischievous bias.

We must bear in mind that Comte looked forward to certain important changes in family life which would bring it into fuller accord with social needs. One of these is the frank and full recognition of domestic service as an element of the family. This clashes sharply with the modern revolutionary temper. If we wish to rise above the habitual disregard of such service as degrading, we have to go back to the Middle Age, and think of the motto, *Ich dien*, so proudly adopted by the Prince of Wales in the fourteenth century. Another change was Comte's enlarged view of inheritance. To the bulk of a rich man's fortune his children, he considered, had no necessary claim. Capital is a trust to be handed down to those most fit to preserve and increase it; and the most fit will often be found outside the range of blood relationship. Adoption of a capable successor will often supersede inheritance by the natural tie.

On the sound constitution of the family depend the health and vigour of the community. The festivals of these five months bring into prominence all the phases of private life that are treated, wisely or unwisely, in the modern novel.

We pass, then, in the twenty-fifth week of the year, to the

review of the past phases in the history of Humanity, which have prepared the way to her present and future state. These phases connect themselves with the three successive stages of belief—Fetishism, Polytheism, Monotheism.

Here we note at once that Fetishism for the first time receives due honour as the primal phase in this great story; honour which could not be paid in the Calendar commemorative of great men, for the great men of Fetishism have passed away from us without a sign. Four festivals are celebrated in the month of Fetishism, marking four essential steps in human history. When they were taken we know not; we can but note their fundamental importance. The taming of Animals, the invention of Fire, the worship of the Sun, as the prime regulator of the seasons and of social institutions, and the use of Iron for weapons of war and for implements of industry.

Fetishism was followed by Polytheism; and in the Polytheistic month we celebrate, first, its conservative stage, the great theocracies of Egypt, Babylonia, India, Peru, not forgetting its fundamental institution of Caste, the great school of apprenticeship and discipline in the arts of life; and, next, the progressive polytheism of Greece and Rome. To Greece two weeks are devoted. In the first honour is paid to the three chief names in poetry and art—Homer, Æschylus, and Phidias. In the second week the founders of philosophy and science are celebrated—Thales, Pythagoras, Aristotle, Hippocrates, Archimedes, Apollonius, and Hipparchus. And the great struggle, without which these men could never have been, is summed up in the word—Salamis. Three names—Scipio, Cæsar, Trajan—suffice to immortalize the social achievements of Rome in government and law.

Of the month of Monotheism the first week is given to Judaic theocracy, represented in the three types of Abraham, Moses, and Solomon; the second week to Catholicism. St. Paul, its founder, is followed by Charlemagne, Alfred, Hildebrand, Godfrey, and St. Bernard. The third week is that of Islam and its founder, special mention being made of the great battle¹ that ended the military strife between Islam and its great rival—the battle in which Cervantes was a soldier. The last week is consecrated to the Western revolution in its entirety, the period at once organic and critical in which political anarchy went side by side with reconstruction, bringing out the immediate elements of the final system,

¹ Lepanto, 1571.—ED.

both in the spiritual and temporal order. Dante, Descartes, and Frederick are taken as the types of this revolutionary and reconstructive movement.

The festivals of the last four of the thirteen months display Humanity as a living and acting force, as a superintending Providence, as our shelter and protectress against the dangers and fatalities of life. Of Positive Religion, Love is the Principle.¹ With that we begin. A mother's love is the surrounding atmosphere of our early life; the love of wife, sister, daughter, follows; and these implant the memories which keep alive the hopes and the affections which save us from moral death. Love is not limited "to its more vehement and selfish forms, the desire of youth for beauty, the consuming love of the mother for the infant." It leads beyond these to "the tranquil and purer manifestations of the spirit, the love of a father for a son, of a friend for a friend; that love which can light up a face upon the edge of the dark river, and can smile in the very throes of pain." Such love is "the only thing which holds out a tender defiance against change and suffering and death." "If we desire and endeavour not to sin against love, not to nourish hate or strife, to hold out the hand again and again to any message of sympathy or trust, not to struggle for our own profit, not to reject tenderness, to believe in the good faith and the goodwill of men; we are then in the way. We may make mistakes, we may fail a thousand times; but the key of heaven is in our hands."² Of this all-protecting, all-providing love, woman is the source and centre. Who does not feel that, when the time comes for disbanding armies and for uniting the diminished navies of the world into a single fleet for the police of the seas, that women will have taken a leading part in bringing that time near? In this tenth month special note will be taken of private meditation and prayer as the means of keeping alive the influences of Home by due recognition of those who have called out and strengthened the springs of character and moral life.

The eleventh month brings before us the Intellectual Providence of Humanity. In the preceding month we deal with the affections by which action is prompted. In this month we are encouraged to think, in order to act wisely. A special Festival of Art is placed here; and also a Festival of Science. Passion for ideal beauty, strenuous search for the profoundest and highest truth, will be fostered

¹ See p. 39 (note), also p. 317 (note).

² The passages quoted are from pp. 169-71 of *The Upton Letters*. By A. C. Benson; 1905.—ED.

by the Religion of Humanity, and animated to new life, not left as heretofore to casual and isolated efforts. Yet these things, precious as they are, will be held subordinate to the training of the young lives of each generation, and to the guidance of grown men and women in the intricate problems and the new forms of social struggle which each century is sure to bring. Intellectual energy, like mechanical energy, is in constant risk of dissipation. Waste of it is always going on; and yet of all the treasures that Humanity has at her disposal it is the most important to economize. There is none too much of it. Our educating providence will guard us against the ever-recurring temptation to indulge in the discussion of insoluble problems, the spinning of endless conjectures as to the origin of matter, as to space of four dimensions, as to the abstract rights of man, as to the immortality of the soul, and will concentrate our thought on the essential task of making private and public life more perfect. During this month the most ancient form of spiritual power, that which is exercised by the old men of the primitive tribe, will be specially celebrated.¹

In the twelfth month the holders of capital will be seen in their true place as Captains of Industry.² To realize the providential character of their great social function, we have only to call to mind the disasters following on the absence of wisdom in the management of capital. When avarice or mad ambition drives the capitalist to rash and foolhardy adventures, ending in chaos, what shipwreck of happiness to millions, what diffusion of universal mistrust, what floodgates of ill-will unfastened! Within due measure capital must be concentrated, and there must be personal responsibility for its use. To imagine that complicated operations in the financial world (and on this all other industrial operations depend) can be conducted by casual committees chosen by an ignorant democracy is one of the wildest hallucinations that ever deluded mankind.

And, finally, the thirteenth and last month of the Positivist year brings before us the dependence of each one of us on the entire assemblage of our fellow-citizens. Here, again, what we owe to those who work faithfully is brought home to us by the few who are false to their trust. An uncemented drain-pipe, letting fever into a household; a plate on a railway loosely laid; a signal missed or misinterpreted; a safety lamp in a coal mine neglected; a girder in a bridge badly painted; bad brickwork; bad gasfitting; bad plumb-

¹ In the Festival of Old Men.—ED.

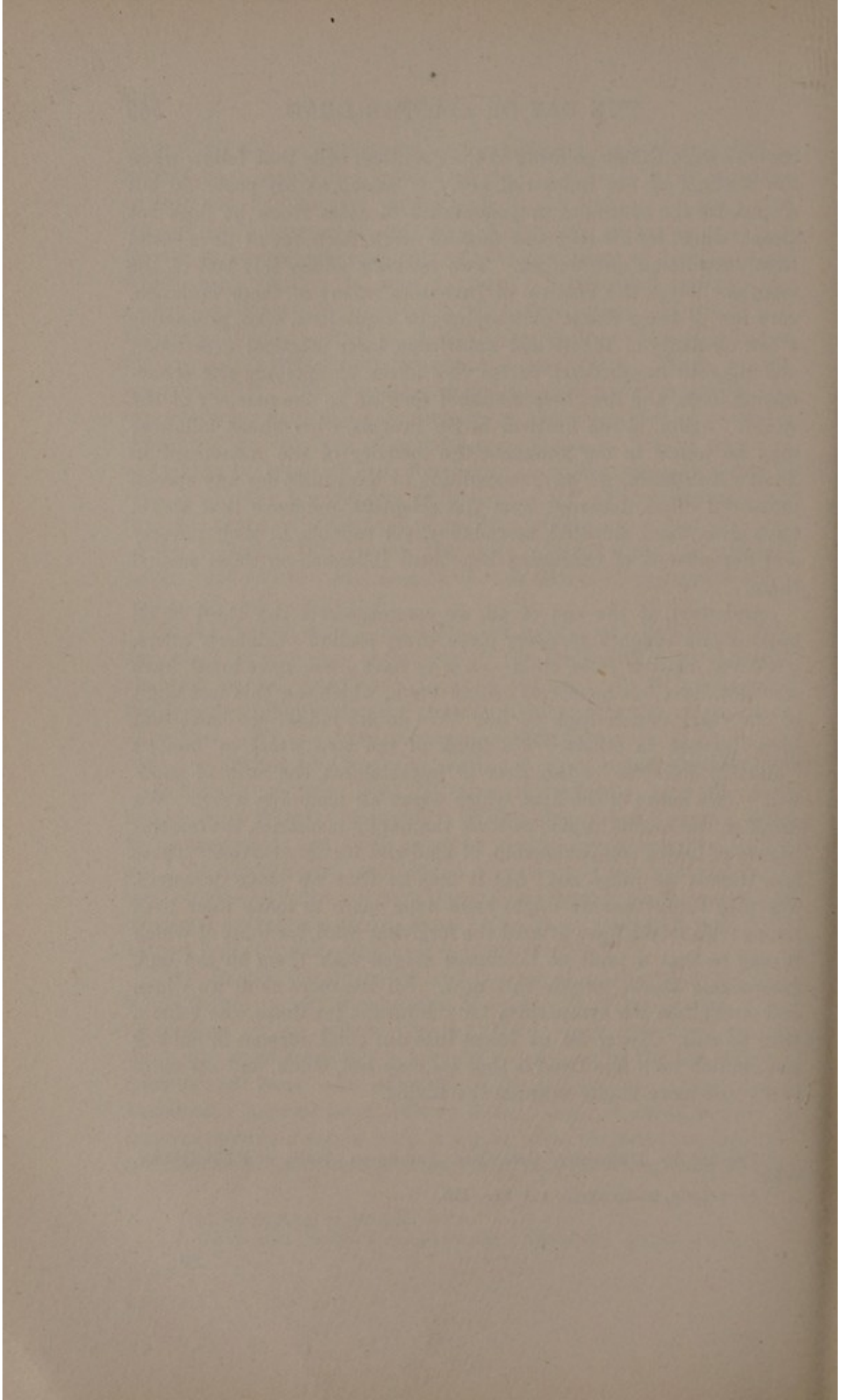
² This month also has a special Festival, that of the Knights.—ED.

ing—all such things pointing to the countless evils that follow when the sentinel of the industrial army is asleep at his post—do but emphasize the enormous preponderance of cases when he does not sleep; when, by his care and faithful work, each one of us is saved from destruction and danger. Two festivals adorn this last of the months. First, the Festival of Inventors,¹ many of them workmen, very few of them either philosophers or capitalists, who, possessing a few elements of theoretical knowledge, large practical experience, and vigorous imagination, devise new forms of applying and economizing force, and thus help mankind forward to the mastery of the world. Again, in the Festival of St. Francis, with whose followers may be joined in our thoughts the memory of the mendicant in Scott's *Antiquary*, we have recognition of lives unfit for any special industrial office, debarred from the scientific eminence that would have given them spiritual ascendancy, yet capable, in their poverty and dependence, of exercising beneficent influence on those around them.

And then, at the end of all, we commemorate the Dead of all nations and tongues, of every place, every station—thinkers, rulers, workmen, mother, wife, child—all who have lived, have loved, have wrought, have left memories behind them, which, on this last night of the year, we call back to life. We do not judge; we leave that high function to others. We think of the two rivers in Dante's "Earthly Paradise"—the river of forgetfulness, the river of goodwill.² We bathe in the first, which wipes all memories away. We drink of the second, which restores the happy memories, the remembrance of bright companionship, of kind and friendly service. These last friends we judge not; but it may be that we judge ourselves. We may think that we might have done more to make their lives happy; we might have uttered the forgiving word, for want of which it may be that a taint of bitterness stayed with them to the end. Irrevocable Death forbids this now. All the more shall we widen and strengthen our sympathies for the future, for those who remain with us still. Never let us forget that our chief purpose in holding communion with the Dead is that we may feel, think, and act more justly and more kindly towards the Living.

¹ Typified by Gutenberg, Columbus, Vaucanson, Watt, and Montgolfier.—ED.

² *Purgatorio*, canto xxviii, 121-32.—ED.



PART IV
POLITICS



CHAPTER I

POLITICS AND THE DARWINIAN THEORY

I

DARWINISM IN POLITICS¹

NEARLY thirty years ago a few Positivists published a book on the foreign policy of England.² It dealt with the constitution of Western Europe, with the alliance then firmly established between France and England, with the British claim to dominion of the sea, with our relations with India, China, and Japan, and, lastly, with our contact with uncivilized races. The book was criticized; but the criticism was not all unfavourable. It achieved some practical results. Positivists found willing and energetic co-operators in their protests against atrocious cruelties to negroes in Jamaica.³ They joined with Bright and Cobden, but on widely different principles, in resisting war with China, which was then in the throes of the Tai-ping rebellion,⁴ and offered to ambitious Anglo-Indians a promising field for annexation. From all meetings of workmen their views on these and the like questions met with enthusiastic response. The case being now quite otherwise, it seems worth while to ask ourselves the reason why. It is said that Englishmen never know when they are beaten. If this were true, it would show courage; but not the best kind of courage, for that is to admit the fact of defeat, to find the reason for it, and so, forewarned and forearmed, to make ready for a new struggle with better weapons. Positivists will do well frankly to admit that for the present their hopes of seeing satisfactory relations established with foreign nations, civilized or barbarous, have received a very severe check. An exception may be made in the case of China, who, notwithstanding a long series of outrageous attacks partially neutralized by the unselfish heroism of Gordon, has shown herself able, as we

¹ February, 1894.

² *International Policy*. Essays on the Foreign Relations of England. 1866. 2nd ed., 1884. (Chapman and Hall.)—ED.

³ During the insurrection of 1865, under the governorship of Eyre.—ED.

⁴ 1850-64.—ED.

foretold that she would be able, to defend her independence, and who now offers us a cheap defence against Russia. Everywhere else, in Burma, in Baluchistan, in New Guinea—above all, in Africa, East, West, North, and South—there have been aggression, annexation, and what follows annexation: an enormous increase of our navy, accompanied by increasing danger of war with our great naval rival. Forty years ago, not merely were we at peace with France, but there was a very effective Anglo-French alliance, which, though subject to occasional shocks, yet remained on the whole intact, till our fatal occupation of Egypt.¹ This alliance has long since disappeared, and a Russo-French alliance has taken its place.

Why and how has this change come about? The political stages of it are not difficult to trace. The Italian war of 1859 roused German jealousies of France. These jealousies found a partial issue in the combination of Austria and Prussia against Denmark a few years later. The Schleswig-Holstein triumph was speedily followed by the quarrel between the victors, ending in the union of North Germany under Prussia. After Königgrätz² war with France became certain. The occupation of French provinces by German troops became, and still remains, the most prominent and obvious source of European disorder, as the Editor of the *Positivist Review* has repeatedly pointed out.³ Since then the manhood of continental Europe has turned half its ploughshares into swords. England, flattering herself that she could stand apart, and, under the shelter of Franco-German rivalry, found an African empire unassailed, is being driven to an inordinate increase of her navy in face of a declining trade, of ruined agriculture, of an unexampled crowding of half-instructed and dissatisfied masses in large towns, of Irish disaffection, of systematic propagation of the Socialist Utopia. These are some of the most obvious conditions which are now disheartening such political observers as are not convinced of the omnipotence of Parliaments, be they ever so democratic, to provide effective remedies for social evils.

These, however, are the outward symptoms only. The egoistic factors in man's life are constant quantities, or nearly so. Unscrupulous politicians, mercantile adventurers of the Phœnician type, men greedy for blood and pillage—whether within or without the limits of the law—have abounded before, and may abound again. Progress is not uniform, and the sooner we recognize this elementary

¹ 1882

² 1866

³ See the *Positivist Review* of February, 1893, for an address by Professor Beesly on "The Causes of Modern Militarism."—ED.

truth of social dynamics the better it will be for us. There have been Nimrods and Attilas, Phœnician and Norse pirates, Elizabethan and Spanish buccaneers, at frequent intervals in the world's history. And the hunters of Matabele are only worse than these because they carry bishops along with them, and clothe their atrocities with the cant of civilization. But, though passions and instincts of this sort are constant factors in human affairs, they are not always dominant factors. To use a biological expression, they are sometimes *inhibited* by other influences. Christianity was such an influence when St. Ambrose drove Theodosius from his church because of the massacre of Thessalonica, or when St. Bernard denounced the persecution of the Jews in the Second Crusade. It had changed its character in the sixteenth century, when the Mexican and Peruvian kingdoms were destroyed under the pretext of promoting it; and it became nugatory as a public force in the nineteenth, when an Archbishop of Canterbury could advise his clergy to refrain from denouncing the opium trade, when missionaries are paving the way for the importation into Eastern and Southern Africa of every vice of Western civilization, and when all religious parties, so Mr. Cecil Rhodes on January 6 of this year assured the people of Cape Town, could approve of the extermination of the Matabele. Christianity, regarded as a force operative on private life and conduct, is not dead—very far from it. In this respect, though far from being all that its supporters claim, it has a long future before it. But as a force determining the collective action of States its vitality is gone. Looked at from the political side, the stronghold of Theism is no longer in the Christian world, but in the Mohammedan. And it is precisely against Mohammedanism that every section of the European invaders of Africa—missionaries, merchants, and military adventurers—are now agreed to fight.

It remains nevertheless true that men are not governed on the whole by their baser interests. They are governed in the long run by ideas—though Englishmen, of all nations in the world, are the slowest to believe it. One of their superiorities to the rest of the world consists, they think, in their conviction that theory has very little to do with practice. We all of us know, and meet every day of our lives, the man who says, "All that is very well in theory; but I am a practical man, and"—we know the rest. Such a man is not wholly wrong. No theory is convertible into practice by a stroke of the pen. On the other hand, he is never wholly right. Men cannot do without a theory, whether they are conscious or not

of holding it. Scornful rejection of theory as an agent in human affairs means very often blind acceptance of a false theory—in other words, slavery to prejudice.

It would sound paradoxical, for instance, to class the appearance in 1859 of Darwin's *Origin of Species* as among important political events. Yet it is not difficult to see that not even the war for Italian independence, which began in that year, can rival it in the importance of its results, when these are fairly measured.

By those who have not given much attention to the subject Darwin is looked at as the originator of the view that the various species of plants and animals branched out from a common stock by gradual processes, as opposed to the view that they arose suddenly by special acts of creative power. This, however, is very wide of the mark. Educated men (I am speaking here not of the literary culture given at our public schools and at Oxford, which sometimes usurps the name of education, but of something very different) had long ago given up the notion that lions and tigers rose up one fine morning out of the ground in the way described by Milton. Evolution, as opposed to creation, is at least as old as the middle of the last century. Buffon, Lamarck, Oken, von Baer, the poet Goethe had systematically advocated the principle, though the mode in which it worked remained to them a matter of great doubt. The hypothesis of Lamarck, which is now being actively discussed, was not generally accepted by naturalists. It was in this state of scientific opinion that Darwin and Wallace propounded their view of the particular way in which evolution took place, founded on the population theory of Malthus.

I am not now discussing the validity of this hypothesis. The point to which I am calling attention is the extreme rapidity with which it has been applied to the solution of political and social problems. Let us take one or two instances. In the *Daily Chronicle* of December 4¹ there is a report of a conversation with Dr. Wallace on the question of the emancipation of women. The conversation was long and interesting, and it would not be fair to condense it into two or three sentences. Dr. Wallace looks forward, as Positivists do, to a reformed humanity. He considers that, when women are absolutely free from all legal and social restrictions due to the "accident of sex," and when the excess of female over male population is reversed, not by killing off women, but by taking greater care of the lives of men, then the emancipated women of

the future—being more free than at present not to marry, and having more men to choose from—"may be trusted to reject idle, selfish, and worthless suitors," who will thus be left without progeny. "The method by which the animal and vegetable worlds have been improved and developed has been through weeding out. The survival of the fittest is really the extinction of the unfit.....In order to cleanse society of the unfit we must give to woman the power of selection in marriage." I need not say I am not discussing Dr. Wallace's views on the position of women. I am calling attention to the way in which a biological hypothesis, proved or unproved, is made to do duty as a guide in a very complicated sociological problem. Take another instance. I was reading the other day a pamphlet on vaccination, in which the writer is contesting the expediency of compulsory infantile vaccination. He observes: "We must remember that it is the delicate, the weak, and the careless that chiefly suffer from small-pox, and that a general law removing the liability from these is promoting the survival of the unfit." Here we have exactly the same crude attempt to use a theory, intended by its authors as an explanation of certain facts of natural history, as a key to a political problem of considerable difficulty.

These two instances may suffice to illustrate the wide and varied application of the competitive theory of Evolution to matters of politics and ethics. We need not be surprised, then, at the influence exercised by the theory when it seems to flatter strong interests and selfish passions. In recent dealings with Oriental nations, and above all with African tribes, it has been operative in a very marked way. Not, of course, that the bands of civilized marauders who have been indulging in wholesale pillage and assassination south of the Zambezi trouble themselves about Mr. Darwin's hypotheses. Gold and land are what they want; the rest is leather and prunella. The way in which the Darwinian theory works is to inhibit the restraining influences at home. The white race, it is said and thought, are "fitter" than the black race. It is the course of nature that the lower race should be extinguished and the superior survive. Such is the reasoning which, consciously or unconsciously, produces in the minds of good men a certain degree of acquiescence, sometimes even active approval of wholesale assassination of brave savages with the scientific appliances of modern warfare. That Darwin and many of his followers were humane men is not to the point. Malthus was well known to be a man of great personal kindness; but the cruel use made of his theory in administration of the Poor Law and in systematic indif-

ference to all efforts to improve the condition of the poor is notorious.

In considering the Darwinian position from the social point of view, two points must be carefully distinguished. First, the hypothesis may be valid for plants and the lower animals, and yet be inapplicable, or only partially applicable, to human affairs. Or, secondly, it may be a very incomplete hypothesis even in its own sphere of natural history. Both these points must be reserved for further consideration.¹

II

THE DARWINIST UTOPIA²

A MORE startling example of the false method in sociology of which I have been lately speaking³ can hardly be conceived than is offered by Mr. Kidd's work on *Social Evolution*,⁴ which is now attracting, not without reason, wide and careful attention. Written with much vigour, using the doctrine of competitive evolution as the key to the riddle of man's past and future, it reaches some very startling conclusions, which are at any rate likely to induce some readers to reconsider the premises from which they flow.

Let us briefly set down the main positions of this book, and the results derived from them.

1. There is one cause of Progress, and one only, whether among individuals or communities: competition of variations, survival of the few successful among many failures.

2. Not merely is competitive selection necessary for progress; it is an indispensable condition for maintaining the level already reached. Once remove it, and you have the hypothetical phenomenon indicated by Darwin's successor, Weismann, called *panmixia*—i.e., the degeneracy that, according to this writer, occurs when all variations, favourable or unfavourable, have an equal chance of propagating themselves. For, though variations in this case will continue to occur in all directions, yet a greater number, so Weismann asserts,

¹ The first point was dealt with by Dr. Bridges in the next two papers, the second point being the subject of the paper on "The Darwinian Controversy" in Part I.—ED.

² July, 1894.

³ Dr. Bridges refers to the preceding paper on "Darwinism in Politics."—ED.

⁴ *Social Evolution*, by B. Kidd. (Macmillan and Co.; 1894.)—ED.

will occur in a downward than in an upward direction. Hence the structures and organs elaborated in the course of evolution will gradually disappear, and the species will revert to the primitive stock from which it sprang.

3. Social organisms are but higher forms of life. Their laws of growth are in the main identical with those of the lower forms. They, like other organisms, are in a state of perpetual struggle. There are more of them than there is adequate room for. Those of them which in the course of generations develop variations that give them an advantage over their rivals survive. The others perish.

4. The variations which give such an advantage are those which induce individual units to sacrifice their own comfort and happiness for the good of the community.

5. Here comes into view a fundamental antagonism between the interests of individuals and the interests of societies, which is intensified by every advance in the increase and the diffusion of knowledge. In proportion as men become more enlightened and desirous of securing the comfort of their own lives and of those immediately connected with them, will they be anxious to put an end to that state of internecine competition between societies on which, nevertheless, if Darwin and Weismann be right, all progress depends. They will set before themselves an ideal of peace, of social justice, of restricted competition, of control over the spontaneous growth of population, of harmony between the interests of each man and the interests of state. This ideal, could it be realized, would involve the cessation of progress, since progress rests on competition, and ultimately the relapse into savagery. It will be pursued none the less; since men will never willingly consent to the continuance of a state of things in which, to use Mr. Huxley's words, "amidst a large and increasing body of the population of all the great industrial centres, *la misère* reigns supreme;.....in which, with every addition to the population, the multitude already sunk in the pit, and the number of the host sliding towards it, continually increase."¹ Mr. Charles Booth has recently told us that "of thirty-seven districts of London, each with a total population of over 30,000, and containing altogether 1,179,000 persons, the proportion in poverty in no case falls below forty per cent, and in some of them it reaches sixty per cent."² If this state of things be a condition of social pro-

¹ Quoted by Mr. Kidd from *Social Diseases and Worse Remedies*; 1891; pp. 32-33.—ED.

² Quoted by Mr. Kidd from *Labour and Life of the People*; 1891.—ED.

gress, men will never willingly consent that their own lives and the lives of those dear to them should be miserable for the sake of a distant future which they will never see.

6. The central fact in progressive societies being "that the interests of the social organism and those of the individuals comprising it at any time are inherently and essentially irreconcilable,"¹ what is the factor that maintains progress? That factor, Mr. Kidd asserts, is Religion. The forms and phases of Religion are infinite; but there is one character common to them all. The motives and sanctions given by Religion to the actions and beliefs which it involves are ultra-rational. From the rudest fetishism to the most highly organized form of Christianity, from belief in ghosts to belief in the Trinity, the same fact strikes us. A religion without supernatural foundations has never yet existed, and never will exist. For that name is not to be claimed by isolated groups or schools gathered round some doctrine or some philosophic name; it can only be given to a faith appealing to the hearts and governing the actions of men of all sorts and conditions. "Of forms of belief intended to regulate conduct in which super-rational sanction has no place, none," says Mr. Kidd, "has *proved* itself to be a religion; none of them can so far claim to have influenced and moved large masses of men in the manner of a religion."² A scientific religion is a contradiction in terms. For the function of religion is to induce men to submit to restrictions, and to engage in courses of action which are directly contrary to their individual interests and to those of their own generation, but which are favourable to the ultimate survival and progress of the community to which they belong. Science and reason, on the other hand, lead men to do the best they can for their own immediate well-being and for those of their fellow-men in whom they can take a personal interest. Therefore, between Science and Religion there is an implacable antagonism—a gulf which cannot be crossed.

7. The most important fact in the history of Social Evolution is the rise and progress of Christianity. Its importance consists in this. By stimulating altruistic feeling to a degree unparalleled by any former creed, it has led to the destruction of privilege and of caste-feeling established by the Roman Empire and the feudal system. The consequence has been that, whereas the prizes of life in former times could only be gained by the few, they are now thrown every year more and more open to the many. In this way

¹ *Social Evolution*, p. 78.—ED.

² *Ibid.*, p. 112.—ED.

the area of competition has become enormously widened. It follows that competition has become far more intense than formerly, and that it will become far intenser in the future in proportion as the disappearance of privilege and the establishment of State-supported education give every one a fair start. And as competition is the sole channel of progress, the superiority of Western nations over the rest of the planet will become more and more obvious and uncontested.

8. There are certain regions, such as Africa and the tropical parts of North and South America, in which from climatic reasons the Western man cannot work. But over these he will maintain administrative control. The destiny of these regions is administration by Western officials on the same plan which has worked so successfully in India.

Such is the vision of the future that unfolds itself to that school of evolutionists to whom competitive struggle and survival of the fittest appear the sole factor in social progress. It is not an alluring picture. Throughout all time it is fated that more human beings shall be brought into the world than there is room to maintain in decent comfort; and that the charmed circle of those who succeed shall be surrounded by the wide and dreary fringe of those who fail. Once let the competition cease, once let the number of entries for the race fall to the level of the number of prizes to be given—and progress ceases; nay, the social structure degenerates slowly but surely to the depths from which it sprang. For in every organism, individual or collective, the structures gained in the long struggle through the ages tend to disappear so soon as the competitive struggle ceases. They maintain their existence only by constant pressure of the grindstone. Such is the iron law of *panmixia* as enunciated by Weismann.

From so gloomy a destiny it might well be supposed that there would be continuous efforts to escape. Reason and intellect brought to bear on the facts of social life suggest measures for withdrawing from the competitive mill, for surrounding the social organism with such protective institutions as shall shelter it from rivalry, for refusing to bring into the world an excess of human beings for whom there are no vacant places, and who therefore must perish miserably. But though Reason and Science point this way, Religion, a more potent factor in human life, points in another; and the essential feature of Religion is to be ultra-rational, to move in a sphere where Logic and Reason have no sway.

Thus the Darwinian fabric rests ultimately on the foundation of

supernatural belief. A few philosophers may reject it; but, seeing it to be essential for the maintenance of the competitive struggle, they will come at last to acquiesce in its continuance, and will watch with equanimity the willingness with which belief in God induces men to accept a state of things of which atrocious misery is an unavoidable accompaniment. *Si Dieu n'existait pas, il faudrait l'inventer.*¹

Against this melancholy picture of human future let us place the conception of social progress held by those who utterly disbelieve in the permanent antagonism of Religion and Science, or of the welfare of Society and that of its component units.

When the social state of primitive Man became stable and continuous, certain instincts rose to prominence which in his isolated condition had been latent or repressed. Far down in the scale of animal life we can trace, side by side with the passions of self-preservation, the impulses which inspire protection of the young, and the tendencies towards tribal gathering carried often to disregard of individual danger or death for the sake of the community.² In Man, as soon as his superiority to other animal races was once assured, these altruistic impulses found freer play, and were strengthened by exercise as the generations followed one another. Moreover, quite independent of inherited changes in the nervous structure of each individual, there is a progressive development of the society through accumulation of mental and material products. The growth of capital sets free large amounts of nervous energy for other things than the provision of food and clothing. The growth of language makes it possible to store up intellectual products and to strengthen the continuity of past and present generations. Man begins to form rude theories of his place in the world, and of the forces that govern him; theories which, in the absence of all knowledge, are inspired by the lowest and the highest of his emotions—fear and reverence. Purely supernatural at first, these primitive religions pass by slow degrees from the irrational and divine to the rational and human; and are finding in the present time their final issue, through the teaching of social and historic science on the one hand, and on the other through the wide-spread though vague ideal of the Christ, in the Religion of Humanity.

The inherent antagonism between Society and its units, which

¹ "If God did not exist, it would be necessary to invent him." From a poem by Voltaire.—ED.

² Cf. pp. 79-80.—ED.

Mr. Kidd supposes, is the merest nightmare born of the crude materialism that regards the science of Man as a mere deduction from certain hypotheses of natural history unaccepted even in their own domain by many of those who know, and resting on the slenderest foundation of fact. Problems of population and heredity, which solve themselves in plants and beasts by the ordeal of fierce conflict, pass with Man into a new dispensation as different from the old as the space enclosed by a garden wall is from the wild confusion of the fields and woods around it. In the woodland the trees and grasses best adapted to the soil and climate multiply as they will and can; the less favoured ones are starved out and disappear, or hide in obscure places with stunted growth. Under the provident eye and hand of the gardener, each enjoys its proper soil and climate, and has room to grow. So will it be under the reign of Humanity when the procreation of the human race takes place under the spiritual forces of that religion to which all other modes of religion are but the precursors.

The writer of this work complains that philosophic thinkers have hitherto neglected Religion as a factor in civilization. From a critic of Auguste Comte this is a strange reproach, since in Comte's work on the structure of Society and the Philosophy of History,¹ Religion is the main subject. If he had studied that work more closely, he would see that his own conception of Religion, involving a perpetual conflict with science and a permanent antagonism between Man and Society, is a contradiction in terms. The religious state implies the harmonious action of all spiritual energies, whether of thought, feeling, or will. It implies unity within, union without: inward and outward peace. Is Mr. Kidd ready to enter any London pulpit and say, "Worship God and do his will: by so doing you and yours will be miserable, but you will promote the ultimate establishment of your race as masters of the world"?

On the whole, perhaps the most striking lesson to be learnt from this singular book is a caution against taking up the last new scientific hypothesis before facts have been found to prove or disprove it, holding it forth as a proposition from Newton's *Principia*, and using it as the basis of a new social system. The pivot on which Mr. Kidd's argument hinges is Weismann's hypothesis of *panmixia*, the view that without competition organisms would not be maintained at their present level, much less rise beyond it; that they would revert soon to more degraded forms.

¹ The *Politique Positive*.—ED.

But *panmixia* is not accepted yet even by biologists; and even if it were, it would be rash in the extreme to extend its application to human evolution, where forces of a wholly different kind come into play.

III

THE ASCENT OF MAN¹

THERE are many signs that the exclusive ascendancy of the competitive theory of evolution to which we have been subjected during the past thirty years is drawing to a close, and that a broader and deeper theory, at once more synthetic and more sympathetic, is beginning to take its place. Not that the labours and researches of Darwin and his successors will be discarded or thrown into the background. The appearance, in 1859, of the *Origin of Species* will remain an epoch in the history of science. But the theory will be supplemented by the incorporation of other factors. Internecine competition will no longer be recognized as the sole motive force which has prepared this earth of ours for the advent of man. Far greater caution will be used in the application of the Darwinian theory to the solution of human problems. It will become more and more clear that other agencies than those of rivalry and combat have been always at work; and that these, as time goes on, tend to become increasingly prominent, until we pass under the reign of Humanity into what is practically a new dispensation—the state in which man's providence brings the forces of the material world into harmony, and renders them subservient to an ethical purpose. All this may be summed up by saying that, as men discern the narrowness of the limits within which Darwinism is useful as a key to the history of man, they will revert to the theory of human evolution put forth earlier in the nineteenth century by Auguste Comte.

An indication of this kind is given by Mr. Henry Drummond's recent book, entitled *The Ascent of Man*.² The author is a Spiritualist. But he has familiarized himself with the results of recent biological research, and in no way shrinks from any conclusion to which scientific investigation may lead. Let it be said at once that, in what relates to man and his position in the world,

¹ August, 1894.

² *The Lowell Lectures on the Ascent of Man*; 1894.—ED.

Spiritualism, though with special inconveniences of its own, is not without value as a counterpoise to materialistic specialism. The time is near at hand when Positivism, which is neither spiritualist nor materialist, will combine all that is best in either school and reject the dross. The reconciliation of analysis with synthesis will then be accomplished. But until, under the Religion of Humanity, the complete ascendancy of Ethics has been rendered compatible with free play to the lower sciences of which it is the crown, spiritualistic philosophy at least serves the purpose of fastening attention on the study of man's moral nature, which the unorganized specialities of biological and physical research tend otherwise to overshadow.

The greater part of Mr. Drummond's book is devoted to the preparation visible in the lower stages of life for the facts specially characteristic of the highest stage as revealed in the nature of man. He dwells on the fact which Positivist writers have constantly emphasized, that the Darwinian theory of evolution, though true so far as it goes, is fatally one-sided in that it concentrates attention almost exclusively on the function of self-preservation. The truth is, however, that in the lower degrees of life, as in the highest, we may discern the continuous operation of two forces—the struggle for the life of self, the struggle for the life of others. In the most elementary forms of life these two forces are represented by the two functions of growth and reproduction. As in the simplest cells, whether vegetal or animal—in the *Amoeba*, for instance, or in the ultimate cells of root-fibres—we can trace something that can be called Choice, and that may be regarded as the germinal principle of Mind; so in the mutual attraction of two cells, which, by their union, produce a new generation, we discern the first beginnings of that vital force known to us ultimately as Love. Proceeding upwards through the scale of Life, as the sexes become separate, this instinct takes a visible and palpable shape; and superadded to the sexual instinct is one of even greater significance—the care of the mother for her offspring. Unconscious and almost mechanical in the articulate and lower vertebrate tribes, it becomes prominent and conscious among birds, still more potent with the animals that feed their young from their own substance and nurse them through a period of infancy, until the function is carried to its utmost height in the longer and more helpless infancy of Man.

The family once formed, the germs of morality appeared in the world. In the short-lived families of animal tribes few traces can be seen of this, except by naturalists whose insight has been fortified

by study of human society. No one has thrown greater light on it than the philosophic sportsman of the eighteenth century, Georges Leroy, the friend of Hume and Diderot. His descriptions, in his *Letters on Animals*,¹ of the family life of wolves and foxes vividly describe the first beginnings within the narrow circle of the home of those emotions of tenderness and pity which lie at the root of morality. Further than this among animals it is impossible to go. Morality, in the true sense, requires the simultaneous existence of the family and of society. A moral action is a social function performed by a free organ under the influence of those affections which the family has first called into being. Now, social existence on a large scale has been crushed out among the higher vertebrates by the ascendancy of Man. On the other hand, we may see social life carried to a high pitch of perfection among bees and ants with entire absence of family life. A state of things in which all our social activities were prescribed by our official superiors, or were the automatic result of ancestral tradition, would be quite incompatible with morality. Moral life, as wise men have said for ages, implies a measure of freedom and choice. What Comte added to the time-worn discussion was the all-important truth that morality implies love. Love is the fulfilling of the law. The characteristic feature of human action is *Agir par affection, et penser pour agir*.²

Human society is distinguished from the bee-hive or the ant-hill by the fact that it is made up, not of individuals, but of families. In the love of parents for their young, in the dependence of children on their parents, in the comradeship of children of the same household, we have the germs of the three altruistic affections—compassion, reverence, and friendship—the growth and final supremacy of which form the principal factor in the Ascent of Man. Into the making of Man, into the moulding of his character and impulses, it is abundantly clear that other factors have entered. Fierce struggles against external fatalities, battles with rigour of climate, with carnivorous races, with rival tribes, carried on through thousands of years, have not merely hidden from view the faint and dim beginnings of unselfish love, but have left inveterate traces, have strengthened ferocious animal instincts which, when unrestrained, render man the most formidable of beasts of prey. Nevertheless, the double meaning of the word *Humanity* is no fortuitous fact. It reveals the instinctive assurance, engraved on the monumental tablet of familiar speech, that what specially defines man from other animals

¹ See p. 54 (note 1).

² See p. 38 (note).

is his capacity for the final triumph of unselfish love. The rise and progress of that love is the central theme of human history, when some day it shall be rightly written.

In man's slow ascent self-love and love of others have ever been, and in the future will be, intricately intertwined. A world of unselfish activity, from which self-love should be wholly shut out, may be dreamed of; but it is not, and never will be, ours. Of ours what can be said is that the nobler element flashes out the brighter for the darkness; or rather, like the bullet in the rifled barrel, it gains efficiency from the resistance. War, the collective killing of fellow-men, has been the school of the noblest virtues; as the very name of virtue—manliness—remains to testify. Fidelity, truth, honour, valour, discipline, endurance—such are some of the lessons learnt in that school, when men like Cæsar were schoolmasters, or when the contest was for the defence of the best treasures and traditions of humanity. Rome's incorporation of her conquered nations gave rise to the wholly new conception which illumines the writings of Cicero and the Stoics before the Christian Church arose—the conception of *humanum genus*, of the collective whole of which each one of us is a member, and to which each owes service. Paul and the Christian saints did but add intensity to a current of thought and feeling already flowing. The Christ of the Catholic Church is the forerunner of Humanity, with whom the Christ of the nineteenth century tends every year to become more identical, stripping off what is specially Jewish, miraculous, and theological, and embodying the results of modern science and revolutionary progress. For those who can read between the lines of the evolutionary story, the spectacle of a Pope¹ persuading the faithful to accept the French Republic, and occupying himself with the solution of labour problems, is one of the many sure signs that the reign of Humanity is not far distant. The bud is opening into blossom, though theological husks may still cling to the outer petals.

It is quite true, as the naturalists tell us, that the law of natural selection holds good of every form of life; of complicated social organisms no less than of the humblest protophyte. Those societies which, from whatever cause and in whatever way, have developed the virtues of truth, fidelity, justice, courage, will hold together best, and, other conditions not opposing, will take the leading place. In the final state of man, victory thus gained can leave no sting in those who are the losers, since the very qualities

¹ Leo XIII.—ED.

that obtained it are guarantees that it will be rightly used. In our present imperfect state the operation of this law, though confused by conflicting causes, is none the less certain.

To take a familiar instance. Englishmen won their empire by strength born of virtues fostered for eight centuries in English households, and culminating in the age of Elizabeth and Shakespeare. Strength may survive for a time the moral force that generates it. But if in the retention and extension of empire a different temper should arise—pride of race and caste, greed of power, suppression, in the name of patriotism, of patriotic life in every race but our own; if empire comes to mean destruction of African races by Maxim guns and alcohol; if the annexation of a coveted province is effected under a veil of fulsome pledges which we are pre-determined to violate; and, lastly, if internal progress and the urgent needs of our working population are disregarded in the struggle for these avaricious and visionary aims—then it is certain that the seeds of self-destruction which such an empire contains will be swift to germinate. Whether from outward attack or from inward decay, it will fall; and great will be the fall of it.

We need not and cannot deny that by the law of natural selection advantages and ultimate success are given to those societies that observe the rules of justice; disadvantage and failure are the ultimate fate of those who violate them. This is but the repetition in scientific language of many wise saws of old times, as that "Honesty is the best policy," that "The mills of God grind slowly, though they grind exceeding small," that "Righteousness exalteth a nation," and many others. In this way the Darwinian law makes for righteousness, it is said; and we want nothing more. It is much, no doubt; but it is not enough. Hope of reward, fear of retribution, have been held out to man for centuries during the reign of the gods. They are held out again during the more permanent dominion of law. In neither case does the incentive suffice if unaccompanied by direct appeal to a higher motive; to the enthusiasm that springs from unselfish love, sacrifice of self, devotion to the cause of others. Such feelings have their root, as we have seen, in the deepest sources of life. Their growth from lowly beginnings, their increasing power to modify the instincts of greed and savagery, their ultimate ascendancy in the far-off future to which we tend—these things, and not the power to annihilate space, rival the speed of birds and fishes, or transmute earth into gold, form the final standard by which we are to measure the Ascent of Man.

CHAPTER II

IMPERIALISM

I

IMPERIALISM AND PATRIOTISM¹

FACTS that pass immediately around us, which form part of our own atmosphere, and from which we cannot escape any more than from our shadow, are very often just those which it is hardest to grasp with the clear, definite precision which a student aims at in studies of a remoter kind. Mathematics, electricity, the description of some unknown microscopical organism, the investigation of an obscure corner of the Athenian or Roman constitution, offer problems of much difficulty, and sometimes of much importance. But the problems offered by man's practical life, to say nothing of their overwhelming urgency, are of much greater scientific difficulty. We are driven, of course, to form rough and ready rule-of-thumb solutions, reached by the varying play of passion, interest, or prejudice which governs our life, much in the same way as fish swimming in a whirlpool may be said to solve practically some very complicated problems of dynamics. But to arrive at clear, definite statements of general truths, such as we aim at, not without success, in the simpler sciences of biology and physics, is altogether another matter. And yet nothing short of this must be aimed at, unless human life is to be tossed hither and thither by the varying play of popular impulse, commercial greed, and political ambition.

What, for example, is patriotism? Without attempting, in the first instance, a definition that shall stand all tests, we may at least start with a provisional definition that, so far as it goes, shall be both intelligible and certain. We may speak of it as the complex of feelings and convictions which lead men to behave in case of need as the Greeks behaved at Marathon or Thermopylæ, the Romans when Hannibal was encamped at the Colline gate, the Dutch at the siege of Leiden, the French in the first years of the Revolution, the

English when threatened by the Armada, the English and Scotch when threatened by Napoleon. In all these cases there was an almost absolute concentration of the muscular and nervous energies of the community upon a common purpose. Self-preservation, the strongest and most persistent of animal instincts, was entirely subordinated to the preservation of the community. In plain English, men died for their country, or were ready to die.

It is, perhaps, not needful to spend many words in praise of patriotism as thus defined. Indeed, no words at all would be needed, were it not that Positivism has been supposed, by those who know nothing of it but the name, to take but little account of it. But only those who are entirely ignorant of what Positivists think and teach could make this mistake. No principle has been more strongly repudiated by Comte than that of bare cosmopolite humanitarianism. Between pure self-love and pure love for Humanity, our Family affections, our devotion to our Country, are interposed. Those who show themselves insensible to the narrower ties are looked on with suspicion, and with well-merited suspicion, when they proclaim their devotion to the wider. Philanthropists, pure and simple, are not always the best of men. Rousseau, who sent his children to the foundling hospital, and his pupil Robespierre, who began by advocating the abolition of death penalties, and ended as we know, have not left savoury memories behind them. A man who is known to be brutal to his wife or children, or to the lower animals, will find it hard to gain the credit of a good citizen; and so, too, no professions of devotion to the widest interests of Humanity can atone for indifference to the welfare of the community in which he was born, and through which he inherits all that raises him above the savage. These truths are trite; yet it seems that sometimes they need repeating.

Assuming patriotism to be a state of mind and of character to be devoid of which is a grave misfortune entailing grievous moral loss, what are the conditions for its manifestation? Three things seem to be necessary. First, a definite appropriation of a certain portion of the earth's surface. Secondly, willingness to combine politically under a fixed government. Thirdly, acceptance of a common tradition embodied in religion, in language, in laws, in historical memories, or at least in some of these, for identity in all of them is not strictly necessary.

As to the first of these conditions, few will doubt, though few seem to understand, the principle upon which it rests. Why do we cling with such invincible love to the inanimate mountains, plains,

and shores that we call our fatherland? Why do we return to them with joy after months and years of absence, spent on a richer soil and in a more genial climate? These feelings are, in the truest sense of the word, fetishistic; and fetishism is no bundle of savage traditions to be handed over to the student of folklore; it is something that lies permanently at the root of man's life; something that inspired Wordsworth's noblest poetry and Turner's pictures; something that is destined to play a large and growing part in the religious culture of the future.

Be this as it may, the necessity of this first condition of patriotism is forcibly illustrated by its absence in the case of the Jews. I speak not of those who are Jews by race, and who become naturalized in the country where they may choose to dwell; but of Jews who cling to their tribal religion, and who, with many admirable qualities of mind and character, have been a source of continual disturbance in Europe, often of tragic outrage, for many centuries.

We may pass, with few words, to the second condition of patriotic feelings—willingness to act under a common government. The Scotch are said, and rightly, to be patriotic Britons, because, however strong their national feeling as Scotchmen, no doubt can be raised as to their acceptance of the central government in London. As to Ireland, the case is obviously different; but to discuss it here would exceed the limits of this paper. As illustrations of the combination of local independence with federal co-operation, two examples are worth considering, because in extent of territory they stand at the two extremes: the Swiss and the American republics.

The third condition is, perhaps, the most important of all. To constitute patriotism, acquiescence in a common government, though essential, is obviously inadequate. Infinitely more important than this are the collective actions, not of the present generation only, but of past generations. Some will tell us that such a thought appeals only to that infinitely small portion of mankind that reads books of history, and that the enormous majority of men and women care little about the matter. Those who think thus are but shallow students of human nature. Did Nelson's signal at Trafalgar stir his rough crews any the less that few or none of them had read Hume's or any other history of England? Men rally round symbols as soldiers round their flag; and increase of knowledge will but make such symbols more potent in the future.

A common country, a common government, common memories,

traditions, enthusiasms—these things constitute patriotism. Of its ethical and political value little need be said on the present occasion. The point to be considered is, In what relation does it stand to Imperialism, which it is now sought to encase in patriotic veneer? As used by British politicians at the present time, the word *imperialism* covers two wholly distinct and even opposed political states. There is the case of India and the Crown colonies, which we govern by force, and to which the word *empire* properly applies. Secondly, there is the case of such colonies as Australia, New Zealand, and Canada, which we cannot be said, in any ordinary sense of the word, to govern at all. They make their own marriage laws; they impose what duties they please on the introduction of British produce. The retention of the Crown veto on their acts is as nominal as is the right to veto a Bill which has passed through both Houses of Parliament. Nor do they contribute, in any substantial way, to the maintenance of the British army and navy. No one doubts that the ties which bind the colonies to England—the ties of race, of language, of intimate family relationship—are very real and strong. Equally certain is it that they will not bear straining. As time goes on, and as new generations appear on the scene, the local patriotism of Australia, South Africa, New Zealand, and Canada will grow stronger. The dream of uniting them into anything that can be called a political federation is swiftly melting away.

The government of British India, like that of the Dutch and the French East Indies, rests, distinctly and avowedly, on material force—force modified, doubtless, by the moral restraints of humanity and justice, which are strongly operative in each of these three cases. On the unrighteous deeds connected with the original conquest there is no reason now to dilate. The continuance of our dominion can only be justified ethically if the result be what it was in the case of the conquest of Gaul and Spain by Rome—a steady progress towards identification of the conqueror and the conquered, ending in the entire removal of all political and social disabilities. So long as this result remains doubtful it will be best to refrain from exultation at the maintenance of our Indian empire. That it is a source of wealth to us, except in so far as it supplies lucrative employment to a few hundreds of our upper middle classes, is an illusion long since dispelled. That the country is growing richer under our sway is often strongly stated, but has also—and especially of late years—been strongly doubted. But the test question remains—Are we preparing India for self-government? Are we

making progress towards obliteration of the social distinction between the governing class and the governed? Unless and until these questions can be answered satisfactorily no one who knows what patriotism really means can pretend to feel patriotic exultation at the maintenance of our Indian empire. We may accept it as a duty inherited from the past. We may recognize its necessity as the only means available for avoiding the miserable anarchy that would follow a successful invasion of India. But to be proud of it is another matter altogether. Between Imperialism and Patriotism there is a gulf set which no sophistries can bridge.

II

ROMAN AND BRITISH IMPERIALISM¹

POSITIVISTS are well known to be admirers of the Roman Empire. Even Dante's appreciation of Julius Cæsar was not higher than Comte's; and what Comte has said of this great statesman has been reiterated and amplified by M. Pierre Laffitte in his *Grands Types de l'Humanité*,² by Dr. Congreve in his lectures on the Roman Empire,³ and by the Editor of the *Positivist Review* in the *New Calendar of Great Men*.⁴ Before the appearance in England of Mommsen's great work,⁵ Positivists were content to bear with equanimity the stigma of Cæsarism cast on them by their democratic friends. Guided, though not slavishly guided, by Comte's *Philosophy of History*, they have always seen that in the great Roman Revolution of the century before the Christian era Cæsar was the upholder of progress, the true republican; and that his assassins were what Dante paints them—traitors, or dupes of traitors, to the cause of Humanity. The Roman Empire, with all its abuses, with shortcomings inherent in its origin, often administered by unworthy chiefs, and due account taken of the corruption of its later years, remains, as a whole, one of the noblest instruments of progress ever forged by human wisdom.

This being so, why is it that we look with coldness on the British Empire as it stands, and offer all the opposition in our power to its further extension? The Roman Empire established its

¹ 1900² Vol. ii, pp. 461-96.—ED.³ R. Congreve, *The Roman Empire of the West*; 1855.—ED.⁴ See Professor Beesly's biography of Cæsar, pp. 164-68.—ED.⁵ *The Roman History*; 1854-56.—ED.

sway over many nations and languages, welded them into a whole, gave them peace, gave them law. Is not British rule in India and elsewhere tending to do the same, and to do it in a purer and less tyrannical way? Admiration of the Roman Empire, detestation of modern Imperialism—what is to be said of a political school which combines these two principles, except that those who hold them blow hot and cold at once? And yet nothing is more certain than that the Positive school of politics does combine them, and is prepared to justify its attitude. What is the justification?

We have again to go back to the fundamental meaning of the word *Positive*. It is an unattractive word at first hearing; it rouses many objections, and even among Positivists there are some who would like it changed, because it has too harsh, too dry, too doctrinaire a sound. Some would like it changed to *scientific*; some, again, to *humanitarian*. Each class of objectors fails to see that the ideal towards which Positive Philosophy is working is to be both at once. Of its seven characteristic notes the first four—*reality, utility, certainty, precision*—distinguish it from mystical or metaphysical schools, and bring it into touch with science in the rather narrow sense in which that term is often used by physicists. Building on this firm foundation, Positive Philosophy aims at being *organic, relative, and sympathetic*. It is the second of these three qualities that I wish to speak of now, though in truth it is only by an artificial effort that it can be separated from the rest.

What do we mean by *Relative*? It is best explained by reference to Comte's definition of life as "a continuous and close adjustment of internal spontaneity with external fatality."¹ To speak of the life of an organism apart from its environment is an unintelligible use of words. The words are simply devoid of meaning. The simplest plant—a microscopic fungus, for instance—presupposes certain conditions of atmospheric pressure, of soil, of temperature, and so on, without which it would be non-existent. In animal life it is much easier to recognize this truth; indeed, animal life was spoken of by Bichat with significant exaggeration as the life of *relation*, as distinguished from vegetal life, the life of nutrition.² Obviously most of the functions of nerve and muscle consist of continuous relations with the outer world. By one of the five senses the animal perceives its food; by muscular action it seizes and devours it.

Far wider is the significance of relativity when we pass from the

¹ *Pos. Pol.*, vol. i, p. 335.

² *Cf.* above, pp. 5-6.—ED.

science of biology to that of sociology. Many new factors come into play here. For the present let us concentrate attention on the most important of these—the gradual evolution of the advanced portion of Humanity, often spoken of as the History of Civilization. Pascal taught us long ago that “the whole series of human generations should be looked upon as one and the same man ever living, ever learning.”¹ In the eighteenth century many other thinkers, notably Leibnitz and Condorcet, enforced the same truth, the full significance of which it was left for Auguste Comte to discover. More or less dimly the truth has always been perceived by the great leaders of men. “When I was a child,” said St. Paul, “I spoke as a child, I felt as a child, I thought as a child; now that I am become a man I have put away childish things.”² In his own mystical way he, like Pascal, felt and expressed the analogy between the growth of man and the growth of Humanity.

This being so, it follows that all political judgments of any value must be relative. In other words, we cannot form a sound opinion as to the action of statesmen at any period of history as to the value of laws enacted or of institutions established without taking account of the degree of evolution which the community under consideration has at that time reached. Obviously this view of the matter raises a difficulty, and suggests a danger. It would be so much easier if we could devise a hard-and-fast rule that any one could apply to all cases and all times. Change being a law of all life, individual or social, there is the danger of mistaking what is relative for what is arbitrary; of confounding change in accordance with a definite law, with the fortuitous results of arbitrary caprice or contending passion. But who is prepared to say that political problems are easier than mathematical problems? There is no royal road to the solution of either. Here lies the function of the law-giver, or rather of the law-revealer in science. The planets were thought to move at the capricious will of a deity, till Hipparchus, Ptolemy, and Kepler revealed their laws of movement. So has it been, and so will it be, with the changing phases in the life of Humanity. Comte, aided by his predecessors, has gone very far in determining the laws of these changes. Much more,

¹ From the *Préface sur le Traité du Vide* (1647). A similar thought to Pascal's occurs in the writings of the two Bacons, Descartes, and Fontenelle. Readers interested in the history of this important idea should consult the note on pp. 139-41 of vol. ii (1908) of the complete ed. of the *Œuvres de Blaise Pascal*, by L. Brunschvicg and P. Boutroux, where they will find full references and authorities.—ED.

² 1 Corinthians, ch. xiii, 11.—ED.

we cannot doubt, remains to be done by great discoverers in the future.

Enough, nevertheless, has been already done to be of much service in determining questions of the kind raised in this paper. Take, for instance, the great discovery with which the scientific treatment of social evolution may be said to have begun; what is commonly known as the Law of the Three Stages.¹ The law, as all students of Comte are aware, is twofold; it applies on the one hand to man's thoughts, on the other to his activities.² As his theories of the world around him are in the first place supernatural and ultimately scientific, so in the department of practical life war takes the first place in the early stages of civilization; pacific industry in the final stage. In either case there is an intermediate phase, or rather there are groups of intermediate phases; but the essential point for our present purpose is that war, which at one period of man's development is a normal condition, becomes at another period an anomalous and morbid condition. Hence it is that a serious student of history forms such diametrically opposite judgments of Julius Cæsar and of Napoleon Bonaparte; regarding the first as a benefactor to mankind, the second as a curse. But let us look at the matter somewhat more closely; turning from Comte's abstract laws to the concrete facts of history.

All will admit that for many centuries before the Christian era the nations of Europe were in a state of incessant warfare. Of the more remote Celtic and Teutonic tribes we know this mainly through their legends; the evidence, however, from this source is overwhelming. Of Greece and Italy, and of the nations in direct contact with them, we know it by recorded history. In Greece the growth of scientific and literary culture went side by side with more effective military discipline. The new force thus created suggested, to Athens first and afterwards to Macedon, the conception of universal empire, futile in the first case, partially successful in the second. Rome, endowed with an incomparably greater genius for organization and eagerly receptive of Greek culture, followed in the same path, and made herself supreme over Italy, over North Africa, over Spain, over nearly all that had been conquered by the successors of Alexander. There remained one danger to the Græco-Roman world of extreme imminence—that of barbarian invasion from the

¹ See p. 90 (note 1).

² See *Early Essays on Social Philosophy*, pp. 182-84; *General View*, p. 25; *Pos. Pol.*, vol. iii, pp. 44-55, and vol. iv, p. 157. Also consult Laffitte's *Philosophie Première*, vol. i, especially pp. 377-83.—ED.

north. From this the great republican dictator saved civilization for three centuries by the conquest and the effectual incorporation of Gaul. The work of Rome was secure; and, many years before the birth of Jesus in Bethlehem, peace became the law of the progressive nations. Among many things that may be said of the Roman Empire we are entitled to say this: founded by war, at a time when war was the predominant occupation of men, and when industry was left almost entirely to slaves, it turned war to the noblest account that was possible; it was the first sign, and offered the first hope, that war was destined finally to disappear.

One more feature of Roman conquest is to be noted. "The culture, the institutions, even the language of the victors, were eagerly adopted. The grandsons of the men who had fought so gallantly against Cæsar won full citizenship, took their seats in the Senate, and commanded Roman armies."¹ Of the long list of great emperors, most were neither Roman nor Italian. Trajan and Hadrian were Spanish, Marcus Aurelius of Spanish descent, Antoninus was half a Gaul. Others were African, Thracian, Syrian; Diocletian and many of his predecessors were Illyrians. The Roman Empire was in the truest sense an incorporation of discordant nations and languages into a harmonious system, from which the free civilization of Western Europe takes its origin. To compare it to the British Government of Hindostan is misleading. If several of the Governors-General of India had been drawn from the native population, the parallel would be less absurdly inaccurate.²

British Government of India is, however, rightly described as an empire; and the title of emperor or empress, taken of late years, wisely or otherwise, by the head of the Government, is at least not a misnomer. Our Indian possessions are a conquest effected by force, and needing force to maintain it. But to use the same word of our self-governing colonies is an abuse of language. Communities free to elect their own Parliaments, to make their own marriage laws, and to impose heavy duties on goods imported from the mother country, free also to choose what share they will take, if any, in military or naval expenditure, cannot be said to constitute an empire. That Australians and most Canadians are knit to us by ties of kindred and language, that in time of danger they form a recruiting-ground for volunteers, are facts of great political importance. If the time should come when the colonies consent to bear their fair share of

¹ *New Calendar of Great Men*, p. 165.

² See further on this subject the paper on "The Services of Ancient Rome" in Part V.—ED.

the cost of our army and navy, then, no doubt, Great Britain would have become, not, indeed, an empire, but a federation. How long that federation would stand the strain of party politics and of the enormous spaces that would separate its scattered members is another question; and its discussion is by no means urgent. As yet the Australians, New Zealanders, and Canadians fighting for us in South Africa are paid by the British taxpayer. Our colonists are indulging in war at the expense of the mother-country.

The truth is that the very conception of empire for progressive nations has become for many centuries a gross anachronism. The Roman Empire is an unique fact in history; meeting in an admirable way a peculiar combination of circumstances which, as we see when we analyse it, cannot recur. Between ancient Rome and modern France or Britain a series of events has passed; an evolution of thought and of action, which might be almost called a transformation of political species, were it not for the continuity and unity which pervade the whole. The rise of the Catholic Church, feudalism, substitution of serfage for slavery and of hired labour for serfage, the liberation of thought, the growth of science, the establishment of international diplomacy, the Dutch, English, American, and French revolutions—these and other things have brought about a new order of things in which the permanent subjection of Europeans to a king, queen, or cabinet resident thousands of miles away is entirely inconceivable. I say *permanent* subjection; for laws of historical evolution, plain enough to men of ordinary wisdom and average morality, may be resisted, and for a time with apparent success, by policies of "blood and iron," or of blood and gold, such as before now have tempted unscrupulous statesmen to national disaster. A strong statesman untroubled by conscience, finding a policy of reaction serve his turn, may resolve to "see it through." He may succeed for a time; a Napoleon for a generation; a smaller man for a few years; time enough to work irreparable mischief to his nation, though not enough to arrest the onward march of Humanity.

By creed and by instinct Positivists are nationalist no less than humanitarian. Their firm conviction that the interests of Humanity are in the long run safe will not deter them—will, on the contrary, impel them to do their utmost, be it much or little, to save their country from danger, physical or moral; from the danger of injustice or the danger of invasion. It is for this reason that they have taken and will take every occasion to resist so far as they can the spread of the imperialistic taint; that at the present moment they

are making common cause with those who seek to prevent the establishment of a new Ireland seven thousand miles away; and who, with this view, are urging that our inevitable triumph in the present struggle shall not be embittered and nullified by suppression of the two South African Republics.

III

THE SEA¹

CAPTAIN MAHAN'S books on sea power have been widely read and carefully considered. No one before him had so precisely analysed the conditions which enable a nation to be preponderant on the sea, and the results which follow from such preponderance. It is safe to say that Englishmen, with all their pride in their past naval achievements, had not realized the full importance of the subject until it had been presented to them in all its bearings in these writings of a friendly foreigner. They have been a powerful factor in stimulating the vast increase of our navy which began a few years ago, and which is still advancing with giant strides. The past history of the world is invoked, and is studied with a zest wholly new to naval men. From the second Punic War to the struggle of England with Napoleon, or of Japan with China, the enormous advantage possessed by the combatant who has command of the sea is made obvious to all.

But this conclusion, though applicable to every phase of the world's history, Athenian, Venetian, or Dutch, is of far greater moment at the particular point at which Western civilization now stands. In ancient history nothing was thought of but the Mediterranean and the countries which contained it. To this in the Middle Ages the Baltic and the German Ocean were added. Four hundred years ago the discovery of the Americas brought new problems to statesmanship; and the struggle to resist the monopoly of Spain on the South Atlantic agitated Europe, and England especially, till the middle of the eighteenth century. Nevertheless, the most pressing questions of the sixteenth, seventeenth, and even of the eighteenth century related in the main to Europe. And so it has been in our own century till close upon the present time.

Three conditions have been operating during the last generation

¹ 1899

to bring about a fundamental change. First among those is the enormous increase in the velocity of transit from one end of the world to the other. When New Zealand half a century ago became a colony it took as many months to sail there as it now takes weeks. It is the same, of course, with India, China, or the Cape. In a year or two from now Peking will be reached from Europe in a fortnight. The means of travel have of course increased with its rapidity, and in far greater proportion. Where fifty years ago there was one ship bound for the Antipodes there are now fifty. Secondly, the vast continent of Africa has been at last opened to explorers and exploiters. Immense regions hitherto left blank on the map and thought to be desert are now known to possess, at least when cultivated, boundless possibilities of wealth. A scramble among the great powers of the West for the occupation of them has ensued, and is still going on. Yet a third factor in the situation has recently been added. An ancient empire, inhabited by the most industrious population in the world, as rich in products that Europe needs as in consumers of what Europe produces, has been assailed by an ambitious neighbour, and so smitten as to be compelled to open its gates. The Japanese war with China has done what a series of English wars have failed to do. Immense possibilities of profit lie open to European and American traders. A bottomless source of mutual jealousies has been set flowing.

The result of all this is that the statesmen of Europe—not to speak of those of America—have no longer to confine their attention to this or that portion of the earth's surface. They are compelled, each and all of them, to deal with the whole planet. And the first fact that meets them is the elementary geographical truth that three-fourths of the earth's surface are covered by water. It was a shock to the Germans three years ago, when England was angrily resenting their sympathy with Kruger; it was a still greater shock to France the other day to find that, if it came to blows, they could not move five thousand men across the sea if England chose to say them nay. They ought to have known this, of course; but nations, like men, are shy of grasping disagreeable truths until the time comes for their practical application. They are now digesting another truth which is an obvious corollary from the foregoing. Germany, France, Holland, Portugal, and every other power that holds, or hopes to hold, distant colonies, holds them by sufferance from England.

It has been a principle of modern statesmanship, ever since the fall of the Papacy, to resist the preponderance of any one State in

Europe, and, if need be, to combine practical efforts for that purpose. Charles V, Philip II, Louis XIV in the later half of his reign, and the first Napoleon experienced in turn this very salutary limitation of their ambitions. The field of conflict was far more limited then than at the present time. Europe was its centre, and the Indian and Atlantic seas its extreme boundaries. The vast Pacific ocean, with the lands that lie there, was still outside the limits. It is otherwise now. Captain Mahan severely criticizes France under Louis XIV and his successor for her blindness to what was taking place on the sea, and for not uniting her efforts with those of Holland to resist the maritime domination of England. He says:—

While England's policy thus steadily aimed at widening and strengthening the bases of her sway upon the ocean, the other governments of Europe seemed blind to the dangers to be feared from her sea growth. The miseries resulting from the overweening power of Spain in days long gone by seemed to be forgotten; forgotten also the more recent lesson of the bloody and costly wars provoked by the ambition and exaggerated power of Louis XIV. Under the eyes of the statesmen of Europe, there was steadily and visibly being built up a third overwhelming power, destined to be used as selfishly, as aggressively, though not as cruelly, and much more successfully, than any which had preceded it. This was the power of the sea.¹

It needs no special boldness of prophecy to foretell that this condition of things will not be tolerated indefinitely by the civilized world. We are told that the existence of the British Empire depends upon it. If that motley assemblage of Asiatic and African dependencies, and of self-governing colonies, content for the present with the protection of a fleet for which they are not taxed, has no other bond of cohesion than this, it is very certain that its life will not be long. When it falls we are told by its defenders that the British population will starve, for the United Kingdom depends for its food on foreign supplies. It is hard to appreciate such an argument. Is it contended that, when England no longer imposes on the world with its fleet, every other nation will combine to prevent American, Russian, or Indian cornships from entering British ports? Why have they not done the same by Holland, whose once formidable fleet has disappeared for two centuries, and whose people are none the worse?

¹ A. T. Mahan, *The Influence of Sea Power upon History, 1660-1783*; p. 63.
—ED.

Captain Mahan has let fall a significant expression which one day will become a household word—"The common birthright of all peoples, the sea."¹ He has struck the right note; and, in spite of deeply ingrained prejudices to the contrary, that way lies the path of progress. The common birthright is not to be monopolized by any power whatsoever—even by our own. The ultimate goal lying before us, unattainable as yet, but to which each generation should seek to approximate more nearly, was pointed out fifty years ago by Auguste Comte—a combined navy of the Western Powers, established for the double purpose of preventing piracy on the high seas, and of promoting physical and geographical discovery.² France, in Comte's view, should take the first step in this great enterprise; that first step consisting in the reduction of her own navy to the fourth part of its existing dimensions. In civilized communities it is not tolerated that any wealthy citizen should swagger about with a band of armed retainers. And so it will be with navies when the world is wiser.

Changes of this kind are not brought about by the unmixed operation of moral and intellectual causes. Material circumstances intervene. And in the present case they are not wanting. During the last decade, while the British navy has been increasing rapidly, three new navies have appeared on the horizon, all of them fully determined to make their weight felt—the German, the Japanese, and, latest and most formidable of all, the American. The time for piercing the Isthmus of Panama is at hand; and it is an open secret that the Clayton-Bulwer Treaty is to be set aside.³ The Americans have become a power on the Pacific Ocean; and they intend to keep the approaches to their Pacific as well as to their Atlantic coasts in their own hands. Not all the fulsome flattery that has been lavished so profusely from this side of the water on the great Republic will alter the remorseless logic of events. The supremacy of any one nation on the sea will not be tolerated much longer.

Let us not make the mistake of dismissing the Czar's appeal to the nations to meet in conclave and discuss disarmament either as an idle dream or a diplomatic trick. When the Council meets, the impossibility of discussing the size of armies irrespective of the size of navies will be foremost among the facts to be met. What will be

¹ *Ibid.*, p. 42.

² See *General View*, p. 285.—ED.

³ The Clayton-Bulwer Treaty of 1850 was superseded by the Hay-Pauncefote Treaty (1901), which allowed the United States to build the Panama Canal while still guaranteeing its neutralization.—ED.

our claim? Hitherto we have been content to hold that our navy should be equal to the two strongest navies that could be brought against us. Shall we be prepared to better that claim now, and to maintain that we should be equal, not to the strongest two, but to the strongest four? Such a course would be almost equivalent to putting ourselves outside the pale of civilization, and proclaiming ourselves the public enemy. Yet if we do not take it we shall be told that we do not make ourselves absolutely secure against combined attack. In a state of civilization no one is absolutely secure; nor is it well that he should be so. Absolute security belongs only to the despot who lives in an armed stronghold involving the absolute insecurity of everyone around him. Let me quote from the Editor of the *Positivist Review*: "What is the meaning of this claim to absolute security.....that we shall go to war with impunity—that we shall be insured in advance against the consequences? Who are we that we should be exempt from the penalties affixed by Nature to folly and crime, whether of individuals or nations?.....In the field of international morality.....the dread of consequences is at present the chief security for fair dealing. No true patriot, therefore, would desire his country to be invulnerable. He would dread for her this gift, fatal as the ring of Gyges. The true glory of a country, as of an individual, lies not in wealth and strength, but in equity, in moderation, in nobleness of temper."¹

¹ From Professor Beesly's essay on "England and the Sea," in *International Policy*, 2nd ed., pp. 135-36.—ED.

CHAPTER III

WAR AND PEACE

I

DEMOCRACY AND WAR¹

THIRTY or forty years ago there was no surer way of catching the ear of a popular audience than by denouncing any of the wars with Asiatic or African nations in which this country happened for the time to be engaged. John Bright's voice was heard in the land in those days. Animated by deep and generous sympathies, and guided by convictions as narrow as they were intense, he taught the crowds who listened to him that our political and social evils were due to the domination of a privileged and self-seeking class of land-owners. Driven by his and Cobden's efforts from their entrenchment of the Corn Laws, they clung desperately to every vantage-ground that remained. So long as workmen were excluded from the suffrage the resources of the nation would continue to be wasted in aggressive wars, waged nominally for the sake of trade, but in reality to provide positions of profit and dignity for the needy sons of lords and squires. To meet these evils, to reduce our overgrown armaments to reasonable proportions, two measures were necessary and sufficient—free trade and popular suffrage. The first had been gained, the second still remained to be fought for.

Democracy came, rather sooner than Bright expected, with Disraeli's Reform Act of 1867. It has so happened that during a great part of the time that has passed since then England has been under the sway of a Minister whose personal predilections were entirely on the side of peace. Nevertheless, there has been no period since Waterloo during which England has been more constantly engaged in war. Wars in West Africa, in South Africa, in East Africa, in North Africa; wars in Afghanistan, wars on the frontier of India, wars in Burma; and now, worse than all, rumours of wars for the maintenance of English supremacy in the central river of the Chinese Empire. How far each or any of these wars

was justifiable is not now the question. The point for inquiry is: How far has the transfer of political power from the middle class to the mass of the population affected the temper of the people with regard to warlike proceedings? On the whole, it would seem to have inclined them to acquiesce in war and in preparations for war far more readily than was the case before the democratic revolution. The most important military enterprise of our time, the foundation of an English empire in the valley of the Nile, has been accepted without a murmur. Sixteen years ago, when we suppressed the first and solitary effort for Egyptian independence, a few scattered protests were heard and disregarded. A few days ago we soaked the sands of the desert with the blood of its bravest inhabitants, and the result is hailed with unanimous acclamation as a glorious victory. Sensational newspaper correspondents have been piling up the horrors of the skeletons through which our soldiers have been marching. Nothing is said of the ten thousand corpses that they left on the battlefield, if, indeed, *battue* be not the fitter name for an encounter waged with such hopeless inequality of weapons. But this by the way; the point here insisted on is that it is not the change from aristocratic or plutocratic to democratic government that will bring about the millennium of peace.

Nothing perhaps has more helped to expose the delusion that democracy and peace were inseparably associated than the example of the great American democracy since the days of slavery were ended. Before that time there had been iniquitous wars enough. Half the territory of the Spanish Republic of Mexico had been shamelessly seized. But the Mexican wars were supposed to be accounted for by the eagerness of the slave-owning aristocracy of the Southern States of the Union to enlarge their boundaries, increase their voting power in Congress, and so preserve their cherished institution. Slavery once abolished, war, it was boasted, was abolished likewise. Needless to say that all such hopes have been by this time effectively dissipated. As gratuitous and unprovoked a war¹ as history records has resulted in developing the latest greeds of the American democracy, and in bringing her before the world as a new aggressive Power, prepared to take her share in plundering the planet. There are far-sighted schemers who dream of a union between the two English-speaking Powers in carrying out this elevated purpose, and in bringing the tropical regions of

¹ The Spanish-American war of 1898.—ED.

the world—of the New World to begin with—under Anglo-Saxon administration. Were this dream to be brought within measurable distance of realization the Schleswig-Holstein drama would be repeated on a vaster scale. The spoilers of the weak would fight in deadly duel over the spoils.

What are the agencies which in a democratic community make for war? A few weeks ago I was asking an Englishman, long resident in America, a well-qualified and well-trained observer of political facts, how he accounted for the sudden explosion of the war fever, repugnant as all aggressive war was known to be to all the more stable and progressive elements of society, especially in the Eastern States. His reply was significant: "Sensational newspapers and Sunday-school philanthropy."

It is time that people should set themselves to consider more seriously than they have done as yet the character and the procedure of the amazing spiritual power which they have allowed to grow up during the last half-century, unchallenged and uncriticized, in the shape of the cheap newspaper Press. I need not apologize for calling it a spiritual power—a power that acts on opinion, as distinguished from legislative or administrative powers that direct or control action. So far as politics are concerned, it is at present the only spiritual power in existence, the Churches having practically abdicated their claim, so irresistible a few centuries ago, to be listened to in public matters, or urging it only in ways too obviously mischievous to involve much risk of its acceptance. In the times of the Commonwealth, and for more than a hundred years afterwards, the place of the priest in questions of public interest was taken by the pamphleteer. Here, at any rate, the guarantees of personal character and individual responsibility were retained. It was known, not merely what the adviser said, but what manner of man he was that advised. Moral securities of this kind are wholly wanting in the anonymous Press of the present day. It would be something gained if the political counsellor could be recognized as a very young man, with no experience of life outside a public school or college, no political training other than that of a debating society, no reasons for writing except to make a livelihood while waiting for briefs.

Anonymity is an evil, but it is not the worst evil. A great political leader may gather young men round him, inspire them with his principles, and use them to develop his policy as a master painter may entrust disciples with the less important parts of his canvas. But the modern newspaper is something very different

from a political studio. It is a great commercial enterprise, bringing in dividends to shareholders, and relying on advertisements and the maintenance of an enormous circulation. It has to flatter popular prejudice, to prophesy smooth things, to lay hold of startling events, to use the strongest colours, to listen readily to wild conjectures—in a word, to be sensational. To say that all newspapers yield to this temptation would be, of course, absurdly unjust. But the temptation exists for all, and many give way to it. It is commonly said that the most profitable page of a newspaper is that which contains its sporting intelligence. War carried on by Englishmen against barbarous tribes, or by Americans against Spaniards, has all the fascination of sport on the grandest scale—excitement of the keenest kind, without the remotest personal danger. War correspondents have developed a new branch of the fine arts. By their aid, and by the telegraph, we are brought as near to the scene of action as though we were at a Spanish bullfight. In a word, it is to the commercial interest of the newspapers that we should be at war.

“Sensational newspapers and Sunday-school philanthropy.” The second is intimately associated with the first, and is quite as dangerous. Man’s altruistic instincts are his most precious possession—his principal leverage for spiritual progress, his sole safeguard against sinking into a piece of industrial or military mechanism. But, like other instincts, they may be indulged with immense detriment and danger to all around him. Unreasonable gushes of benevolence led the followers of Rousseau and Robespierre by a straight path to the Reign of Terror. On a small scale or a great, the same thing is happening every day. The story of the churchgoer who was so deeply stirred by a charity sermon that he stole his neighbour’s purse to empty into the collecting-plate is not so very exaggerated a parody. A story reaches us of gross misgovernment or cruelty committed by some foreign potentate. Special correspondents are sent out; vivid pictures of atrocities are placarded through the country. The cry arises: “In the name of Humanity let the Government be suppressed, let civilized rule be established.” Whether action follows the cry, or whether it is allowed to die out, depends on whether it suits the purposes of aggressive statesmen to push the boundaries of empire in that particular direction. All this we have seen over and over again. When we want to annex Burma, we fill the newspapers with denunciations of the cruelties of King Thebaw. Americans who wished for Cuba fed their countrymen for years with exaggerated stories of

Spanish misgovernment. Atrocities committed by the Khalifa are inducing Englishmen to listen with perfect equanimity to the tale of the massacre of ten thousand Africans at Khartoum. The thing has been developed into a system. When a statesman wishes for a new province a skirmishing body of philanthropists prepares the way.

On the whole, then, those who look to peace as the primary guarantee for moral and social progress will do well not to pin their faith to democratic institutions. Europe has been startled during the last few weeks by the Czar's proposals for disarmament. They show at least that, so far as governmental action can forward so vital a change, as much, and perhaps more, is to be hoped from strongly centralized dictatorships as from popular assemblies split into rival parties, and swayed hither and thither by an anonymous and irresponsible Press.

But for a permanent remedy for the dangers that are every day threatening civilization we must look to the formation of an organic body of principles, held by a few in the first place, but inevitably spreading in the way in which truth of all kinds has been accustomed to spread and prevail. Rapid results in the first instance it is chimerical to hope for. The beginnings must be small and slow. A small group of resolute thinkers in each of the civilized countries of the world, brought into communication with each other, having clear conceptions of the essential principles of social order and social evolution, and a competent knowledge of the special circumstances of each political community, would be prepared, as each serious exigency arose, with the outlines of a pacific policy which would commend itself to the body of their fellow-citizens with increasing force as the years went on, and would guide public opinion into safe channels. Stringent measures should be taken for the absolute exclusion from such a society of theological influences of every kind; for theological religion, ever since the Crusades, has been one of the chief sources of division among the nations. The aim is to found, on purely human principles, an association which, as each occasion arose, would point out the way of conciliating national independence with international peace.¹ The path seems narrow and arduous. But there is no other which leads to the goal; and when the first few pioneers have led the way it will be easier for others to follow.

¹ Such an association was proposed by Comte, to be called the *Comité positif occidental*. See above, pp. 296-97.—ED.

II

CHRISTIANITY AND PEACE¹

"WAR and the preparations for war," said the *Spectator* of December 24,² "are originally due to the fears and passions and clashing interests of the different peoples, and there are only three ways in which these effects of those motives can be cured. One is the rise of a dominant Power, such as Rome was when Augustus decreed that all the world should be taxed.....The second way is a federation of Europe, with a clause in its constitution that any State declaring war on another State shall at once be occupied by the armies of the remainder. Does anyone hope that this condition will ever be realized? And the third way is for the white world to turn sincerely Christian. That is not impossible, as we all hope and some believe."

If to turn Christian would remove the cause of war, it might be thought that the world would not hesitate. Laying aside all philosophical speculations, it would rush, one would suppose, to the Church door and seek sanctuary at all costs. And yet it is evident that the *Spectator* itself, with all its superabundance of orthodox religious sentiment, hesitates much. All hope, it says, for the result, and some believe. We are left in doubt as to whether the *Spectator* itself has passed beyond the hope to the belief.

In considering the question, the first difficulty that meets us is to find out what people mean when they speak of being sincerely Christian. Between acceptance of the morality of the Sermon on the Mount and acceptance of the conclusions of the Council of Trent there is evidently a vast interval. Which of the two extremes is meant? And if neither, then what particular stage in the intervening distance? Is belief in the incarnation, resurrection, and ascension of Jesus an essential element in sincere Christianity? If so, the time when, according to this theory, the sword can be converted into a ploughshare is far off. We have, then, first to decide whether by sincere Christianity we mean Christianity with dogma, or Christianity without dogma. Let us begin with the latter. It is fully set forth for us in the later writings of Tolstoy. True Christianity, in this view of it, consists in absolute forgiveness of injuries, and in firm resolution not to repay wrongdoing with

¹ February, 1899.

² 1898

violence. The crucial case he selects is the duty of every true Christian to refuse service in the army. When summoned to obey the law of universal conscription, he should decline to comply, in full consciousness of the consequences of his refusal, imprisonment, starvation, torture. Tolstoy pushes his principles to their farthest extremes. In case of invasion of his country by a hostile force he is prepared to advocate absolute non-resistance to the invaders. These views, he thinks, once realized in practice by a few pioneers, will spread by their own intrinsic truth and beauty; and war will in the end disappear for mere lack of fighters. The possible alternative that a small remnant may be left in whom the old Adam survives, and that this remnant may reduce the disarmed and non-resistant mass to slavery, Tolstoy does not seem to think it worth while to discuss.

Probably few people will think it necessary to devote much time to the consideration of this singular theory. Its chief interest lies in indicating how very short a way the teaching of the Gospels will carry us in the practical conduct of life. From the Christianity of Jesus we may pass to something very different—the Christianity of St. Paul and of the communities founded by him in Greece and Asia Minor. Here we are in presence of a Church; a confederation of men and women striving to lead a pure and regenerate life, and relying for strength to do so on faith in the incarnate, the crucified, and the risen Christ. In ordinary life the members of this body were governed, on the whole, by ordinary human motives. They held aloof, indeed, as far as possible from military service; but, as Gibbon tells us, “their love of action soon revived, and found a new occupation in the government of the Church.....The safety of that society, its honour, its aggrandizement, were productive, even in the most pious minds, of a spirit of patriotism such as the first of the Romans had felt for the Republic; and sometimes of a similar indifference in the use of whatever means might probably conduce to so desirable an end.”¹ When the Roman Empire adopted Christianity, Christians filled the ranks of its armies; and when the Empire broke up, the warriors of one barbaric king fought against another—Christian against Christian no less than Christian against Mohammedan or pagan. In the first class of contests undoubtedly religion was a restraining influence, as was seen in the capture of Rome by Alaric. But just in the same proportion were the passions of Christians against outsiders embittered and intensified. Charlemagne in his

¹ *The Decline and Fall of the Roman Empire*, ch. xv.—ED.

dealings with the pagans of Saxony, the Crusaders in their struggle for Jerusalem, paid very little attention to the teaching of the Sermon on the Mount.

Christianity reached its maximum of political power in the eleventh, twelfth, and thirteenth centuries. Within the boundaries of Christendom it exercised a strong restraining influence on international conflicts. Visions of the triumph of the Church over the whole known world seemed within reach. Union of the Eastern and Western Churches was successfully attempted; Mohammedanism was thought to be near its downfall; the mendicant orders, acting as a powerful Papal militia, were sending their agents to found missions in the boundless regions that lay eastward of the Saracen. A spiritual monarchy holding sway over the whole planet was on the point of accomplishment, to which all temporal sovereignties would yield homage. To men like Thomas Aquinas and Roger Bacon the peace of the world, temporal no less than spiritual, seemed within measurable distance.

But new forces were at work already which the Catholic Church was powerless to withstand. Industry, first fostered by Benedictine monks, had passed into the hands of guilds and town councils; and became, if not hostile to the Church, yet disconnected from it and secular. The Scholastic philosophy, importing into Christendom the dangerous philosophy of Aristotle and his Arabian commentators, undermined Catholicism by the very metaphysical controversies which had been provoked for its defence. Meanwhile the Kings were asserting their independence of the Popes, the civil law was taking precedence of the canon law. All these things took place two hundred years before Luther. During the sixteenth and seventeenth centuries, while the systematic disruption of the Christian world was going on, Christianity was the direct stimulant of war. With the Treaty of Westphalia¹ the struggle ended; but neither camp retained the slightest hope of mastery over the other. From that time to this, Christianity has continued to exercise a potent ethical influence, the value of which wise men will not dispute; but politically it has been powerless, except for purposes of reaction and discord. Alternately flattering socialist dreams and fomenting anti-republican conspiracies, it shows itself equally hostile to order and to progress.

If peace is to be established in the world, it must be based on principles of public order laid down in conformity with the laws of

¹ 1648

sociological science. There are laws of healthy living for political communities no less than for individual organisms; and it is the business of publicists and of statesmen to find them out and to enforce them. Prominent among the principles involved in them is the truth that vast territorial extension is incompatible with the health of States. Beyond certain limits, which it is not difficult to define with sufficient precision for the purpose, the reaction of the whole upon the parts, which is an imperative condition of social harmony, becomes impracticable; and the way is left open for guilty ambitions and acts of fraudulent violence by which a few reckless adventurers may involve the mass of their fellow-citizens in disastrous war. Short of this, the very fact of maintaining armed forces at vast distances from their homes involves moral and social dangers of the worst kind, as has been shown abundantly by recent revelations of the physical condition of our soldiers in India.

In Europe, as it now stands, there are a considerable number of small States: Denmark, Norway, Sweden, Holland, Belgium, Switzerland, Portugal, Greece, Servia, Bulgaria, Roumania. The imminent probability of a disruption of the incoherent empire of Austria, the increasing tendency to advocate "Home Rule all round" in the United Kingdom, the possibility of Alsace and Lorraine becoming a buffer State between France and Germany—all these things point not, as is commonly said, to a further increase of large States, but to a multiplication of small ones; and if we consider the likelihood that both the Spanish and the Italian monarchies may develop into federal republics, we shall not find it a very difficult stretch of imagination to forecast a future in which the civilized world will become a system of small and truly self-governing States, from which the idea of the military predominance of any one among them will be entirely extirpated. Language and tradition may for a long time continue to hold some of these communities together in loosely united groups; but this, when unaccompanied by naval and military apparatus, would be perfectly compatible with the general harmony. At a very early stage of this evolution the dominant power in North America would have reverted to her pacific tradition; and where the northern continent led the southern would soon follow.

And if any barbaric Power, like Russia, chose for a time to stand outside this system of pacific States and to retain its vast accumulation of destructive forces, it would be powerless in the last resort to withstand the United States of Civilization. Such retention of defensive armaments as the attitude of that Power might

render necessary would but consolidate the Union of Peace by the sense of a common danger, until the retrograde State came to see that its economic safety and social well-being depended on laying its sword aside and sharing in the common lot.

On the whole, it will be found that the second of the three remedies proposed by the *Spectator* is less chimerical and more effective than at first sight it might appear.

III

THE PEACE CONFERENCE¹

WHAT is the true significance of the Conference at the Hague? Has it been the hopeless failure which its opponents foretold from the beginning? Or will it, on the other hand, take its place in history as the beginning of a new era? It was belittled at the outset and throughout its course from two totally opposed points of view: by the enemies and by the friends of progress—by believers in the old system of theology and war from which Humanity is slowly emerging, and by those who look forward to a new world of peaceful industry in which war shall have no place. To the first the success of the Conference appeared disastrous; to the second, hopelessly impossible. Of the blind prejudices and frankly selfish interests of the first little need be said here. In the main the actual administration of European affairs is in the hands of men to whom war and the apparatus of war are by far the most important objects of consideration. On the well-being of society as a whole they do not spend five minutes of thought in a month. Apart from personal ambitions, what they think about is the interest of their country. Will the area of territory over which their administrative sway reaches be diminished or extended? To this question all others are quite secondary. From the beginning of their career no other point of view has been possible to them. Those who instructed them looked at things in that light, and so will those whom they teach. To consolidate the military and administrative power of the government to which they belong is the first object of their lives. To a French politician the supreme question is, How shall we recover

¹ September, 1899. The Peace Conference referred to was that which assembled at the Hague in July, 1899, on the initiative of Nicholas II of Russia, and which resulted in the first Hague Convention.—ED.

Alsace and Lorraine? or if not, then, How shall we found an African or Eastern Empire to rival that of England? British politicians think of the sovereignty of the seas, the retention of India, the occupation of the river valleys of Africa and China. Russian and German statesmen are similarly occupied.

But great changes in the structure of society are rarely due to politicians. While these do their work, well or ill, from day to day, processes go on around them silently for years or centuries, resulting in new growths with which statesmen are but little concerned till they approach maturity. Whatever part may have been played by any prominent ruler who may chance to have connected his name with them is usually found to be altogether subordinate. Constantine appended his seal to the fact that Christianity had become the dominant religion of the Roman world. It was not unimportant that he should have done so; but with the fact itself he had little to do. A long time had passed since the days of the Apostles; a long time was yet to pass before paganism disappeared.

So it has been and will be in the transition of man's activity from the state of war to the state of peace. No greater change in man's position and activities on this planet can be conceived: we need not wonder it should be so long in coming. The Roman Empire began the work; after the fall of the Empire the Papacy carried it on; the very Crusades promoted peace among the nations who engaged in them. In recent centuries the approach towards peace has been far more direct and determined. The establishment of a diplomatic council after the religious wars of the seventeenth century,¹ the rise of modern industry and commerce, the intellectual bonds woven by art, literature, and scientific discovery, the sense of physical unity of our planet now that its remotest provinces are brought into instantaneous communication—all these things and many others have co-operated to the same result. And the result is that the century which is about to close may be called, by contrast with those which have gone before it, the first century of European peace. Since the sanguinary orgies of the Napoleonic wars, that peace has been seriously disturbed only by the brief Crimean war, and the still briefer though more disastrous conflict of France with Germany.

In the passage from war to peace there are various stages.² The

¹ The allusion is to the prolonged diplomatic proceedings at the Congress of Münster, which eventually resulted in the Treaty of Westphalia and the close of the "Thirty Years' War" of 1618-1648.—ED.

² Cf. p. 396.—ED.

first of these is the transition from offensive to defensive war, as shown in the contrast of mediæval wars with those of antiquity. The phase through which we are now passing marks a further progress; defence without war; vast military armaments, maintained at enormous cost, but without breach of peace. This was the burden which the Congress at the Hague was convoked to remove, or at least to alleviate. In this purpose it has notoriously failed. Yet even the failure has its encouraging side. Fears had been aroused lest pressure for disarmament might sow the seed of fresh quarrels; and these fears have not been realized.

But the scheme of organized arbitration which has resulted from the Conference has in some respects surpassed the hopes of the most sanguine. Of this scheme the most important clause is that which provides automatic machinery for convoking the arbitrating Council, in the event of any serious breach of the peace being threatened, without waiting for the invitation of the two contending Powers: a clause commonly known as that of d'Estournelles, though its adoption was largely due to the eminent French statesman, M. Bourgeois. Everyone who remembers the facts must admit that if any such machinery had been in operation thirty years ago, during the months that preceded the Franco-German war, even Bismarck would have been unable to accomplish his guilty purposes. It is deplorable that the obstinate determination of the British Government to interfere with the independence of the Transvaal should have prevented the application of this remedial measure to South Africa. But a glance at the map of the world will show the numerous points of danger at which the preventive action of the new policy may be of service. For Cuba and the Philippines it comes too late; but throughout the whole range of the South American republics, in Samoa, in Siam, in Persia, above all in the vast empire of China, now being opened definitely to the scientific industry of the West, it may work with the happiest results.

Another feature of the Conference is of extreme significance. It has been in the strict sense of the word what the early Church Councils claimed to be, but never were—œcumenical. It embraced the whole civilized world. More than thirty years ago a group of Positivists put forward some suggestions for regulating International Policy.¹ They dealt with the relations of the West to the East; to India, to China, to Japan, to uncivilized communities. But they

¹ See p. 373 (note 2).

hardly ventured to forecast a time at which representatives of Eastern nations should take their place at the Council Board with Englishmen, Americans, Frenchmen, and Germans. Comte indeed, in his *General View*, published in 1848, sketched out the plan of a Positivist Committee, in which every nation of the East and West would be represented.¹ But this Committee was to act avowedly outside of the official world. Its function will be to create and guide public opinion, not to draw up protocols for the guidance of statesmen. It has its own distinct part to play, quite apart from the sphere of diplomatic intervention of which we are now speaking.

One more feature of the recent Conference deserves a word of comment. It was noticed with surprise in several English journals that in the opening ceremonial prayer to the Supreme Being was entirely omitted. Why was this? For the obvious reason that there was no Supreme Being in the worship of whom all members of the Conference could unite. It was the most significant of all possible reminders that God can no longer be regarded as a bond of union between the nations. In the old Hebrew or Assyrian legend, when the human race was engaged in the construction of the tower of Babel, the powers above thought it needful to divide the vast and growing population into discordant sections, lest remaining united it should become too powerful. That verdict of disunion has never been revoked. Theological religion from that time to this has divided the nations, not united them. Even a purely European conference would find it hard to draw up a ritual with which its meetings should begin. For should the prayers read be Mohammedan or Christian? If the latter, should they be offered by Greek, Roman, Anglican, or Lutheran officials? Overstepping the boundaries of Europe and including the vast populations of Eastern Asia, the problem of theological prayer becomes hopelessly insoluble. Catholic and Protestant missionaries are not yet agreed as to what is the proper Chinese translation of the word *God*. Confucians, Shintoists, Buddhists, and Brahmins are wholly doubtful as to what the word means.

On a sober review of the whole situation, and after making all necessary deductions for the perverse prejudices of the European public and for the selfish ambition of statesmen, it seems impossible not to recognize in the Peace Congress of this year a sign of definite

¹ Comte proposed to call this Committee the *Comité positif occidental*. It was not, however, actually founded until 1903. See *Phil. Pos.*, vol. vi, ch. lvii, pp. 544-45, and *General View*, pp. 284-90. Cf. above, pp. 296-97.—ED.

and substantial progress towards the reign of Humanity. Her kingdom is coming: is near at hand. That it may be speedily and firmly established is the supreme object of our prayer and work.

IV

THE FUTURE¹

ALL men who have served their kind faithfully and well have looked forward to a future which they knew that they should never reach. Sometimes the promised land they sought was visible, tangible, temporal. Sometimes it was ideal and spiritual. And, in the latter case, the aim with some has had no relation to terrestrial things, and those who strove for it have felt themselves to be, as the Epistle to the Hebrews describes them, strangers and pilgrims on the earth. With others, again, the guiding vision has been that of Humanity growing slowly but surely to perfection, with Earth for her home. The tyranny of the present, which a recent writer on evolution has imputed to the principal thinkers of our time, and, indeed, of almost all times, has no existence but in his own imagination. Long before Shakespeare's time Man has been known to be a being of large discourse, looking before and after.²

Comte has developed this thought of Shakespeare in a way widely different in extent and in character from that of any previous thinker. Of the four volumes of his great work on *Positive Polity*, the third is devoted to the Philosophy of History, the fourth to the Future of Man. The purpose of his life was to implant in men's minds and hearts the conception of Humanity. Humanity for him, and for those who follow him, is not the mere assemblage of men, women, and children who at this or that moment may be alive. These form but a small part of the whole. What Comte strove for is that the population of the present, to use his own words, "should be made conscious of standing between the mass of those who have gone before, and of those who will follow after." "Our intercourse with the dead, and even with the unborn, should be more constant, although less special, than with our own contemporaries."³ "Men are fellow-labourers in a continuous work which never has exclusive

¹ 1902² *Hamlet*, act iv, sc. iv.—ED.³ See *Pos. Pol.*, vol. iv, p. 21.—ED.

relation to a single group, but always to the whole human race. The present works for the future, as the past worked for the present."

Continuity with the Past is thus the fundamental principle of Comte's conception of the Future. If the Past has been rightly interpreted, if it has been shown to be subject to definite laws of development, there is a strong presumption in favour of a forecast of the Future founded on the continuous operation of those laws. Such a forecast is, indeed, sure to be inaccurate in many details. It will not make sufficient allowance for obstructions; it will be often wrong in its indication of the time at which an anticipated change will occur. Those who are familiar with Comte's distinction between abstract and concrete laws,¹ and of the extreme difficulty, even in the simplest physical sciences, of passing from the abstract to the concrete, will be prepared for a far wider margin of uncertainty when this transition has to be made in so complex a science as sociology. Superficial readers of Comte smile at his anticipations. Closer study would show them that, in the half-century that has passed since he wrote, changes as great as any that he foretold have begun, and are steadily proceeding; and that many of these changes are in the direction which he had indicated. In estimating the force and direction of social currents, it has always to be remembered that institutions, empires, creeds, may be undermined and near their downfall when the flattering voices of their supporters are at their loudest.

Comte's programme, frankly announced in 1848 on the title-page of his *Discours sur l'ensemble du Positivisme*, was *Réorganiser sans dieu ni roi, par le culte systématique de l'Humanité*. In my translation of this work, published in 1865 under the title of *A General View of Positivism*, I rendered the words *sans dieu ni roi* "Irrespective of God or King," with the view of indicating what Comte very distinctly explains in the first chapter of this work, that he held no atheistical view of the universe. Of all attempts to explain the unexplainable, Atheism was on the whole, he thought, the least rational. "Theism," he says, "was the only mode which really satisfied the reason, until men began to see the utter inanity and inutility of all search for absolute truth. The Order of Nature is doubtless very imperfect in every respect; but its production is far more compatible with the hypothesis of an intelligent will than

¹ See the *Fundamental Principles*, pt. ii, §§ 17-23; *General View*, pp. 28-30; *Pos. Pol.*, vol. i, pp. 343-54.—ED.

with that of a blind mechanism."¹ But no attempt to penetrate "the unattainable mystery of the essential Cause that produces phenomena" was of the least use, he considered, in the work of providing a solid basis for social and moral reorganization. It is obvious that on the negative side of his programme—that is to say, in dispensing with supernatural agency in political problems—Comte is at one with thinkers and with practical statesmen of many schools; indeed, of almost every school except the Catholic. Toleration of all theological differences is an old affair by this time. It was preached by Locke and Voltaire; it was incorporated with the institutions of the United States and of the first French Republic. Desperate as the battle is still between clericalism and progressive republicanism in France, in Belgium, in Spain, in some parts of Austria, the result is hardly doubtful even for our own generation, certain for the future. In our own country it is an annoying obstacle to impatient reformers: it cannot be called as yet a serious or permanent danger.

But toleration pure and simple will carry us but a little way. Though a necessary condition for reconstruction, though it clears the ground, it adds not one stone to the fabric. Toleration may be, and often is, the outcome of indifference, laziness, slavery to selfish comfort, Mammon-worship; in a word, of every form of social decadence. Where this is the case, sincere fanaticism is respectable by comparison; more mischievous, it may be, for the moment, but not in the long run. In any case, the leverage for reorganization on which Comte relied was not toleration, needful as that might be; not demolition of any kind, for that work in France, at least, had been sufficiently done; but the combination of social fervour and social science to which he gave the name of Positivism. If there were no natural laws discoverable in social phenomena; if they were regulated, as was once believed of the planets or the solar system, or of the diseases of the human body, by the caprices of a super-human power, Positivism would be an idle dream. If, again, human nature were utterly corrupt, as theologians say, or were controlled, as Hobbes and other metaphysicians have held, by wholly self-regarding motives, then, again, Positivism would be an idle dream. Comte's celebrated motto, *L'Amour pour principe, l'Ordre pour base, et le Progrès pour but*,² sums up the whole of his teaching. Without a sufficient leaven of unselfish enthusiasm, without a policy

¹ *General View*, p. 34.—ED.

² *Catechisme Positiviste*. See above, p. 39 (note), and p. 34 of the Eng. tr.—ED.

based on the natural laws that regulate the structure and the growth of society, there can be no safety from the fatalities that surround us. It is a delusion, and a deadly one, to despair. It is a delusion, again, to imagine that all will go right if we only leave it alone. And, lastly, it is a delusion to suppose that the world is to be saved solely by benevolent endeavour. Lovers of Carlyle have not forgotten the motto of his *Latter-Day Pamphlets*: "Then said his Lordship, 'Well! God mend all!' 'Nay, by God, Donald, we must help him to mend it!' said the other." The word remains truer than ever, when "Humanity" is written in place of "God." *Pour compléter les lois, il faut les volontés.*¹ The laws must be found, and the wills also.

Signs are not wanting to those who look for them that should prevent despair. We must not let the storms and eddies of passing events blind us to the massive tidal currents that are steadily working towards the goal of our hopes. Eighty-seven years have passed since Waterloo. Can any one point to an equal period in the six centuries of modern history in which Western Europe has had a larger proportion of peaceful years? There have been many wars, far too many; and some of them have left bad results behind them. But all of them have been short, and at long intervals, compared with the wars of religion, the wars for military supremacy in Europe, the wars for commercial aggrandizement, of previous centuries.

War is threatened from many sources. But the political forces making for peace are numerous and potent. Forty years ago, for instance, we made a commercial treaty with France. Who can deny that it has bound both nations in heavy penalties to keep the peace? Read, again, Count Goluchowski's recent address (May 8) to the Austrian Parliament on the Triple and the Dual Alliances, and on the alliance of England with Japan. Not unduly optimistic in tone, the speech was a striking indication of the all but unanimous desire of European statesmen to refrain from war. The danger comes from the spiritual side, not from the temporal; sometimes from reactionary theological doctrines, far more often from the irresponsible newspaper Press, swayed by democratic follies, and manipulated by adventurers of the Stock Exchange. Against spiritual dangers, spiritual weapons alone will serve; and Positivists, among others, have been doing their best for the last forty years to forge them. In the meantime it is something, it is much,

¹ See p. 171 (note 2).—ED.

that the States of Western Europe, with America and Japan added to their councils, have been of late acting together—at the Hague, three years ago, for a good purpose; in China, again, for a purpose not so good; yet still together. Comte's great conception of the Republic of Western nations is not dead, as some have thought; it is on the point of revival.

It is probable that the international force, partly material, partly moral, thus arising will deal in one way or other with the subject that touches the pride of Englishmen most nearly—the claim of any single nation to the Dominion of the Sea. The discovery of our power—for the moment our exclusive power—to convey an army across the globe four times greater than that which fought for us at Waterloo will add intensity to the wish that this claim should be resisted. France and Germany are not content, and never will be content, to hold their Colonies at our good pleasure. The desire has been there as long as the Colonies; but power to give effect to it has hitherto been wanting. That want exists no longer, as many have foreseen for a long time, and as the Shipping Combination is beginning to convince the blindest. On this point it may be well to quote some words written by Professor Beesly thirty-six years ago:—

The time is not far distant when England will cease to be in material strength the foremost member of the Anglo-Saxon race. Most of us will live to see the United States with a population double that of our own islands, overflowing with wealth, exempt from most of the economic difficulties that embarrass an old country, and enjoying equally with ourselves all the advantages of modern civilization. I say nothing of their emancipation from hereditary institutions, because that will not be unanimously admitted as an element of superiority. But that their material force will be vastly greater than our own no one in his sober senses will deny. Already our most formidable rivals on the sea, in a few years they must inevitably overshadow us. And yet Englishmen, professing to respect their country, are content to rest her claim to be considered great on this material superiority, which Nature herself is rapidly transferring to another nation!¹

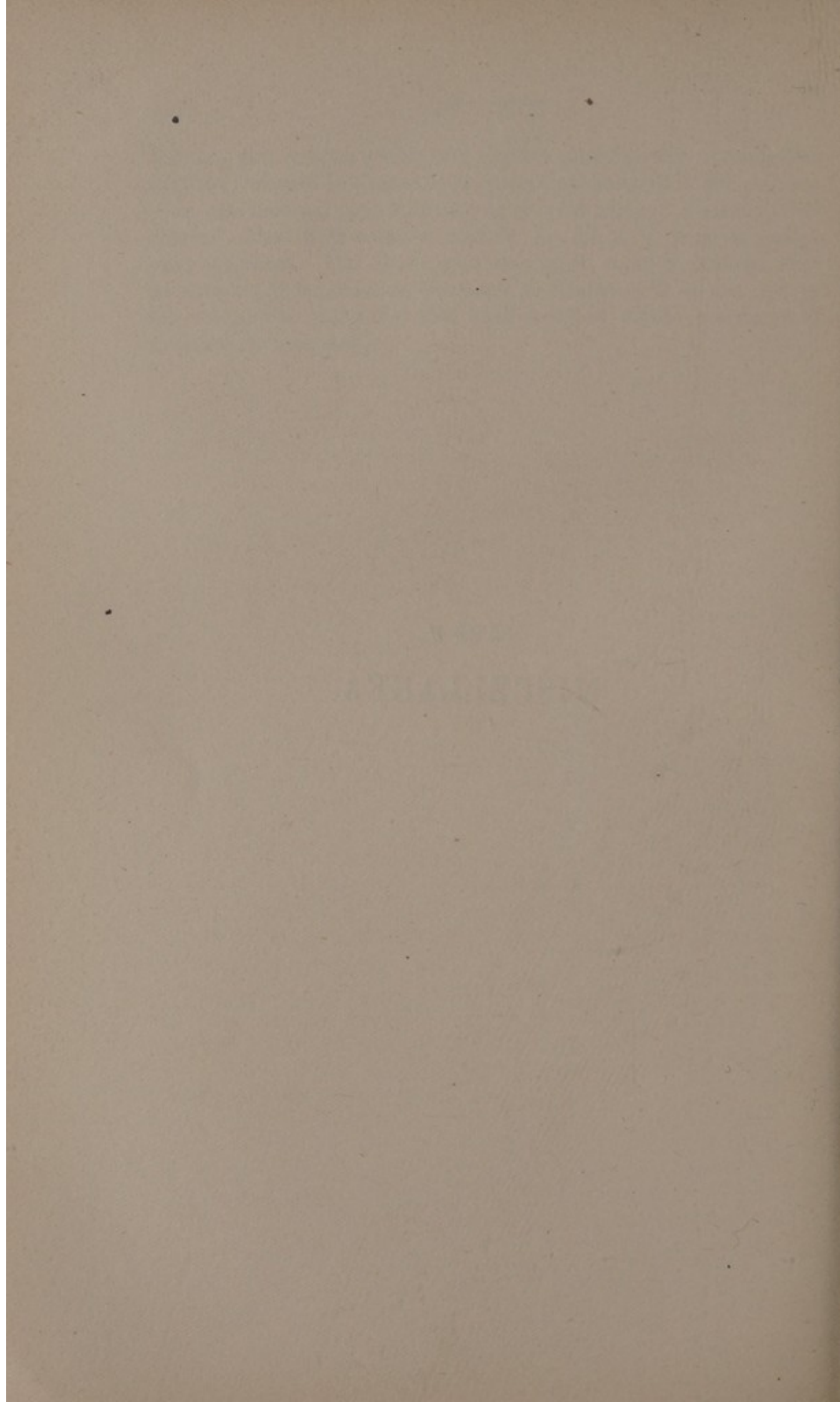
It may be that, when this inevitable transference of naval supremacy has been effected, wise counsels may prevail among the statesmen of this country as well as of others. In that case, without any previous internecine struggle, agreements will be made

¹ *International Policy*, 2nd ed., p. 144 of the essay on "England and the Sea."

between the nations which will mark a definite step towards the ideal put forward by Comte as the only final solution of the problem—an international navy sufficient to prevent piracy; abolition of all others.¹ That final solution may be far off, or it may be nearer than we think. But those who love their country best, be that country England, America, Germany, or France, will be the first to bid welcome to any policy that shall bring it within the range of practical statesmanship.

¹ *Cf.* p. 402.—ED.

PART V
MISCELLANEA



MISCELLANEOUS PAPERS

I

THE CORRESPONDENCE OF MILL WITH COMTE

COMTE's letters to Mill were published twenty-two years ago by the Paris Positivists.¹ Mill's replies were naturally looked for; but difficulties had arisen, of which the most important was the objection felt at that time by Professor Bain to the publication of his name in those letters, in some of which his admiration for Comte is an extremely significant feature. At last, however, we have the correspondence in its complete form, edited by Professor Lévy-Bruhl for the *Bibliothèque de Philosophie Contemporaine*.²

The correspondence began in 1841, and closed in 1846: an isolated letter from Mill in 1847 on the Irish question hardly forms part of it. Of the eighty-nine letters of which it consists—forty-four from Mill, forty-five from Comte—seventy-seven were written during the four years 1842–45; and it may be said generally that the first half of the series is by far the more important.

The first letter is from Mill (November 8, 1841). He was then thirty-five years old, Comte being forty-three. Mill introduces himself as an entire stranger. But he had been familiar, he says, since 1828 with those earlier writings of Comte in which, as most people are now aware, the programme of his whole career as a thinker and a social reformer is clearly set forth.³ Mill remarks that these early writings had done more than anything else to set him free from the narrow Benthamism in which he had been brought up, and which is so vividly described in his *Autobiography*. He goes on to say that in 1837 he read the first two volumes of the *Positive Philosophy*, all that up to that time had been published. "Since the happy moment," he writes, "when these two volumes became known to me, I have been looking forward with keen impatience to the appearance of each new volume, and I read it,

¹ *Lettres d'Auguste Comte à John Stuart Mill; 1841–46.* Paris; 1877.—ED.

² *Lettres inédites de John Stuart Mill à Auguste Comte.* Publiées avec les réponses de Comte et une Introduction par L. Lévy-Bruhl. Paris; 1899.—ED.

³ *The Early Essays on Social Philosophy.* See above, p. 95 (note).—ED.

and read it again, with true intellectual passion. I may say that I had already entered on a line of thought nearly approaching your own, especially under the impulses given me by your earlier work; but I had still many things to learn from you of the greatest importance, and I hope some day to show you that I have learnt them well. There remain questions of a secondary kind on which my opinions are not the same as yours. Perhaps the disagreement will one day disappear. At any rate, I think I may say that, whatever erroneous opinions I may hold, they are not so deeply rooted as to resist such thorough discussion as may arise if you allow me sometimes to submit my thoughts to you and to ask for explanations of your own."¹

Comte was then at one of the darkest hours of his life. The scientific specialists, whose prestige he threatened, were beginning to strip him of his official appointments; his private life had for years been as desolate and dreary as it could be; and at such a time the intellectual and social sympathy of a man like Mill was peculiarly grateful. Both had the same public purposes; both saw that theological belief was undergoing irrevocable decay, and that the salvation of all that was noblest in man's life depended on bringing sociology and ethics within the pale of science. And, besides this, there was much in the natures of the two men that was akin. Springs of deep tenderness in both lay underneath a cold and stoical exterior.

Comte replied to Mill's overtures, as might be expected, with extreme cordiality. Living as he did a life of extreme isolation, it was the more pleasant to receive signs of sympathy from those who could appreciate his aims. He thinks Mill had exaggerated his debt to him. Mill's "Benthamism," the most remarkable product of the economic school, was a true preparation for positive sociology. He speaks of the rooted aversion of the scientific coteries in Paris, established and endowed as they were, to any broad co-ordinating principles, as the chief obstacle to progress; and of his own determination to bring the question between him and them to a definite issue in the final volume of his treatise.² And, lastly, he speaks of his project of an association of thinkers among the Western nations who should occupy themselves with the work of elaborating political and ethical principles on a positive basis, since without regeneration

¹ *Lettres inédites*, pp. 2-3.—ED.

² See *Phil. Pos.*, vol. vi, ch. lvii, pp. 374-400; or pp. 302-7 of vol. iii of Miss Martineau's version (1896 ed.).—ED.

of principles reform of institutions was hopeless.¹ In the organization of this new spiritual force he hopes that Mill will take a leading part.

So the correspondence began, and so it continued through the long series of letters in 1842 and the first half of 1843. Mill was impatient for Comte's concluding volume. He was at that time finishing, under Comte's influence, his great treatise on *Logic*; and at one time he thought of deferring the publication of it till Comte's treatise had been completed (p. 77). Mill's delight at receiving this final volume is described in the nineteenth and twenty-first letters. At first he failed to grasp its full bearing. He was profoundly impressed, however, even at this first reading, with Comte's conception of the splendid social and ethical results that would follow from modern industry when once the organization of it had been carried out as thoroughly as the organization of war among the military nations of antiquity. In this connection Mill speaks of Carlyle, with whom he had been long intimate, and whose *Past and Present* was to appear in the following year. But Mill now set himself to read again the fourth, fifth, and sixth volumes continuously. (These, it will be remembered, correspond to the second volume of Miss Martineau's very useful, but also very imperfect, condensation.)² His impressions on this survey of "Social Physics" as a whole must be given in his own words, which differ materially, not indeed in substance, but in tone, from the language used by him in later years with regard to these same volumes:—

I had read the fourth volume often and carefully; but till now I had never realized its full scientific value. It was not possible for me fully to assimilate the principles contained in it till I saw their full development in the last part of your work. Hitherto I had looked upon it merely as the necessary preparation for the philosophical survey of history in the fifth volume, although I had always appreciated the bearing of your great conception of Social Statics. To the fifth volume I had always done full justice, though I am now penetrated by its spirit more deeply than before. As to the sixth, perhaps my last letter led you to think me less capable of appreciating its spirit than was really the case. On the whole, it seems to me superior to anything you have yet done. In the foregoing volumes, by a privilege peculiar to systematic and comprehensive minds, you had sown the germs of all the principal conceptions of the final volume,

¹ See above, p. 416 (note).

² Dr. Bridges refers to the earlier edition of Miss Martineau's work in two volumes. The 1896 ed. is in three vols.—ED.

so that at first even the most astonishing of them seemed familiar to me. But now that I read again the whole work from the beginning, my final and definite impression is one which is not merely stronger than the first, but it is new in kind. It is essentially a moral impression. What is passing within me seems to me a first and special verification of the general conclusion of your great treatise—the aptitude of the Positive Philosophy, when once organized as a whole, to deal with the great social functions hitherto very imperfectly fulfilled by religions alone.

It has been my lot, a rare one in my country, never to have believed in God, even when a child. I have always seen that the construction of a true philosophy of society was the only possible foundation on which a general regeneration of human morality could rest, and that the idea of Humanity was the only substitute for the idea of God. But wide indeed is the difference between this speculative belief and the conviction which I am now feeling, that this inevitable substitution will be effective in its results, and that it will come speedily.¹

He continues in this strain, expressing the hope that he may not be found unworthy to take part in forwarding this greatest of causes. In this letter, as in others that preceded it, he mentions differences of opinion. But he persists in maintaining that these differences were secondary. And it is difficult to avoid agreeing with him. On the fundamental question of the organization of a spiritual power—that is to say, of an association of thinkers occupied in bringing sociology and ethics into line with the other sciences, they were entirely at one.

“There was nothing,” he says, twenty-nine years afterwards in his *Autobiography*,

in his [Comte's] great treatise which I admired more than his remarkable exposition of the benefits which the nations of modern Europe have historically derived from the separation, during the Middle Ages, of temporal and spiritual power, and the distinct organization of the latter. I agreed with him that the moral and intellectual ascendancy once exercised by priests must in time pass into the hands of philosophers; and will naturally do so when they become sufficiently unanimous, and in other respects worthy to possess it.²

On the method, again, in which sociology should be studied their agreement went very far. Mill accepted, as we have seen, the great division of the subject into social statics and social dynamics; “the

¹ *Lettres inédites*, pp. 134–36.—ED.

² *Autobiography*, 1873, p. 212.—ED.

first branch of the science ascertains the conditions of stability in the social union; the second, the laws of progress."¹ As to social dynamics, the true method of study, designated by Mill as the Historical or Inverse Deductive Method, was due, in Mill's opinion, to Comte alone.

Why, then, did their correspondence terminate? Mill, in his *Autobiography*, gives an explanation which does not seem quite to tally with the facts as stated by himself. It appears from the letters that one of the "secondary points of difference" assumed, in the course of 1843, greater prominence. This was the question of the political equality of women and men. On this subject many letters of great interest on both sides passed between these two thinkers; and they ultimately agreed to differ. "Our intercourse," Mill says, would not have been discontinued "if the differences between us had been on matters of simple doctrine. But they were chiefly on those points of opinion which blended in both of us with our strongest feelings, and determined the entire direction of our aspirations."² He goes on to attribute their final divergence to Comte's conception of organizing philosophers into "a kind of corporate hierarchy, invested with almost the same spiritual supremacy (although without any secular power) once possessed by the Catholic Church." "It is not surprising," he adds, "that while as logicians we were nearly at one, as sociologists we could travel together no further."³ If the *Politique Positive* had been published while the correspondence between Mill and Comte was going on, language of this kind would be intelligible, though, as the present writer thinks he has elsewhere shown, it would not be justified.⁴ But that treatise was not published till many years afterwards, between 1851 and 1854, when letters had long ceased to pass.

In the controversy as to women's position in society Comte, at the time at which these letters were written, was at a great personal disadvantage as compared with his friendly opponent. His miserable marriage debarred him from women's society. He had no experience of the highest form of pure and elevating love. That came three years afterwards;⁵ with what transforming consequences to his character he has told us. Mill had for years enjoyed the friendship of the lady who afterwards became his wife. We are not forced to

¹ *Logic*, bk. vi, ch. x, § 5.—ED. ² *Autobiography*, p. 211. ³ *Ibid.*, p. 212.

⁴ See *The Unity of Comte's Life and Doctrine*. A Reply to Strictures on Comte's Later Writings addressed to J. S. Mill by J. H. Bridges. 1866; 1910 (Watts).—ED.

⁵ See p. 342 (note).

accept his appreciation of her genius when he ranks her intellectually above Shelley, Carlyle, Comte, or any other of the great spirits of his time; we may even doubt whether she did not sometimes lead him astray; for woman no more than man is infallible. Nevertheless, his passionate acknowledgment of her beneficent influence over his life will take its place beside the Dedication of the *Positive Polity* to Clotilde de Vaux¹ as a noble forecast of what the religion of the future holds in store for men. On the whole, it will be found, when the irritation of temporary controversies has passed away, that the agreement of Comte and Mill on the subject of woman's influence and position is far more fundamental than their difference. This was at least the case when richer personal experience had revealed to Comte much that, when writing to Mill, he did not know. Both were at one in the conviction that women were destined to take a far more prominent part in the solution of social and moral problems in the future than has been hitherto possible. Both were agreed that the intellectual inheritance of our race should be shared by men and women alike without distinction. But Comte, taking his stand on certain elementary biological facts, thought that the work of women would be better done if they were saved from the worst extremities of the competitive struggle, into which Mill, or the followers of Mill, have been ready to plunge them.

Many other topics are handled in these letters. But even a bare catalogue of them cannot be given here. A word, however, may be said of the question of Psychology, which arises frequently. Comte, as everyone knows, had thrown doubts on the value of the introspective method of research.² Mill explains that he means by the word something different from the psychology of Condillac, or of Cousin, or even of the Scotch school (p. 13). Comte urges Mill to read Gall's *Functions of the Brain*, guarding himself carefully against attaching any importance to Gall's localization of those functions. This leads to many valuable observations on both sides. In the course of them Bain, then a young man, is spoken of as a student and admirer of Comte. Obviously, nothing can usefully be said on this vast subject in the present paper. Many details are given of the persecution of Comte by Arago and others, consequent on his protest against the narrowness of mind engendered by scientific specialization when uncontrolled by general principles. Here Mill played the part of a noble and generous friend. We can only regret that the friendship should have cooled.

¹ See *Pos. Pol.*, vol. i, pp. xxxi-xlv.—ED.

² Cf. above, pp. 212-14.—ED.

On the whole, it may be said that a more interesting *Commercium Epistolicum* has never been given to the world. It will not satisfy those who worship Comte as an infallible revealer of truth; still less those who have made up their minds that his work is superseded. But it will be welcome to others who are content to revere him as a mighty, but not unerring, intellect; a noble, but not faultless, character. The perfect man has not been seen in the world yet. There is no ground for thinking that he ever will.

II

COMTE'S LETTERS TO DR. AUDIFFRENT

A VOLUME of Comte's correspondence has recently been published,¹ of which the larger part is occupied by a series of ninety-three letters addressed to Dr. Audiffrent, one of the thirteen executors nominated in Comte's will, and one of the two who still survive.² Dr. Audiffrent came into contact with Comte in 1850, and the letters extend over the seven following years; the last was written twelve days before Comte's death. Passages from some of these letters will be found in Dr. Ingram's selection published last year.³ All these, however, refer to the later period (1854-57); many of the earlier letters are of equal interest.

From the first, dated 21 Descartes 62⁴ (October 28, 1850), we learn that the Positivist Society was founded in March, 1848; that it had at the date of this letter forty-five members, of whom two-thirds were Parisians; and that the meetings took place every Wednesday evening—a practice which, it may be noted, has continued, without interruption, to the present day. There were many sincere Positivists, Comte remarks, both in France and in other countries, who, for various reasons, had not joined the Society. Dr. Audiffrent, if he wishes to be enrolled as a member, is invited

¹ *Lettres d'Auguste Comte à divers (1850-1857)*. Publiées par ses Exécuteurs Testamentaires. Vol. i, pt. i; 1902.—ED.

² Written in 1902. Dr. Audiffrent died in 1909.—ED.

³ *Passages from the Letters of Auguste Comte*, selected and tr. by J. K. Ingram. (A. and C. Black; 1901.)—ED.

⁴ The date "21 Descartes 62" signifies the 21st day of the eleventh month of the Positivist Calendar, the month headed by Descartes, the year being the sixty-second from the outbreak of the French Revolution in 1789. The latter year was taken by Comte as the starting-point of the new Positive era in its provisional form. See *Pos. Pol.*, vol. iv, p. 347.—ED.

to read the *General View of Positivism*, published in July, 1848, as well as other minor publications of the Society which had special reference to the political exigencies of the time. Littré's *Application of Positive Philosophy to the Government of Societies, and Especially to the Present Crisis*,¹ is also mentioned. After reading these, he is requested to communicate his impressions to Comte, who will then form a judgment as to his fitness for membership, and, the judgment being favourable, will propose him to the Society for acceptance. On January 9, 1851, Dr. Audiffrent is informed that he has been accepted. Further details as to the origin and constitution of the Society will be found in Dr. Robinet's *Life of Comte*.² Immediately inspired by the Revolution of February in 1848, it was intended to occupy, in relation to the second Republic, a position in some respects analogous to that of the Jacobin Society in relation to the Republic of 1792; with all the fundamental differences consequent on the contrast of the destructive doctrines of Robespierre and Rousseau with the constructive teaching of Positivism. The purpose of the Society was defined as the application to questions of the day of the political and social principles laid down in the *Philosophie Positive*, and more especially in the last two volumes. Its operations were not to be limited to France. Whether by direct membership or through affiliated societies, they were to extend to the whole of Western Europe and to the two Americas. The Society was to be neither cosmopolitan nor national, but occidental. Its motto was to be *Order and Progress*.

Nearly four years passed between the Revolution of February and the dictatorship established by Louis Napoleon, as President of the Republic, in December, 1851. Comte approved of this dictatorship; and he has been much blamed for doing so by those who forget all the proceedings of the Assembly which the President suppressed. Within three months of the Revolution, clerical and anti-republican reaction was in full swing. The sudden suppression of the national workshops on June 23, 1848, showed the workmen of Paris what they had to hope. In the street-fighting of the three days that followed more blood was shed than in the *coup d'état* of Louis Napoleon. Between 4,000 and 5,000 prisoners were condemned to transportation. Freedom of the Press was abolished.

¹ *Application de la Philosophie Positive au gouvernement des sociétés et en particulier à la crise actuelle*. Par É. Littré. This appeared first as a series of articles in the *National* of July to October, 1849. It will be found in the small volume entitled *Conservation, Révolution, et Positivisme* (1852).—ED.

² *Notice sur l'œuvre et la vie d'Auguste Comte*; 1860. See pp. 218-28 and 462-68 of the 3rd ed. (1891).—ED.

It was no wonder that when the time came, at the close of 1848, for choosing a President, the voters for Louis Napoleon, whose previous writings had shown some sympathy with socialist aspirations, should have outnumbered those for Cavaignac by nearly four to one. His powers were extremely limited, whether under the Constituent Assembly which sat till the end of May, 1849, or under the Legislative Assembly which followed. For the expedition to Rome in the spring of 1849, for the suppression of Comte's lectures in July, for the reactionary law on primary instruction in March, 1850, for the practical exclusion of workmen from the suffrage in May of that year, for the removal of Michelet from his professorship at the *Collège de France* in 1851, the principal share of responsibility must fall on other shoulders than his. In the duel between Parliament and President that wasted the energies of France for three years, there was ground for thinking that the indispensable conditions of *Order and Progress* would be best promoted by the victory of a dictator who professed allegiance to the Republic over the Legitimist and Orleanist reactionaries who made no secret of their intention to destroy it.

Wholly different became Comte's attitude as each month of 1852 made it more clear that the feeble and inconsequent dictator was unable to resist the childish ambition of founding an hereditary dynasty. On this point the fifteenth, sixteenth, twenty-sixth, and twenty-eighth letters of this series are emphatic enough. The imperialism of Napoleon, he wrote in April, will make a further change necessary. The prospect for France is a sequence of dictators, somewhat like that of the Spanish republics, until one comes who can govern on positive principles, combining Order and Progress. A dictatorial republic is the only form adapted to France; though in England, and some other Protestant countries, the case may be otherwise. The fears of those, he wrote again in May, who fail to see that the republic will endure are ill-founded. This parody of the Empire, like Ledru-Rollin's parody of the Mountain, will have no endurance. On December 12, 1852, he gave fuller vent to his scorn. He compares the new-made Emperor with the *Mamamouchi* of Molière's *Le Bourgeois Gentilhomme*.¹ The empire is, he continues, a purely official suspension of our republican situation. That situation began in 1792, and under no subsequent government has it really ceased. "Positivists are now the only republicans whose enthusiasm rests on solid conviction." "Let us all unite to

¹ Act iv, sc. 3.—ED.

dissipate the Bonapartist legend. The 'glorious' days of Austerlitz, of Eylau, of Wagram, even those of Arcola and of Lodi, should be irrevocably branded as evil deeds, as acts of treason against Humanity."¹

That here, as elsewhere, Comte overrated the rapidity of progress, and took too low an estimate of the forces of obstruction, is evident enough. But how right he was in principle! How immeasurably in advance of the Bérangers, the Victor Hugos, the Thiers, the Jules Favres, and other spokesmen of the Liberal party! Even of those who listened to him not all learnt the lesson completely; too few to avert the storm which burst upon France and Europe eighteen years afterwards.

Comte's political creed is habitually misunderstood; not because it was obscure, for it was singularly definite; not because of its narrowness, for it was far more comprehensive than that of any publicist of the nineteenth century; not because it varied, for its essential principles remained unaltered from the beginning of his career in 1822 to the end of his life; but simply because in all these respects he stood head and shoulders above his contemporaries. Like the great Florentine, *fece parte da se stesso*.² He was a Conservative republican, profoundly convinced of the need of preserving order. For the mere partisans of opposition he had deep-seated repugnance; constructive politicians of whatever school, Jesuit or revolutionary, were far more to his liking.³ Yet he could sympathize with a man like Barbès, and take practical steps for his release from prison. Honest revolutionaries, he wrote to Dr. Audiffrent, in September, 1852, are the immediate precursors of Positivism.⁴

Not less noteworthy was his attitude during the Crimean War. Relatively to Russian civilization, he could see much to admire in Nicholas I. Relatively to Turkey, he could speak of Reschid Pasha with respect. When Nicholas, in 1853, disturbed European order by invading Turkey, he could heartily approve of combined European resistance. But he sternly blamed the Crimean expedition of 1854-55 as a needless and wanton aggression on the part of England and France. "The righteous war undertaken against war," he writes in January, 1855 (forty-seventh letter), "has degenerated into an insane war of aggression.....which puts the Czar now

¹ Twenty-eighth letter.—ED.

² "He formed a party by himself." This is an adaptation of Dante's line, *Averti fatta parte per te stesso*, in the *Paradiso*, canto xvii, 69.—ED.

³ See the Preface to *Positivist Catechism*, pp. 1-2.

⁴ See the 23rd and 27th letters.

morally in the right, since he is acting on the defensive." His *Appel aux Conservateurs*, published in August of this year (of which the right title in English should be "Appeal to Practical Statesmen")¹, develops Comte's attitude on these and other kindred questions at greater length.

I have dwelt, rather too fully perhaps, on the letters in this very important series which touch on passing events, mainly with the view of showing that the author of the *Positive Philosophy* and the founder of the Religion of Humanity never failed in the keen sympathies of a patriotic citizen. These three sides of his life-work—philosophic, religious, civic—were indeed from the first inseparably connected; their connection is the very hall-mark of Positivism. In 1822, while laying down the fundamental laws of social evolution, Comte had said:—

In order to establish a new social system just conceptions will not suffice. It is necessary that the mass of society should feel attracted by it (*se passionner pour le constituer*). This condition is not merely indispensable to overcome the obstacles, more or less serious, which this system must encounter among the classes who are losing their ascendancy. It is needed, above all, for the satisfaction of the moral craving for enthusiasm inherent in man when he enters upon a new career..... All history testifies in favour of this truth.....The mass of mankind will never be inspired with a passion for any system by proving to them that it is one which the progress of civilization has prepared and now demands for the guidance of society. A truth of this nature is accessible to a very limited circle..... The only way of obtaining this result consists in presenting a vivid picture of the ameliorations which the new system should bring about in the condition of mankind.....Such a perspective alone can induce men to effect the moral revolution within themselves, essential for establishing the new system. This alone can repress that egotism, now rendered predominant by the dissolution of the ancient system, which, after our ideas have been enlightened by scientific labours, will remain as the only serious obstacle to the triumph of the new social organization. This alone can draw society from its apathy, and impress on it that active devotedness which is demanded by a social state destined to maintain all the human faculties in constant action. Here, then, we find a sphere of work in which the imagination has the principal part to play.....It is the part specially reserved for the Fine Arts in the general work of social reorganization.²

¹ See above, p. 237 (note 1).

² *Early Essays on Social Philosophy*, pp. 171-72.—ED.

Social enthusiasm based on scientific vision: this, in the last resort, is the meaning of Positivism. In the thirty years that passed after the foregoing words were written, Comte had given full development to both sides of his work. He had founded the science of sociology, and he had shown it to be the basis of positive religion. The year 1852 is a critical moment in the evolution of his doctrine. In that year appeared the second volume of his *Positive Polity*, dealing with Social Statics—*i.e.*, the permanent conditions common to every phase of historical evolution. Writing to Dr. Audiffrent on July 7, he says: "This volume deals with the principal difficulty of the construction which I am undertaking." In the final chapter of the *General View of Positivism* he had spoken of the Religion of Humanity. But in this volume for the first time he defines clearly what it is that he means by the word *Religion*.¹ From his conception of religion, not as a creed, not as a set of institutions and ceremonials, but as a *state*—a condition of moral unity, in which man became at one with himself by willing submission to a power outside himself—far-reaching conclusions followed. Attempts to reach this ideal state have been made from the earliest origin of man's social life, with varying success; of these the Religion of Humanity is the final outcome. But all previous attempts were good relatively to their time; all were imperfect at their best, and in their decline were liable to become, in many ways—though not in all ways—noxious and immoral. These thoughts will be found in the opening chapter of the *Positivist Catechism*,² published later in the same year.

A further conclusion followed. Comte was under less illusion than is commonly supposed as to the rapidity with which Positivism would spread. In the ninth letter of this series (August 29, 1851) he remarks that for at least a generation to come Positivism will act more decisively on leaders than on those they lead, inversely to what took place with Christianity. *Elle sera, pendant une génération au moins, la religion des chefs, avant de devenir celle des sujets.* For the diffusion of Positivism over the world he assigned a period of two centuries.³ In a remarkable passage of the thirty-third letter (June 9, 1853) he warns Dr. Audiffrent against attaching too much importance to these dates. "I hope," he writes, "that men of sense (*les bons esprits*) will not attach more importance to them than I do myself." Still, in any case the process must be slow;

¹ See *Pos. Pol.*, vol. ii, ch. i, and especially pp. 7-20.

² In the First Conversation, on the "General Theory of Religion."—ED.

³ See p. 290 of *General View*.

and, in the meantime, what was to be the attitude of Positivists towards the less perfect modes of religion to which large numbers of their contemporaries would still remain sincerely devoted?

The answer to this question was given in the *Appel aux Conservateurs*, the second part of which contains his conception of a religious league with sincere theological believers of whatever school, against the forces, daily threatening to become more dangerous, of irreligion and materialism.¹ The project has been criticized as Utopian, and the more so that one of its distinctive features was to be the total absence of such hypocritical concealment as we have become familiar with of late in the case of men holding high positions in English universities. There was to be no paltering with principles, no abandonment of the claim of Positivism to be the highest form of religion. *La présidence positiviste*, Comte writes (eighty-fifth letter), *ne comporte aucun partage; et doit pourtant respecter l'indépendance nécessaire de chaque élément.*² Utopian or otherwise—and to the present writer it seems otherwise—the conception is one without which Comte's way of regarding the facts of religious life cannot be understood. It should be added that the third part of this short treatise,³ dealing with the attitude of Positivists towards Revolutionaries, advocates sympathy, and in many cases co-operation, with those of them who are free from envious and subversive passions, and are animated by sincere desire to build up a nobler fabric of life.

Reference is often made in these letters to the institution of Positivist sacraments; distinct avowals, made at critical periods, that the life of each human being is bound up with that of his nation and of Humanity.⁴ That these declarations have no mystical significance, and are imposed on none who do not willingly make them, is, of course, well known to Positivists. Comte instituted no weekly services, nor any formal invocations of Humanity. Such things he held to be hollow, except so far as they resulted from strong inward convictions, widely diffused; and it needed wise guidance to decide when the time for them had come, and with what resources of poetry and other arts they should be surrounded. It was one among many reasons for his insisting so strongly that those who conducted the Positivist movement should have fulfilled the requisite conditions of age and intellectual training. Emphatic judgments on this point are to be found in the twenty-third letter,

¹ Cf. above, p. 242.—ED.

² See also the 42nd, 44th, 47th, and 59th letters.

³ The *Appel*.—ED.

Cf. p. 224.—ED.

and they are perhaps as necessary now as they were fifty years ago. Comte had no sympathy with "playing at church" (*la fantaisie de jouer à la chapelle*),¹ or with the usurpation of spiritual authority by those who had no claim to it.

III

A VISIT TO PIERRE LAFFITTE²

A SHORT visit recently paid to M. Laffitte, at his home in the South-West of France, leads me to say a few words on this remarkable man, the greatest of Comte's disciples, his successor in the only sense in which such a man can have a successor. To the Positivist that word implies no mystic conveyance of apostolical succession, but the power to carry on the master's work, to develop those of his conceptions which had been left half-unfolded, to adapt his thoughts to the changing conditions of the time; to use his methods wisely, and by means of them arrive at new results; in a word, to stand to him in the relation in which Archytas stood to Pythagoras, Theophrastus to Aristotle, Luini to Leonardo da Vinci.

I found M. Laffitte in the little town of Cadillac on the Garonne, thirty miles higher up the river than Bordeaux, on the edge of the Sauterne wine district. The whole countryside is a vast vineyard: the vintage was just beginning, the vine leaves were tinged with orange and crimson, pine-clad hills here and there broke the monotony of the plain. From the heights that bounded the valley the views were singularly attractive and thoroughly southern in character—I was going to say Italian, only that the signs of industry, prosperity, and fine careful tillage so far surpassed anything that can be seen in Italy. Cadillac, with a population not exceeding three thousand, is a prominent point in all these landscapes, for the Duke d'Épernon, in the sixteenth century, built a fortress there which, though wholly unlike the mediæval castles of the eleventh and twelfth centuries, was a place of great size and strength, well adapted to the warfare of that later time. From this he was able to terrorize Bordeaux with threats of stopping inland traffic. It was one of the principal strongholds of that second feudalism which Richelieu set himself to destroy. This castle, perfectly preserved, is now a penitentiary. A large hospital and lunatic asylum, also of very ancient foundation,

¹ See p. 134 of these *Lettres*.—ED.

² 1894

is another feature of the little town whose inhabitants drive a thriving trade in the manufacture of wine barrels, the staves for which are imported, through Trieste and Bordeaux, from the oak forests of Bosnia.

M. Laffitte's house, shared with a sister, is an unpretending but spacious one-story building on the outskirts of the town overlooking the river; plainly furnished, with a small loosely-ordered garden, well shaded by trellised vines, from which the white grapes of the country hang in profusion. Adjoining Cadillac and separated from it by a small stream is the village of Béguey, M. Laffitte's birth-place, in which his family have been settled for many generations. His grandfather was an ironmaster, with forges like those of which the remains still abound in the woods of Sussex and Hampshire. The trade has long since migrated to Bordeaux and elsewhere. In the house of one of his relations we listened to music of the eighteenth century, charmingly played and sung by Sacchini, Grétry, Piccinni, and other masters, whom it is now the fashion to disregard, but whose place in the historical growth of music is immortalized in the Calendar.¹ Gay Gascon songs were interspersed.

It was pleasant to think of our chief in his old age being able to spend half the year in this bright peaceful region surrounded by the affectionate respect of his neighbours of all shades of opinion. With the conservative doctor, the republican mayor, and with many members of the clergy he is on the friendliest terms, and especially with the parish priest of Béguey, a pious Catholic with no pretensions to liberalism, who frankly accepts the position created by recent French history, that the time for Catholic intervention in politics is over, and that the duties of the priest lie henceforth in the sphere of private life. I regretted not being able to see this clergyman, who was from home. But I visited the village church recently rebuilt by workmen of the neighbourhood in the Roman style with singular freedom from tawdry decoration. To the expense of this building M. Laffitte contributed, and he is among the few male inhabitants who attend the Sunday service; a fact noted with much surprise by some of his friends who fail to understand that withdrawal from theology does not necessarily mean irreligion. I had much conversation with him on the leading thoughts contained in the *Appel aux Conservateurs*, especially on Comte's great conception of the religious

¹ In the week of Mozart, and the month headed by Shakespeare, Piccinni is not in the Calendar.—ED.

alliance of Positivists with sincere theologians of whatever creed.¹ The questions raised by the recent law of Divorce appeared to him to be among those on which Positivists and Catholics might usefully unite. It is needless to say that his opinions are well known in the neighbourhood. He has frequently lectured there on Positivist subjects; and one of these discourses, delivered to a large and most responsive audience, on "La Femme Agricole" will, I believe, soon appear in the *Revue Occidentale*.²

Several excursions in the neighbourhood have left ineffaceable memories. One of them was to the château of La Brède, a small feudal castle with moats and drawbridges almost unaltered, and old furniture of the time of Henri IV, where the family of Montesquieu have lived for five centuries. Montesquieu's own room is kept, like Scott's at Abbotsford, exactly as he left it, and his vast collection of books is preserved intact. Another walk ending in the village church of St. Roch on the hills was noteworthy not merely for its beauty, but because M. Laffitte's discourses on September 5 were always prepared while walking along this road.³

These, alas, are now entrusted to other hands, as he has wisely resolved to spend the latter half of each year that may remain to him in retirement. But retirement in his case does not mean inactivity. On the contrary, it is here that the best part of his work has for a long time been done. A certain toughness, if I may use the word, in the fibres of his brain, fortified by long mathematical training, enables him, as it enabled Comte, to carry on a continuous process of thought for hours without putting pen to paper. Certain specified subjects are thought out by him in this way, partly in the silence of the night, partly in solitary walks. He returns to Paris late in the year with a harvest of results, gathered in with untiring devotion by MM. Jeannolle, Clément, and others of the band of friends and disciples who surround him in Paris, and who are making ready to continue his work.

What has that work been? To estimate it rightly we should form a clear and definite notion of the relation of a disciple to a master. In old times this relation was openly recognized and well understood. In the present century a wave of revolutionary prejudice has overwhelmed it, and, as most men seem to think, has wiped it out altogether. Every man should form his own opinions

¹ See above, p. 242.—ED.

² This *Revue* was founded by Laffitte in 1878.—ED.

³ These discourses were delivered annually in commemoration of Comte's death on September 5, 1857.—ED.

independently, it is said. He should be bound by the watchwords of no master. Yet no one has invented the alphabet or constructed the English or the Greek language. No man can seriously delude himself with the dream that his stock-in-trade of ideas, traditions, and beliefs is of his own manufacture. So it is, however, that those who follow a master do it grudgingly, and with the sense that it is looked on as bad literary form. They turn their faces another way, so to speak, and fear or blush to acknowledge the source of the thoughts on which very often their reputation has been built up. A minority remains, more honest and more dull, for whom discipleship means blind and profitless repetition of the words of their teacher, in season and out of season, with small regard to the time when, the persons to whom, and the circumstances in which they were spoken.

M. Laffitte has avoided both these snares. He has openly and loyally avowed Comte as his master without ever professing to regard him as infallible. He has concentrated all the forces of his intellect to the development of thoughts which Comte had left half unfolded, or had veiled in abstract language of which no one had perceived the concrete application. He has deliberately set himself to complete the programme which Comte's premature death cut short. The unfinished treatise on the Science and the Art of Human Conduct,¹ which forms the keystone of the human Synthesis—that is to say, the final adjustment of all truths which subserve the highest welfare of man—has formed from the beginning of his career the principal field of his efforts. The fundamental truths of Positive Philosophy, spoken of by Comte as *Philosophie Première*, and set forth in the fourth volume of his *Positive Polity*, form for most readers a barren catalogue of abstractions. M. Laffitte's work on the subject² exhibits these truths in their connection with the work of Aristotle, of the mediæval schoolmen, and of the thinkers of modern Europe, as the necessary groundwork of fixed moral and social convictions. In particular, his explanation of the identity of a scientific law and a mathematical equation may be mentioned as a signal instance of the precision and lucidity given by scientific method to a notion which, though verbally very familiar, is yet misconceived by most of those who use it.³

Deep truths like these may be thought more adapted to a school of students than to the world at large. But his forthcoming summary

¹ See above, pp. 166-67.—ED.

² See above, p. 47 (note).

³ Cf. above, pp. 100-101.—ED.

of Positive Ethic put in the form of question and answer will show, I think, his power of bringing principles of the highest moment within the understanding of the humblest.¹ Throughout the whole of his career M. Laffitte has never swerved from the social point of view. As a French citizen it is hardly too much to say that his influence has been greater than that of any thinker since the days of Voltaire and Diderot. His policy has been a consistent defence of the Republic against Clericalism and Democracy, which during the last two decades have continually joined their forces to destroy it. Here it is that his combination of historical and philosophical power have stood him in good stead. His vivid pithy demonstrations of the need for stable government, his bold assertions, backed by solid fact, that Louis XI and Richelieu were the forerunners and founders of the Republic, his personal talk in Socrates' fashion with all comers at the Café Voltaire, his lectures on the French Revolution given in every hall in Paris—these things have made him a real force in the public life of France, so that it is not surprising to hear of the list of statesmen who subscribe to the *Revue Occidentale*. His Professorship of the History of Science at the *Collège de France*, an institution wholly free from the official trammels of the University, realizes a suggestion made long ago by Comte, and secures him a fit audience.

I must not dwell on what it would be unpardonable wholly to omit—on the charm of manner springing from a genial and loving nature entirely free from taint of arrogance or envy, on the brilliant wit that overlies the depth of intellect and character, on the wide sympathy which Goethe himself could not surpass with worth of every kind and degree from artisan to artist, thinker, or statesman; lastly, on the loyalty to his master which secured under very great difficulties the fulfilment of Comte's will and the possession of the house in which he lived.

That there are points of his public policy on which judgment may be reserved, or even opposition expressed, is certain. But in politics, which, like medicine, can never be a science but only an art founded on a science, a wide margin must be left for such dissent, so long as the human race exists. As I said at starting, M. Laffitte has regarded Comte not as an inspired prophet, but as the greatest of modern thinkers and teachers. He has not hesitated to diverge when divergence after mature judgment seemed indispensable. In

¹ Laffitte's catechism was never published in a complete form. See the translation of an article by Laffitte entitled "Preliminary Sketch of a Positivist Catechism" in the *Positivist Review* of June, 1903.—ED.

this he has set an example to all of us. To suppose Comte infallible would be to credit him with miraculous revelation; and the days of miracle are over. It is no mark of reverence for a teacher to accept his mistakes.

IV

PIERRE LAFFITTE'S TEACHING¹

I HAVE been asked by the Editor of the *Positivist Review* to say something of the philosophical side of Laffitte's work. But I find it quite impossible to do this adequately within the limits of an ordinary article, or even if the whole space of the *Review* had been allotted to me. Perhaps in no case, certainly in few, can the philosopher be separated from the man. Assuredly it cannot in the present instance, the philosophy in question being the Positive Philosophy as instituted by Comte, in which the part taken by the heart and the head are so intimately interwoven. All that I can do on the present occasion is to offer a few special illustrations of Laffitte's mode of teaching, and thus to give somewhat more precision and definiteness to impressions which would be otherwise vague and fleeting. In any case, emphasis will have been given to my conviction that in Pierre Laffitte Humanity has gained (not lost)² a thinker of that rare order in whom the highest intellectual gifts have been devoted to the highest service. The world will find this out in due time.

My intercourse—may I say my friendship?—with Laffitte began in 1859. I had been in Paris in September, 1857, having been already in correspondence with Comte; and was present at the commemorative meeting of September 27, noted on pp. 550-53 of Dr. Robinet's biography.³ On that occasion Laffitte was not present, wisely and rightly abstaining while his claims to act as director were being examined by some of the older Positivists. One of the most remarkable of these was Fabien Magnin, the cabinet-maker, in whose grave, close by that of Comte, Pierre Laffitte now lies. With him I had long conversations as we walked to and fro by the canal which adjoined his workshop at St. Denis. I can

¹ 1903

² This paper was written soon after the death of Laffitte, which occurred on January 4, 1903.—ED.

³ Third edition.

never forget his emphatic approval of the choice which had just been made of Laffitte as head of the Positivist organization—a choice indicated, no doubt, by Comte's mention of him in his will, but obviously needing further confirmation. "M. Laffitte," said this workman, "has the two essential elements which we need—strong social sympathies; intellectual capacity and training. The first he shares with others; the second no one possesses in nearly so high a degree as himself. He is said to be wanting in initiative, but you will see that that will come." Magnin, who had been intimately associated with both Comte and Laffitte for many years, knew well what he was talking about, and his forecast was justified. Between two and three years afterwards an old college friend, J. B. Winstanley, well known in the annals of Positivism for his munificent donations in times of crisis, was writing to me as follows from Paris about Laffitte's many-sided activity: "When one sees the overwhelming amount of work that Laffitte has to do, one's admiration for the devoted energy with which he throws himself into it leaves no room for anything but regret that he is prevented by the physical impossibility of the thing from doing many things which it would be well that he should do." He was engaged at this time in his work on Chinese civilization,¹ he was delivering a course of twenty-five lectures on the general History of Humanity; he was giving elementary private teaching on Positive lines (of which more afterwards); and all this time he was earning his livelihood as a teacher of mathematics, and was spending much time and energy in efforts (happily successful) to maintain the provisions of Comte's will in the law courts.

Winstanley introduced me to him in the summer of 1859. I was then studying medicine in Paris, and had many opportunities of meeting him. Of the wit and genial gaiety of his talk I will say little, for enough has been said by others. These happy gifts, outcome of a nature free from all mean or envious taint, were in full play at the time of which I speak; they had not entirely disappeared when I saw him, in a state of extreme physical decay, in October of last year. They helped, not hindered, his life-work; and if there be any who underrate them, they must be Pharisees indeed. The general drift of our first conversation I remember well. It turned on the pleasure felt in intellectual research. This pleasure, he said, was good and wholesome, provided always that the ardour of social and moral progress lay behind it as the dominant principle. So

¹ See above, p. 93 (note 2).

understood, the capacity for such pleasure was useful, and all but indispensable, to those who sought to guide the spiritual destinies of Humanity. It was a general and most vivid commentary on the well-known maxim of Comte, *L'esprit doit toujours être le ministre du cœur, et jamais son esclave*.¹ The submission of the Positivist differs from that of the Jesuit as life from death. *Sicut cadaver*, said Ignatius; *sicut corpus vivum*, said Comte. Laffitte worked on those lines always; following in his Master's track, but with eye and ear open to what was passing in the world of thought and action, living in the present, living also in the past and future, developing original thought in himself, and encouraging it in others.

The private teaching alluded to above was that given in 1859-60 to Winstanley, who, wishing to repair the defects of his academic education, had been recommended by Comte to apply to Laffitte, as the only one of his disciples capable of teaching the whole series of abstract sciences from Mathematics to Ethics. Full notes of these lectures, so far as they extended (for they were cut short by Winstanley's recall from France to home duties, and soon afterwards by death), are now in my possession. They cover the preliminary course of *First Philosophy*, the course on Arithmetic, and that on Algebra.

Two things would strike any unprejudiced reader of these lectures—first, their extreme simplicity, clearness, and precision; secondly, the way in which social and moral considerations are intertwined with questions of arithmetic and algebra. Let me take as an illustration the first case that presents itself—the problem of numeration. That problem, no easy one, is, the teacher pointed out, to express all possible numbers by the combination of the fewest number of words. The use of the fingers, or of fingers and toes together, would carry the savage a little way, but only a little. To solve the problem with any approach to adequacy we must have the “subordination of groups”—i.e., of groups of units to groups of tens, groups of tens to groups of hundreds, and so on. Now, this conception was not reached till a very advanced period of civilization; and it was the result of what Laffitte was never tired of pointing out to his pupils—the reaction of practical life (in this case of military organization) on speculative life. So, again, with the admirable artifice, unknown to Greeks or Romans, and due to Orientals, of indicating numerical value by position. I find in the

¹ “The Intellect should always be the Servant of the Heart, but never its Slave.” This was one of the three mottoes on the title-page of the *General View*.—ED.

notes this remark: "We see in it the reaction of social feeling and custom on the abstract spirit. There can be little doubt that it was in social usages that this conception of a relation between value and position took its rise. A procession, for instance, illustrates it." Again, in the chapter on fractions, while pointing out that the successive addition of the same number to the numerator and denominator of a fraction produces a series each term of which comes nearer to unity, though unity can never be reached, the teacher introduces the general conception of *limit*, which plays so vast a part in the higher calculus, and no less a part, as Laffitte goes on to show, in sociology. That a given institution or instinct tends constantly to disappear may be quite consistent with the truth that it will never disappear completely. Man tends, on the whole, to become more sober but he will never cease to eat and drink.

I might fill pages with instances of the same kind, all of them stamped with the same general character—the infusion of sociological teaching in the first rudiments of systematic education. But as much misconception prevails, even among Positivists, as to what the purpose of Comte's scheme of systematic education really was, a few words of comment are here necessary. It was intended to help the formation among the leading minds of Europe, rich or poor, literate or illiterate, of solid convictions as to the nature of society and man, and as to the means of modifying that nature, within possible limits, in the wisest way. As to the need of such convictions, I need not say much. It is enough to refer to the eloquent and powerful remarks on the subject in Mr. Harrison's New Year's Address.¹ But no true judgment of Comte's scheme of scientific education is possible unless this purpose is kept constantly in mind. It does not come into competition with the various schemes of technical education which are now occupying, and very rightly occupying, public attention. These have for their object to enable each nation to take its proper part in subduing the forces of nature to man's service. No one can dispute the need for such work as this, however unwisely it may be sometimes regulated. In one way or another it will assuredly go on; and no one can see, or wish to see, the end of it. But the systematic course of scientific teaching instituted by Comte, and put in practice by Laffitte, had quite another purpose in view, not less definite and even more

¹ Delivered at Clifford's Inn Hall on January 1, 1903, entitled "The Old Order and the New." See *Positivist Review* of February, 1903.—ED.

important. It aimed at throwing light on the problems of human nature and human conduct. Now, the mathematical and physical sciences, as commonly thought of, seem to have nothing whatever to do with this. As thought of in Positivist teaching, they have very much to do with it. They form an essential part of that ladder of the understanding (*scala intellectûs*) by which we are enabled to travel from the simplest laws of nature to the highest and the most complex; they hold out a type of precision and certainty which it is the principal aim of Comte and his school to introduce, within possible limits, in the fluctuating region of social and moral facts. While ascending this ladder the Positivist teacher (and I am here taking Laffitte as the only complete example of such a teacher known to me) has the summit constantly in view. The numberless applications of physical science to industrial purposes, important as they may be, form no part of his immediate purpose. To many speculations, on which much energy is expended by minds of great acuteness in the present day, he is quite indifferent. In the geometry of space of four dimensions, in conjectures as to the ultimate constitution of matter or the ultimate origin of life, he takes no interest whatever. Throughout the whole series of the "abstract sciences" he never loses sight of the final aim, the establishment of scientific certainty in sociology and morals, as the first condition of governing human nature wisely.

So, then, men must become mathematicians before they can be good citizens? The taunt was hurled at Laffitte continually, but it fell wide of the mark always. No one knew better than he—I take leave to say that no one, after Comte, knew nearly so well as he—that the world was not going to be remodelled by scientific teaching, however wise, if there were nothing else behind it. *L'Amour pour principe; l'Ordre pour base*.¹ Both are equally needed if there is to be any progress worthy of the name. We have already seen that Laffitte's scientific teaching was saturated with thoughts bearing on Man and the Service of Man. But, wholly apart from the abstractions of science, no one I have ever known had so firm and large a grip of life in the *concrete*—the life of workmen, of women and children; the wholesome traditions of a country village, the monuments and memories of a great city. He had grasped Comte's scheme of education to the full.² In that ideal scheme, as all know, though many forget, only one-third of the twenty-one years of

¹ See p. 39 (note).

² See *General View*, pp. 125-36, and *Pos. Pol.*, vol. iv, pp. 228-39.—ED.

education was devoted to systematic intellectual training; during infancy and childhood influences of a wholly different kind—home life, the life of art and song—were supreme. All this Laffitte fully realized. Those who have stood by when young children were presented for admission to the Positivist body and on other occasions of a similar kind can tell, perhaps, better than others how on every side of life his wise judgments were lit up by the keenest and most genial sympathy.

As I said at starting, I make no attempt to speak in this short paper of Laffitte's two volumes of *Philosophie Première*,¹ or of his three volumes on the *Grands Types de l'Humanité*.² His attempt to construct the treatise on Human Nature and Education (*Morale Théorique et Pratique*) which Comte had projected and on which he left a few priceless indications will, it may be hoped, appear in due course.³ Meanwhile let me call attention to a short work which seems to me to have received far less attention than it deserves—*La Morale Positive, par M. Pierre Laffitte, précédée d'un aperçu sommaire sur sa vie et son œuvre*, published in 1880 by M. Emile Antoine, Dr. Robinet's son-in-law—who, as all who know him will grieve to hear, is now dangerously ill. Eighty pages are occupied by a very admirable biographical notice. The remainder (218 pages) consists of a lecture delivered by Laffitte at Havre in December, 1878. This lecture was very carefully revised by the author, and has the character of a substantive work, brief though it be, and avowedly meant for popular use. It falls into three divisions: (1) The urgency of Positive Ethics in reference to the present time; (2) its fundamental characters; (3) its principal applications to the individual, to the family, to the body of Western nations, and to the rest of the world. Wholly in accordance with Comte's teaching, as continuous with it as the painting of Luini is with that of Leonardo, this little book abounds in the fresh vitality, the pithy illustrations, the instructive paradoxes, the kindly sympathy, the capacity for entering into his hearers' point of view, which made Laffitte's instruction so acceptable to those who would have turned a deaf ear to a formal statement of abstract doctrine. I strongly recommend it as an introduction to Positivism, and hope much that it may soon be translated into English.⁴

¹ See above, p. 47 (note).

² See above, pp. 232 (note 2), 246 (note 2).

³ Laffitte's courses of lectures on Theoretical and Practical Morals have only been published in the *Revue Occidentale* (1885-1887).—ED.

⁴ See *The Positive Science of Morals*. Its opportuneness, its outlines, and its chief applications. By the late Pierre Laffitte. Translated by J. Carey Hall. (Watts; 1908.)—ED.

V

HUXLEY AND POSITIVISM

WHAT lay at the root of the extreme bitterness with which Huxley always spoke and wrote of Positivism? The admirable biography¹ recently given to the world by his son raises the question; and the attempt to answer it may throw light on several points of interest, and especially on the part which science has to play in solving the problems of human life.

But before entering on such deep matters a word should be said on the vivid portraiture given in this book of a remarkable personality. It brings before us a brave, loyal, sincere man; combative and prejudiced, but genial, affectionate, and devoted; a good fighter, a good hater, but free from paltry jealousies, incapable of mean or sordid thoughts. To the first rank of scientific discoverers he does not belong. He did not make an epoch in the science which he pursued by any new or far-reaching conception. But he played a more important part in fashioning opinion than men whose intellectual force was perhaps greater than his own; for his very considerable powers of scientific research were associated with the literary gift of vigorous and lucid exposition. Towards the end of his career he became almost better known as a man of letters than as a man of science. A philosophic thinker, in any true sense of that word, he never was; and for any attempt to co-ordinate the positive sciences into a coherent system, whether on the method followed by Comte or that followed by Mr. Herbert Spencer, he had no sympathy. For the former, indeed, he had no feeling but repugnance.

It is not difficult to account for this repugnance. Those who have followed the details of Comte's life know that the hostility of the scientific coteries was far more bitter and more fatal to his material prosperity than that of the Catholic Church—although this, too, was not wanting, for the *Philosophie Positive* was at once placed by that Church on the list of prohibited books. Comte's special aptitudes in mathematical science could not be denied; they had been acknowledged by Fourier, the greatest mathematician, perhaps, of the nineteenth century, by Poincaré, Navier, and many others. In biology the illustrious Blainville acknowledged him as one of his most sedulous pupils. His eminence in sociology was,

¹ *Life and Letters of T. H. Huxley*. Two vols.; 1900.—ED.

of course, not duly recognized, precisely because he was the founder of this science. As a distinct branch of the tree of scientific knowledge it had no existence before his time. But his early essays on history had attracted the attention of Guizot; as a careful student of economics he was well known to Say and to Dunoyer. All this was when Comte was a young man, between his twenty-fifth and thirtieth year. As time went on and the building up of his philosophy of the sciences proceeded, it became clear that the new science of sociology, by the very fact of its existence, tended to take an exceptional position among the sciences. This position has been often misunderstood, as though it implied that sociology, when fully constituted, would operate in discouraging the pursuit of other sciences. It has been a very disastrous misunderstanding, the responsibility for which rests partly with the narrowness, the imperfect training, and the want of civic feeling of many of the scientific specialists; but partly also with the narrowness, imperfect training, and impatience of some of the most prominent of Comte's disciples. Both one and the other might and should have learnt from the *Philosophie Positive* that sociology can have no existence as a science except so far as it rests on a sure foundation of biology and physics. Those who are unversed in the methods and results of the more elementary sciences are not likely to do much original work for the progress of the more composite. Be this as it may, sociology, while resting on the older sciences, and maintaining the same degree of dependence on them on the one side, and of independence of them on the other, that biology acknowledges with respect to physics, and physics with respect to mathematics, cannot avoid claiming for itself a position of exceptional prominence. Its field of research contains the truths which touch man's life most nearly. It gives fresh significance to the ancient saying, handed down to us in various forms from theocratic times, that "The proper study of mankind is man."¹ To say that it will obstruct the culture of other sciences is the direct reverse of the truth; and this quite apart from the obvious fact that our industrial necessities will always secure for these their due share of attention. Nevertheless, it is true that this new science, of which Comte more truly than anyone else may be regarded as the founder, will undoubtedly exercise, quite automatically and spontaneously, a directing influence over the choice of the problems on which our store of intellectual capital is to be expended. An instance of this

¹ Pope's *Essay on Man*; 1733. This epigram was selected by Comte as the motto for the title-page of his *Treatise on Theoretical Morals*, which he did not live to write.—ED.

is the keen stimulus given during the last thirty years to the study of the biological problem of heredity, owing to the growing perception of its sociological importance. The scientific study of language, or, again, the researches now being made as to the mental faculties of animals, are other instances. All this may explain, though it does not excuse, the suspicion of the academic world that the new science of sociology, assuming definite shape between 1830 and 1842,¹ would not merely exercise a directing influence over scientific specialism, but would tend to discourage it altogether. The suspicion was handed on to a later generation, and has not yet died out. It was shared by Huxley; and it must be owned that the language of the first English Positivist with whom he came into controversial contact was not of a kind calculated to allay it.

I have no intention of dealing with all the violent and, it must frankly be said, foolish attacks on Positivism which occur frequently in these volumes—as, *e.g.*, that Comte was “destitute of philosophic power,” that Comtists advocate “the crudest eighteenth-century materialism,” and so on. These are but wild and whirling words, which, if not forgotten, can only recoil on the reputation of their author. For myself, the principal interest of Huxley’s biography is the evidence afforded of the fact that, while never tired of reviling Positivism, he ended by bearing witness in a very striking way to one of its most fundamental principles. Of the two synthetic philosophies of the nineteenth century claiming to be founded on science, one, that which is identified with the name of Herbert Spencer, takes Cosmic Evolution for its central principle; the other, that of Auguste Comte, rests on the conception of Humanity. It will be seen that Huxley’s later teaching lends support to Comte rather than to Spencer. This point has been already touched by Mr. Harrison, but it will well bear re-insistence.

Let me quote one of these later utterances from the ninth volume of Huxley’s *Collected Essays*.² It occurs in the essay entitled “Evolution and Ethics”³—

The influence of the cosmic process on the evolution of society is the greater the more rudimentary its civilization. Social progress means a checking of the cosmic process at every step, and the substitution for it of another, which may be called the ethical process, the end of which is, not the survival of those who may happen to be the fittest in respect of the

¹ The *Philosophie Positive* was published between the years 1830 and 1842. Cf. above, p. 336 (note 1).—ED.

² 1893-94.—ED.

³ The Romanes Lecture, 1893.—ED.

whole of the conditions which obtain, but of those who are ethically the best.....As I have already urged, the practice of that which is ethically the best—what we call goodness or virtue—involves a course of conduct which in all respects is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside, or treading down, all competitors, it requires that the individual shall not merely respect, but help, his fellows; its influence is directed not so much to the survival of the fittest as to the fitting of as many as possible to survive. It repudiates the gladiatorial theory of existence.¹

And, again, p. 83 :—

The ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it. It may seem an audacious proposal thus to pit the microcosm against the macrocosm, and to set man to subdue nature to his higher ends; but I venture to think that the great intellectual difference between the ancient times with which we have been occupied and our day, lies in the solid foundation we have acquired for the hope that such an enterprise may meet with a certain measure of success.

It is difficult, I think, to define the Positivist attitude in this great controversy more distinctly than is done by Huxley in the foregoing passage. One is tempted to recall the example of the prophet Balaam, who came to curse Israel and ended by blessing them altogether. We may raise our hopes of ultimate success higher than Huxley did, but we know well that it can never be complete. "With all the agencies, physical or moral, which can be brought to bear, we shall have to acknowledge," said Comte, "that the exceeding imperfection of human nature forms an eternal obstacle to the object for which Positivism strives—the victory of social sympathy over self-love." The whole spirit of Positivism consists in recognition of and resignation to the lower order, and in gradual modification of it by the higher order. We are neither to imitate the Cosmic process, nor to run away from it, but to combat it. The whole thing is summed up, philosophically speaking, in Comte's classification, or rather his serial arrangement, of the sciences—a piece of sociological construction of which Huxley, no less than Spencer, has entirely failed to grasp the meaning. Throughout the scale of sciences the higher order rests upon the lower, but is at the same time quite distinct from it—as distinct

¹ Pp. 81-82.

as the flower is from the soil on which it depends for sustenance. Every molecule of every living organism obeys the law of gravitation, and submits to all other conditions imposed by the structure of the solar system. Yet the science of Biology is distinct from the science of Physics. Humanity, in addition to all those fatalities, is subject also to the Malthusian competition which Darwin and Wallace have shown to play so enormous and so unexpected a part in the evolution of living forms. We cannot run away from this fact any more than we can leap from our own shadow. The scientific error of the last forty years, now in slow but sure process of correction, has been to believe that it stood alone. The humane Malthus was the innocent occasion of much bad political economy, much faulty legislation, much social indifference, in his day; and so in our own time has the no less humane Darwin.¹ Needless to say that a great scientific discoverer is not to be held responsible for the temporary evils that may attach to his discovery. The fault lies with those who, under the dazzling influence of a new and original truth, become blind to older truths of equal or greater value.

The history of civilization is a continuous struggle of Humanity against physical and biological fatalities—the Malthusian fatality among the rest. It has involved a pitting of “the microcosm against the macrocosm,” a repudiation of the “gladiatorial theory of existence.” We had all this out half a century ago, when Malthusian theories, spoken of in those days as the “stern laws of political economy,” were barring the way to many forms of social progress. In natural history the application of Malthus’s doctrine has proved, in the hands of the founder of a great school of naturalists, most fertile in results. In the history of Humanity it is but a half-truth; and half-truths have sometimes shown themselves more dangerous than lies.

VI

THE CENTENARY OF KANT²

IMMANUEL KANT died on February 12, 1804, in his seventy-ninth year. His centenary has been recently celebrated with great honour by his countrymen in Königsberg, where the whole of his life was spent. It demands some notice in the *Positivist Review*, for Kant occupies an honoured place in the Positivist Calendar under the

¹ Cf. p. 336.—ED.

² April, 1904

month of Descartes and the week of Hume. Thinkers equally great have left a less profound impression on the mass of their contemporaries. It was the consistency of a noble character, of a pure and upright life, that won the veneration of those who had no power of sounding the depth of his thoughts.

He prepared himself for his work by a very thorough training in mathematics and physics. Between 1755 and 1770 he was occupied as a private tutor in these subjects. How completely he had mastered them is shown by the fact that he had predicted the existence of the planet Uranus prior to its discovery by Herschel.¹ In 1770 he was appointed professor of logic and metaphysics, and held that office for twenty-four years. When compelled by the infirmities of age to resign it, he still continued to publish important papers on philosophic subjects. It is noteworthy that his principal works were produced towards the close of his life. The first edition of his *Critique of Pure Reason* was published in 1781, the second in 1787; the *Critique of Practical Reason* in the year following.

Hume, by his discussion of causation, gave the first impulse to his work. Was it necessary for us to believe that everything that happened had a cause? That we did so believe was undoubted. But whence came the necessity? All our experience of causation is that of a constant succession. We say that the antecedent has a power of producing the sequent. But what do we know about this power? Experience teaches us that when a billiard ball in motion impinges upon a second at rest, the second ball moves. We say that the first ball causes the motion of the second. But is the connection between the first movement and the second necessary? We have no perception of any power in the first ball to move the second. When this succession of events is repeated over and over again, the idea of necessity begins to form itself within us. But this is only a subjective notion. We pass, by the force of habit, irresistibly from the antecedent to the sequent. This passage, by habitual association from the idea of the motion of the first ball to that of the motion of the second, is the fact that we call causation. When sequent follows antecedent invariably in our experience, we call the antecedent the cause of the sequent. The idea of cause is not given us *a priori*. It is a fact of experience.

Hume's absolute denial of all knowledge derived elsewhere than from experience, involving as it did entire scepticism as to the

¹ Or, rather, he had suggested the possibility of there being other planets outside the orbit of Saturn.—ED.

possibility of metaphysics, was the starting-point of Kant's philosophical career. Kant set himself to ask, What, then, were the elements of experience? Locke had maintained that the materials of knowledge were derived from sensation and reflection. Leibnitz, with other successors of Descartes, held that there were elements of knowledge transcending sensation—ideas of substance, of causality, of infinity, of eternity, and so on. These he regarded as innate. Kant introduced the very fertile thought that there were not two sources of knowledge—external objects on one side and human understanding on the other—but one only: the interaction of the two; the union, in other words, of object and subject. Thus water has not two causes, oxygen and hydrogen. Water results from the union of the two. So knowledge results from the interaction of object and subject, from the co-operation of the outer world and the mind.

Kant asked himself the question, Are synthetic judgments *a priori* possible; and if so, how? The expression is technical, but the question may be easily put into simpler language. A synthetic judgment adds new knowledge, as opposed to an analytic judgment, which is a mere explanation, an unfolding, of the terms used. Thus, when we say a triangle is a figure bounded by three straight lines, we merely define the triangle; the judgment is analytical. But when we say the three angles of a triangle are equal to two right angles, the judgment is synthetic. We have a piece of new knowledge. So, too, if we say all body is extended, it is an analytic judgment. Extension enters into our conception of body, so we are merely saying the same thing again in new words. But if we say all body has weight, the judgment is synthetic. It adds to our knowledge. In this last case the knowledge given is *a posteriori*; it is derived from experience. But in the former example of the three angles of a triangle the knowledge, so Kant considered, was *a priori*. It was dependent on the laws of space, not on observation of outward facts. This, it may be observed, is a very doubtful proposition. It may be contended with great probability—and, indeed, if we study the history of mathematical science, the probability becomes a certainty—that geometry, like other sciences, is a science of observation. But Kant thought otherwise. There were, he considered, two conditions, two forms, as he expressed it, under which our intuition of the outer world took place. These were Space and Time. We are so constituted as not to be able to apprehend the facts of the outer world otherwise than in these two forms. They are part of our mental structure. And so it is, he thought, that

geometry results from our consideration of Space, independently of material furnished by the outer world.

Again, our intuitions of the sensible world, received under the forms of Time and Space, are generalized, unified, gathered up into objects of thought, or concepts, by the Understanding, in ways appointed by the constitution of the Understanding. These ways Kant indicated by the term "categories." That is to say, the material given by intuition of the outer world was thought of as quantity, as quality, as relation of cause and effect, and in various other modes, of which Kant specified twelve. Much subtle thought was expended on this machinery of categories, which has not altogether carried conviction to subsequent thinkers. So much, however, was established: our knowledge of the external world and of ourselves was a knowledge, not of things in themselves, not of absolute realities, but of the impressions received by the senses and moulded by the structure of our intelligence. Compelled though we may be to believe in the existence of things outside us, we have no real knowledge of these things. What we call knowledge is the result of the action of the world upon sense modified by the structure of sense and of understanding.

Thus, said Kant at the conclusion of this part of his work,

we have traversed the region of the pure understanding, and carefully surveyed every part of it; we have also measured it, and assigned to everything therein its proper place. But this land is an island, and enclosed by Nature herself within unchangeable limits. It is the land of truth, surrounded by a wide and stormy ocean, the region of illusion, where many a fog-bank, many an iceberg, seems to the mariner on his voyage of discovery a new country, and, while constantly deluding him with vain hopes, engages him in dangerous adventures, from which he never can desist, and which yet he never can bring to a termination.¹

But beyond Understanding there is in man a higher faculty, that of Reason, whose function it is to furnish what Plato called Ideas—that is, conceptions formed from notions transcending the possibility of Experience. Kant set himself to examine the validity of Reason. "The science of metaphysics," he says, "has for the proper object of its inquiries only three grand ideas—God, Freedom, and Immortality—and it aims at showing that the second conception, conjoined with the first, must lead to the third as a necessary conclusion. All

¹ *Critique of Pure Reason*. Transcendental Analytic, bk. ii, ch. iii.—ED.

the other subjects with which it occupies itself are merely means for the attainment and realization of these ideas."¹

Now, to follow Kant in his elaboration of these subjects would be impossible within the present limits. All that can be done is to state briefly his conclusion. And his conclusion was that, though it was impossible to disprove these ideas, it was equally impossible to prove them, from the purely speculative standpoint. An important chapter of his treatise is devoted to an examination of the arguments employed by speculative reason in proof of the existence of a Supreme Being. It was said that the mere idea of God was a proof of his existence. Kant destroys this line of argument mercilessly. "We may as well hope to increase our stock of knowledge by mere ideas as the merchant to augment his wealth by the addition of ciphers to his cash account."² He proceeds to examine the argument based on the necessity of a First Cause, and, lastly, the argument founded on the evidence of design in the universe. And his conclusion is that "all attempts of reason to establish a theology by the aid of speculation alone are fruitless; that the principles of reason as applied to nature do not conduct us to any theological truths; and, consequently, that a rational theology can have no existence, *unless it is founded on the laws of morality.*" "A Supreme Being is, therefore, for the speculative reason a mere ideal, though a faultless one; a conception which perfects and crowns the system of human cognition, but the objective reality of which can neither be proved nor disproved by human reason."³

The words italicized in the foregoing passage suggest that we should now turn to Kant's theory of morality, both for its own sake and to see what light it throws on his general conceptions of truth. I will quote the opening words of his *Metaphysic of Ethics*: "Nothing can possibly be conceived in this world, or even out of it, which can be called good without qualification, except a Good Will."⁴ Moral worth depends, he goes on to show, on this alone, and not on feelings of any kind, whether self-regarding or otherwise.

A good will is good not because of what it performs or effects, not by its aptness for the attainment of some proposed end, but simply by virtue of the volition—that is, it is good in itself, and, considered by itself, is to be esteemed much higher

¹ *Ibid.*, 2nd ed., Transcendental Dialectic, bk. i, sect. 3.—ED.

² *Ibid.*, T. D., bk. ii, ch. iii, sect. 4.—ED.

³ *Ibid.*, T. D., bk. ii, ch. iii, sect. 7.—ED.

⁴ *Fundamental Principles of the Metaphysic of Ethics*. Tr. by T. K. Abbott. 3rd ed. (1907), p. 10.—ED.

than all that can be brought about by it in favour of any inclination—nay, even of the sum-total of all inclinations..... Even though this will should wholly lack power to accomplish its purpose, if with its greatest efforts it should yet achieve nothing, and there should remain only the good will (not, to be sure, a mere wish, but the summoning of all means in our power), then, like a jewel, it would still shine by its own light, as a thing which has its whole value in itself.¹

Acting from duty is the only kind of action, said Kant, which has moral value. "There are many minds so sympathetically constituted that, without any other motive of vanity or self-interest, they find a pleasure in spreading joy around them, and can take delight in the satisfaction of others so far as it is their own work."² Kant maintains that an action of this kind, however amiable, has, nevertheless, no true moral worth; it is on a level with other actions performed from inclination—*e.g.*, from the inclination to honour, which, if happily directed to objects of public utility, may likewise deserve praise, but not respect. Respect is due only to actions done from duty, not from inclination.

The moral rule of action is for a man so to act that he can will that his rule should be a universal law. Let the question be asked: Is a man in distress and under compulsion justified in making a promise with the intention of not keeping it? Kant replied: "Let such a man ask himself, Should I be content that my maxim (to extricate myself from difficulty by a false promise) should hold good as a universal law, for others as well as for myself?"³ Then he will at once become aware that, while he can will the lie, he cannot possibly will that lying should become a universal law. For with such a law there could be no promises at all. This, then, is the practical law of conduct; and the necessity of acting from pure respect for this practical law is what Kant called the "categorical imperative"—that is to say, the obligation of duty, before which every other motive must give way, because it is the condition of a will being good in itself; and the worth of such a will is above everything.

Further, this law must not only be obeyed, but must be regarded as given by the will. The will must be regarded as itself giving the law. The will must be free. "A free will and a will subject to moral laws are one and the same."⁴ On the other hand, it is equally necessary that everything that takes place should be fixedly

¹ *Ibid.*, p. 11.—ED.

³ *Ibid.*, pp. 22-23.—ED.

² *Ibid.*, p. 16.—ED.

⁴ *Ibid.*, p. 79.—ED.

determined according to laws of nature. Here, then, is a contradiction. Can it be solved, and how? Theoretically it cannot be solved; a solution would overstep all the bounds of reason. All that we can say is that, morally, we are compelled to assume freedom. "This thought certainly involves the idea of an order and a system of laws different from that of the mechanism of nature which belongs to the sensible world, and it makes the conception of an intelligible world necessary (that is to say, the whole system of rational beings as things in themselves)."¹

Further consideration, the exposition of which must be omitted here, led Kant to the view that for rising to the highest summit of morality two other Ideas, in addition to that of Freedom, must be postulated as practically necessary, though all attempts to demonstrate them as speculative truths must inevitably fail. These were the Immortality of the Soul and the existence of God. Into these abstruse questions we need not now try to follow him. Enough has been said to show that his ethical teaching was pure and elevated. Yet his almost indignant repudiation of Love as an element of moral action affects us with a sense of harsh and cold sterility. Hume's *Inquiry Concerning the Principles of Morals* contains truth which Kant would seem to have wholly missed. Hume, at least, did not omit Love from his ideal of life.² Love for our principle, Law for our basis, Growth towards perfection for our goal—such a rule of living needs no factitious support from belief in the Immortality of the Soul, or in the existence of a Supreme Being.

No mention of Kant, however brief, should omit his very remarkable essay, published in 1784, on the *Idea of Universal History in Relation to Humanity*. He begins by saying that, whatever may be said of Free-will by metaphysicians, its manifestations in human action are reducible, like other phenomena, to general laws of nature. History always cherishes the hope that, if the play of free-will be looked at on a sufficiently large scale, there will be found in it signs of a continuous, though slow, unfolding of man's original faculties. Thus births, marriages, and deaths, though when looked at individually they seem to follow no rule, yet appear quite otherwise when viewed statistically in large masses. So, too, is it with the facts of weather. Hence it may be that while individuals, and even nations, go their own way, and follow their tendencies, yet all the time, unknown to themselves, they are following the guiding

¹ *Ibid.*, p. 95.—ED.

² Cf. above, p. 50.—ED.

thread of nature's plan. Let us see if we can find this guiding thread.

For the development of Humanity we must look not to the individual, but to the race. Man is not the slave of automatic instincts, as other animals are; what he is is due to his own efforts guided by reason. These efforts are called into being by the antagonism between his sociality and his individualizing self-love, his passions of ambition and avarice. Were it not for these passions, the human race would have lain dormant in Arcadian sloth; man's inventive powers would never have been roused to action. The play of these passions led men to form societies in which the freedom of each was limited by the freedom of others. But then the same thing happened with States. Their warfare with one another has been continual. From this there is no issue except in the institution of international community. Towards this final result the whole course of human development has been slowly and imperceptibly tending. It will be the purpose of the new philosophy of history, when the Kepler of history shall arise,¹ to unveil this hitherto secret process of nature. To become conscious of the process will hasten its completion.

In this short essay, even more than in his general philosophy, Kant shows himself one of the principal and most immediate predecessors of Auguste Comte.²

VII

COMTE AND CARLYLE³

To bring these two names together, except for the purpose of contrasting them, will seem to many a sheer paradox. And indeed in every detail of outward form no sharper contrast could be imagined than that between the systematic rigid thinker, founder of a school of thought and of a rule of life, and the rhapsodic seer, disdainful of all systems, and the last of whose wishes it assuredly would have been that his own dark oracles should be regarded as forming one.

¹ We may justly say, with Littré, that in this essay, with its distinct prophecy of the appearance of a thinker who should one day find the precise laws of historical growth, Kant really foreshadowed the coming of Comte as the great historian of Humanity.—ED.

² Cf. p. 91.—ED.

³ A posthumous paper.—ED.

These two men, though they were contemporaries, had no understanding of each other's work. Carlyle, in his *Reminiscences*,¹ speaks of Comte, *more suo*, as an "algebraic ghost"; to Comte, Carlyle was *un pur littérateur*, a brilliant writer for effect. These failures of strong men absorbed in their own work to appreciate the value of another's, when pursued on wholly different lines, have been seen before, and will be seen again. For those who have profited by both teachers, it is often easier to see what they have in common. And the attempt to do this may perhaps throw new light not merely on either teacher, but—and this is of much greater moment—on the thing taught.

For many readers of Carlyle the unfinished papers and summaries of conversations published by Mr. Froude were the first intimation that Carlyle held any abstract principles as to Man's place in the world that could be called by the name of a philosophy. Careful students of the *Sartor Resartus* have no doubt seen that it was otherwise; but even to them, even perhaps to Carlyle himself, the underlying principles were so wrapped and veiled in their vesture of parable and trope that it was often difficult to attribute to them separate existence. Men become readily the slaves of words which yet, for all the richest and deepest thoughts, are a miserably imperfect vehicle. And the worst is that when the slavery is once established, the words henceforth and mechanically lose the meaning which the first speaker had given them. It is not wonderful, then, that Carlyle, in his loneliness, deeply penetrated with truths held by few and for which no words then current seemed to him adequate, should shrink from embodying them in abstract formulas. Embodying in such a case might be too like embalming. Preferring formless life to petrified perfection, he chose, as great teachers before him had chosen, to speak in parables. Nevertheless, if the parables are sound, the hard kernel of truth must lie within them.

Here are some passages of Carlyle's conversations as summarized by Froude:—

Sciences of natural things he always respected.....Science, however, in these latter days, was stepping beyond its proper province, like the young Titans trying to take heaven by storm. If man, as explained by Science, was no more than a developed animal, and conscience and intellect but developments of the functions of animals, then God and religion were no more than

¹ *Reminiscences*, by T. Carlyle. Ed. by C. E. Norton. Two vols.; 1887. The epithet occurs in vol. ii, p. 219: "*foreshadowing* the miserablest phantasmal algebraic ghost I have yet met with among the ranks of the living."—ED.

inferences, and inferences which might be lawfully disputed..... He did not believe in historical Christianity.....The body of the belief was now perishing, and the soul of it, being discredited by its connection with discovered error, was suspected not to be a soul at all; half mankind, betrayed and deserted, were rushing off into materialism. Nor was the materialism the worst. Shivering at so blank a prospect, entangled in the institutions which remained standing when the life had gone out of them, the other half were "reconciling faith with reason," pretending to believe, or believing that they believed, becoming hypocrites, conscious or unconscious, the last the worse of the two, not daring to look the facts in the face, so that the very sense of truth was withered in them.....Centuries of spiritual anarchy lay before the world before sincere belief could again be generally possible among men of knowledge and insight.¹

Thus Carlyle recognized that the destructive effect of modern science could not be stayed at the traditional Christianity which he had long abandoned, but was threatening those fundamental truths in which he still believed; and yet he repudiated as strongly as ever the materialism which would account for conscience and duty in terms of physics or biology. These conversations, Froude tells us, took place in or about the year 1862; and it is impossible not to be reminded, in spite of differences of language, of the conceptions reached by Comte some forty years before, the root from which all his subsequent teaching grew. It is not without interest in this direction to notice that two of the few contemporaries on whom Comte had exerted a marked influence, John Stuart Mill and Gustave d'Eichthal, one of Comte's earliest and most intimate friends, had also come into close contact with Carlyle. How strongly Mill had been impressed by Comte appears from a well-known passage in the first edition of his *Logic*;² yet high as the eulogium was it failed to convey an adequate measure of the real bearing of Comte's conceptions. It may be doubted whether the moral intensity of Mill's nature was such as to render him sensible to the primary purport of a thought which proved indeed to be the starting-point of a new philosophy, but of which both the source

¹ *Thomas Carlyle: A History of his Life in London* (1884), vol. ii, pp. 259-61.—ED.

² *A System of Logic: Ratiocinative and Inductive*, by J. S. Mill. Two vols.; 1843. The passage occurs on p. 564 of vol. ii: "The greatest living authority on scientific methods in general, and the only philosopher who, with a competent knowledge of those methods, has attempted to characterize the Method of Sociology, M. Comte, considers this inverse order as inseparably inherent in the nature of sociological speculation."—ED.

and the final end had more to do with the conduct of Man's life than with the conduct of his thoughts. The speculative importance of Comte's "law of the three stages" was undoubtedly great; but the ethical importance of it was incomparably greater. The impulse which stirred Comte was his perception of the profound anarchy which pervaded every region of European life, public or private. In the family, in the State, in the body politic of Europe, all the old relations were disturbed, because there was no common understanding as to how to work and what to work for. Comte's early youth had been passed during the temporary arrest of the Revolution by Napoleon. A memorable school of publicists, of whom de Maistre was the strongest type, were mercilessly dissecting the revolutionary doctrine and preaching a return to mediæval principles as the sole hope of salvation. Profoundly convinced of the impossibility of the neo-Catholic dream, Comte was yet taught by it the extreme weakness of the doctrine which had destroyed without being able to replace. Of all the revolutionary teachers Condorcet had come nearest to success in giving coherence to the revolutionary doctrine. He had formed a philosophy of history; he had a clear conception of society moving onward in the future through an orderly path of progress. Yet to Condorcet the Middle Ages were wholly incomprehensible. The *Imitatio Christi* was a phenomenon which his philosophy left wholly unexplained. Comte regarded Condorcet with the reverence of a pupil for a master. But he read a chapter of the *Imitation* daily.

Now, the conception of Comte to which I wish to call attention in order to compare it with the views of Carlyle is this. Moral facts exist in the world now, as always; but an entire change is taking place in the ways of regarding them. Their study is henceforth a branch of Science; not, as heretofore, a branch of Theology. This to some will sound a truism, and it will be said that for a hundred years before Comte, at any rate since the days of Hume and the thinkers of the eighteenth century, it had become a commonplace for many educated minds. To a large extent this is true. Comte himself was the first to insist upon his debt to Hume; and Condorcet's *View of Intellectual Progress* (*Esquisse du Progrès de l'Esprit Humain*)¹ was his avowed starting-point. But the distinctive features in Comte's work were these. First, this assertion of the change of the point of view from which moral facts were to be looked at did not remain with him, as with Hume and others, a

¹ Cf. above, p. 91.—ED.

mere abstract philosophical statement. By practice and by example as well as by precept he showed that the new mode was as organic as the old. He removed the strongest motive which has led and still leads men to cling, in spite of their reason and their judgment, to the old mode by showing that human life in every one of its departments could be built up far more perfectly by the new. Secondly, Comte's mode of conceiving this enormous transition was incomparably larger and more complete than that of any of his predecessors. By his law of the three stages, applied successively to different departments of thought, he not only embraced a multitude of facts of which those before him had taken no account, but he explained the apparent paradox that the same minds could remain in the supernatural stage with regard to one order of truths, though they had reached the positive or scientific stage with regard to another. But thirdly—and this is of most importance for our immediate purpose—the region of ethical and social truth was in Comte's survey vastly wider and far more fertile than it was to Hume, or even to Condorcet. The elevation and integrity of Hume's nature no candid student would deny. But what reader of Thomas à Kempis or Wordsworth or Carlyle but must feel that some of the deepest truths of man's life were for Hume as non-existent as starlight for the blind or music for the deaf? It is the same in our own time. Many of our most vigorous thinkers are so absorbed in considering how such facts as duty, reverence, devotion, may have been evolved that they omit entirely to look at the facts themselves, and at last practically forget them. The evolution of a rose in bygone millenniums from some earlier and ruder plant is of course most interesting. But, after all, the rose itself is a more precious thing to man than the evolution of the rose. And so with the life of man. There is no need to disparage the profoundest inquiry as to how the sense of duty came to us, especially if we test at each step the reality of our results; yet the knowledge of what for European men and women in our time duty may be is of greater moment than the completest view, could we attain it, of the genesis of duty in primeval man. Wonderful is the egg; but still more wonderful is the thing that comes out of it; and this the more when, as sometimes happens, the early stages of incubation can only be guessed at, because they lie millions of ages deep.

Those philosophers, from Hume downwards, who have regarded the facts of men's mental and moral life as amenable to scientific method have for the most part dealt only with a small portion of the facts, and one large region till quite lately was left out of their

field of view almost entirely. It is only in the last few years that the history of the great religions of mankind has been generally admitted into the domain of scientific study. Hume had approached the subject in a short essay,¹ and then left it. With Comte it had been the cardinal subject of his *Philosophy of History*.² Of late the scientific study of religion has become a speciality. But it will be noticed even here that those who handle this new branch of science speak of the object of their study as of a thing outside them and very far distant from them. It is an ancient monument to be revered, or a strange species to be tabulated. To look at it as we look on gravitation, heat, electricity, or any other permanent agent affecting our life now and always, never suggests itself to them.

To Comte, on the other hand, religion and duty were living things. Whatever the primeval beginnings of love and reverence, they have been carefully nurtured by the good and great of all ages. To them we owe it that we are what we are, imperfect, struggling, bearing with us bloodstains of the savage and broken links of the slave's chain, yet with high hopes of a better and nobler future, and in the midst of toil and suffering blest by the sight of the stars and the dawn and the sunset, the trees and the flowers, blest still more by the deeds of heroic men, whether shown us in sculptured marble or in the moulding of a life of sacrifice and the building up of a Church.

Yes, you say, but these germs of good that you speak of, which have been growing and fructifying from the first ages of the world—whence come they? Can you explain them by the chemical changes in the brain tissue, by the competition of one variety of protoplasm with another a hundred million years ago? No, emphatically reply both Comte and Carlyle. It is not in the power of man to explain the universe at all. The origin of virtue, the origin of life, the origin of matter—all these things are utterly beyond our ken. Philosophies founded on algebra or founded on Darwinism will not serve us here. Algebra is a good thing. Darwin's patient researches into the laws of inheritance—that, too, is good. Positivists assuredly undervalue neither. But a key to unlock the riddle of the universe? Not exactly! A child playing by the seaside might as well try to get the Atlantic into its little wooden tub. The little fraction of the

¹ See p. 325 (note 3).

² Contained in vol. iii of the *Pos. Pol.* Dr. Ingram has given a useful *résumé* of Comte's exposition in his *Outlines of the History of Religion*. (A. and C. Black; 1900.) Cf. above, p. 344.—ED.

universe that passes under our ken during the lifetime of our race—that is our sphere of thought and work. Our work, our duty lies here.

Materialism, the attempt to explain life by chemistry and physics, to explain the facts of emotion, love, and hope by the facts of growth and digestion—these things Comte utterly repudiates. We are fenced in, guided, helped, by all sorts of material mechanical conditions: that is obvious. Our very existence depends on the axis of the earth being at a certain angle with the plane of its orbit. Were it perpendicular, we should perhaps live more comfortably; were it much sloped, we should not live at all. So, too, a slight chemical change in the composition of the air we breathe would prevent us from breathing at all. These things are very important to know and to think about. In every way the higher life is dependent on the lower. But the lower does not *account* for the higher. Not the cunningest of florists can make the loveliest rose affectionate or virtuous. You cannot account for the fact of love or reverence by physics and biology; they are the products of Humanity, of the social life of Man.

And here we have at once the chief point of agreement between Comte and Carlyle, and also the chief difference. Carlyle's point of view was moral, but not social. It was individual. To dream of the infinite unknown, to meditate deeply on duty, to do the work nearest, whatever it chanced to be—all this is well; but how does it help to unite men together and give them a common object of work, a common object of reverence? How does it help them in dealing with the practical problems of life, such problems as are raised by modern industry and by the Revolution, French, Russian, Irish—European problems? Comte's point of view is moral, like Carlyle's; but by virtue of being moral it is social, for it is governed by his conception of Humanity.

VIII

THE SERVICES OF ANCIENT ROME¹

I HAVE spoken of Moses, Homer, Aristotle, and Archimedes. Moses, as the type of the old religions of Egypt, Judæa, Persia, and India, implanted in civilized man that which (far more than the invention

¹ A posthumous paper which formed part of a lecture.—ED.

of printing or the steam engine) marks him off from the savage, the sense of religious obligation, of the enormous gulf between right and wrong, between righteousness and sin.

To Homer, Aristotle, and Archimedes, and to the other great poets, artists, and philosophers of Greece, we owe our first notions of Truth and of Beauty. Their poets gave us ideal types of noble men and women. Their thinkers were the first Positive Philosophers; the first men who really studied the Laws of Nature, not because they wanted to become rich by useful practical inventions, but for the love of Truth.

To-day I intend to speak of Rome. What do we owe to Rome? We owe to her the Law and Government, and, indirectly, the Science and the Religion, which make the great difference between Europeans and Asiatics. Every one must see, when he looks at the map of the world, the distinction that there is between the west part of Europe (including the American Colonies, whether Spanish or Anglo-Saxon) and the rest of the world. In France, in Italy, in Spain, in Germany, just the same things are being talked about as in England. There is the same Christian religion; and the same decay and corruption of the Christian religion; the same interest in mathematics, astronomy, electricity, chemistry, physiology, and other sciences; the same social problems; above all, the great problem of Labour and Capital. Western Europe (with its American offshoots) forms really one great community. It takes the lead of the human race. Now, this community of Western Europe dates from the Roman Empire, as established by the great men of Rome, of whom Julius Cæsar may be taken as the highest type.

Rome was founded 700 years before Julius Cæsar's time. For three or four centuries it was only one among many other tribes and cities in Italy. War was the natural condition among ancient nations. All the free men of the nations were warriors. Most of the weavers, carpenters, shoemakers, tailors, and other mechanics were slaves. The only pursuit which was thought worthy of the warrior was agriculture. Many of the best Roman generals would not disdain to follow the plough. War has developed in man two habits, two faculties of the greatest value—the power of meeting danger calmly; the power of discipline and of organization. The nation that possessed these qualities in the highest degree was certain to triumph over the rest at last. Rome was that nation. Her citizens had a deeper sense of religious obligation than any other. They were more profoundly penetrated with the sense of duty to their country than any other. This gave them their

irresistible firmness in battle, their undaunted perseverance even in defeat. This, too, lay at the root of their extraordinary power of discipline. *The Romans were strong to rule because they knew better than any nation how to obey.*

The City of Rome first conquered the other cities and tribes of Italy. This took four or five hundred years to accomplish. From that time the people of Italy, under all their changes of government and religion, have been really one people, possessing a common language and a common literature.

Rome and Italy now came into contact with the surrounding nations. They narrowly escaped destruction from the great commercial empire of Carthage: a people akin to the Jews in blood, possessed of immense wealth and many rich colonies, but who have left few noble memories, few great works, few names of great heroes behind them. Their one great man, Hannibal, overran Italy, held it for many years, and all but conquered Rome; but while he was camped under its walls the citizens put up to sale by auction the piece of land on which his camp stood, and it fetched the usual price. That shows their spirit. They never for one instance doubted of their destiny.

The Carthaginians were driven out of Italy. Carthage was taken. The peninsula of Spain was conquered. The peninsula of Greece was conquered. All the eastern part of the Mediterranean (the countries formed into an empire by Alexander) were conquered. And at last Julius Cæsar completed the work by conquering France and Britain. So that all Europe west of the Rhine and south of the Danube became incorporated into the Roman State, which was governed first by the rich nobles and rich capitalists of Rome, who called themselves falsely a Republic; but which was governed ultimately in a far more republican spirit by the Roman Emperors.

Now, see what all this did for the world! This long career of war and conquest did three things.

1. It established *peace* and *civil law* throughout this vast region, which had hitherto from time immemorial been the scene of perpetual wars between small tribes leading to no result. How vastly superior the Roman law courts were to those of the nations whom they conquered, you have an example in the trial of Jesus Christ. Pontius Pilate, though a feeble man, had at all events some notion of what justice meant. Paul, a Roman citizen, appealed from the local tribunals to the Imperial court at Rome. He "appealed to Cæsar." When Julius Cæsar was massacred by the Roman aristocracy, Jews, Syrians, Africans, and men from other provinces of

the Empire were seen weeping at his funeral. They felt that their great defender had perished. This, then, was the first great result of Roman conquest. It gave Peace and Civil Law to Europe.

2. It diffused the results of Greek civilization, Greek art, Greek science throughout Europe. This was the second great result.

3. It paved the way for the diffusion of Christianity throughout Europe. We are too apt to look on Christianity as if it came entirely from the Jews. It is in reality the mixed result of Asiatic, Greek, and Roman civilization. It is far more due to Greeks than to Jews; far more due to Romans than to Greeks.

The change from polytheism to monotheism, from many gods to one God, was going on everywhere throughout the Roman Empire. The Greek thinkers were giving up their paganism four hundred years before Christianity. Jesus Christ's teaching would have remained limited to Judæa, and very likely we should never have heard of it but for the heroic and unceasing energy of a Roman citizen, Paul of Tarsus. Paul saw that the Jews were a set of narrow sectarians with whom nothing was to be done, and devoted his life to the moral regeneration of the Greeks and Italians. Comte regards Paul as the true founder of Christianity, the man who made it a European fact. The Christ of Paul is something quite different from the vague philanthropy of Jesus, a man of whose real history there is very little evidence that we can depend upon. The Christ of Paul was altogether ideal: the noble creation of a noble mind; the idea of the grandest self-sacrifice; God making Himself Man, and suffering torture in order to save Man from misery. The Christ of St. Paul's Epistles is totally different from the Jesus of the Gospels. The Jesus of the Gospels was an amiable enthusiast, apparently professing to possess miraculous powers, a man of whose real life we know very little. Paul was penetrated with the desire of regenerating the Roman world. For this purpose he availed himself at first of the old Mosaic Law. The story, half true, half fabulous, of the life of Jesus revolted him. But after a long struggle it was suddenly borne in upon his mind that this life of Jesus might be the way through which the great purpose of regenerating the moral life of men was to be accomplished. Henceforth he joined himself to the little Jewish sect of Christians, which but for him would always have remained Jewish, and put forward, with sublime forgetfulness of self, his own great conception of heroic self-sacrifice, of purity, of self-mastery, of love, of duty, *under the name of Christ*, consecrating his life with the most unparalleled

energy to the preaching of these truths in every part of the Mediterranean.

The grandeur of the Christian Church in its best days lay in this. It was an organization for moral purposes, wholly unconnected with and independent of the political and civil authorities. Under Moses and the old theocracies morality was a matter for the magistrates. A man was put to death for breaking the Sabbath. Further, religion was a matter of nationality. Each nation had its own gods. The Jews had Jehovah, the Greeks Apollo, the Romans Jupiter, and so on. But here was a religion which bound together men of different blood, and aimed, though unsuccessfully, at becoming the universal religion. The Catholic Church in its best days—that is, from the fourth to the thirteenth century—was a moral power which the Roman Emperors and the kings and nobles were obliged to respect. The Popes in the Middle Ages were the leaders and protectors of European civilization, corrupt as they may have become afterwards. During the times in which the barbarian hordes were tearing the Roman Empire to pieces science and law and (far more important than these) spiritual life—that is to say, the impulse to heroism and saintliness and purity and pity—were kept alive by the Popes and priests and cloistered monks, whom it is now common to regard as the very types of indolence and craft and avarice. Catholicism for the last four centuries has been in a state of hopeless decline. But had it not been for the power which the Catholic Church exercised during the Middle Ages from Spain to Scotland, Europe would be now in a state of barbarism.

IX

THE BATHS OF CARACALLA¹

THOSE who go to Rome and look carefully at the earliest monuments of the Christian Church and the latest monuments of imperial Rome may perhaps be struck, as I was, by one curious contrast. Amid the waste of vineyards and monastery gardens that still stretch over the southern half of the ancient city rise the stupendous ruins of Caracalla's baths,² covered a few years ago with the luxuriant

¹ The concluding passages of a lecture on Health delivered in October, 1886.—ED.

² The famous *thermae* or hot baths of the Roman Emperor Caracalla (186–217).—ED.

growth of aromatic foliage of which Shelley speaks in the preface to his *Prometheus*; now stripped and bare, so that the full stature of the ruin can be seen and its former magnificence imagined. It was a building larger than St. Paul's, lined throughout with costly marble, paved with mosaic, roofed with gold, decorated with Greek sculpture. Thousands of bathers could be here at once, attaining in absolute perfection that most legitimate of all luxuries, the perfect freedom of the skin from any particle that might clog its pores, dull the fine sense of touch, or vitiate the blood. These were hot-air baths, like the poor imitations of them which we call Turkish in London. There were many other buildings in Rome of the same kind, and several of the same size; so that many thousands could bathe at the same time. The price of admission was half a farthing, equal at most to half a penny of our money. What city of modern Europe has made cleanliness universal?

While Caracalla's baths were building, the quarries of that friable cement which gives Roman buildings their wondrous durability were being penetrated in every direction by labyrinths of underground passages, where the followers of the Christian sect assembled in secret to worship and to bury their dead. These passages, just high enough and broad enough to admit a man, have on either side small hollow spaces closed with brickwork, in which lie human remains layer above layer. Here and there the passage is enlarged into a small vault in which fifty persons might stand; and, by the light of torches, are seen rude altars hewn in the soft rock, and rudely painted emblems of the Christian faith. Into these dank and death-laden recesses the winds of heaven never found their way. Such air as one breathes is heavy and repulsive, even now, when decay has done its work, and only a few harmless ashes remain. But what must it have been then?

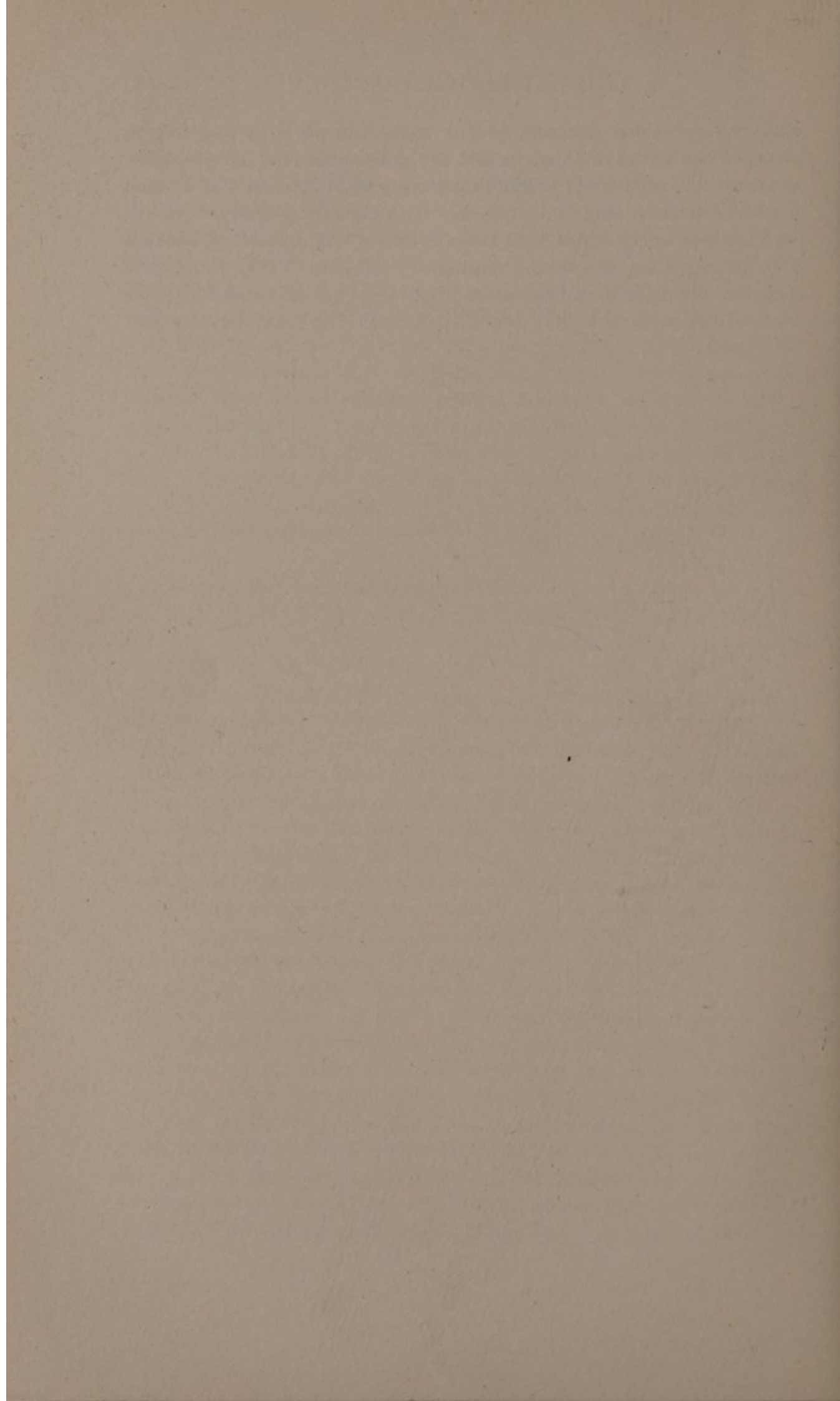
Yet strange indeed as is the contrast, still stranger and more unexpected is the result. Physical foulness goes with moral power; physical purity with moral degradation. The future of the world for many centuries to come lay not with the radiant health and physical beauty that illumined the vast Halls of Caracalla, but with the humble, quiet, unattractive people that you might have watched in the dusk creeping from the Catacombs to their poor homes in the dingy suburbs. Let the Materialist think on these things. Let the Spiritualists think on them also.

See, then, the point which we have so far reached. From the nineteenth Christian century, tracing the growth of society upwards to the first, we have never seen that harmonious interaction of man's

physical framework and nervous organization that we call health, either systematically sought for or spontaneously reached by social arrangements. In the last two centuries our mastery over the forces of nature has been used to amass wealth, and in so doing has made health more difficult of attainment by stimulating the growth of towns, by turning every water-course into a foul drain, so that the very air we breathe and the water we drink have been vitiated. And when we go behind this modern civilization of ours and take refuge in the times when the Christian Church was far more powerful than it is now, and the rage for wealth-producing had not been stimulated by physical discovery, we find that by a strange perversion the degradation of man's body was looked upon as a sacred and holy thing. This earth being a scene of pilgrimage to a higher and nobler life, it was not worth while to spend pains upon it, in order to render it a fit dwelling-place for man; so that physical uncleanness was tolerated in our towns and venerated in our saints.

And yet passing still farther back to the social life of Greeks and Romans as it was when the Christian revolutionists came to disturb it, we find that life brilliant, splendid, refined, physically perfect as it was, nevertheless tainted with such moral foulness that we welcome its disappearance, the choice between physical and moral impurity being fatally forced upon us. We take refuge from the gorgeous spaces of Caracalla's baths in the stifling air of the Catacombs. None the less do we look forward to a time when the two conditions of health shall be united; when purity of soul and body shall be inseparable; when men and women full of love and tenderness as ever Christians of the first centuries were, eager to help their fellows in weakness or sorrow, purged from anger and avarice, unspotted by the world, shall yet enjoy to the full all those simplest, subtlest pleasures which earth lavishes on those who will not wantonly waste and scorn them: pure air and undefiled streams, the unpolluted fragrance of the meadows that Shakespeare and Milton loved. In the carelessness of mediæval saints for physical purity, in their rapt attention to the inner problems of the soul, in their certainty that this world was but an inn where we stayed for a few days and nights on our way to a permanent home, we, from where we stand, can see the germs of terrible evils that were to follow. Those men were ready, as we know, to sacrifice their bodies for their souls' welfare. The time was to come when their successors should be even readier to sacrifice other people's bodies for the welfare of other people's souls. The one-sided fervour

and the one-sided doctrine of the early Church was one day to sharpen the sword of Dominic and to light the torch of Torquemada. Nay, at this moment it is kindling conspiracies against the French Republic, and cursing Italian society with chronic anarchy. Admit, as I for one freely admit, that these evils are less disastrous, because less potent, than the sordid plutocracy of New York, Paris, and London, which follows from mere negation of all spiritual life. We sympathize with the first more than with the last; but we war with both.



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