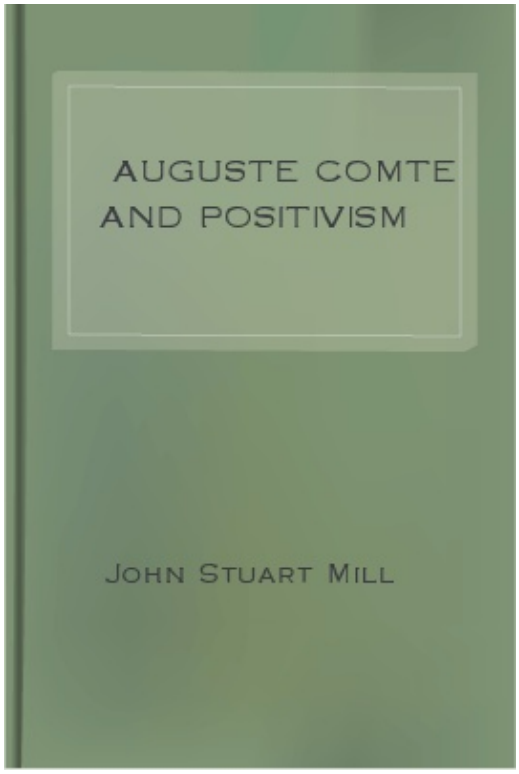

PART I.
PART II.

Auguste Comte and Positivism

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AUGUSTE COMTE AND POSITIVISM

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PART I.

THE COURS DE PHILOSOPHIE POSITIVE.

For some time much has been said, in England and on the Continent, concerning "Positivism" and "the Positive Philosophy." Those phrases, which during the life of the eminent thinker who introduced them had made their way into no writings or discussions but those of his very few direct disciples, have emerged from the depths and manifested themselves on the surface of the philosophy of the age. It is not very widely known what they represent, but it is understood that they represent something. They are symbols of a recognised mode of thought, and one of sufficient importance to induce almost all who now discuss the great problems of philosophy, or survey from any elevated point of view the opinions of the age, to take what is termed the Positivist view of things into serious consideration, and define their own position, more or less friendly or hostile, in regard to it. Indeed, though the mode of thought expressed by the terms Positive and Positivism is widely spread, the words themselves are, as usual, better known through the enemies of that mode of thinking than through its friends; and more than one thinker who never called himself or his opinions by those appellations, and carefully guarded himself against being confounded with those who did, finds himself, sometimes to his displeasure, though generally by a tolerably correct instinct, classed with Positivists, and assailed as a Positivist. This change in the bearings of philosophic opinion commenced in England earlier than in France, where a philosophy of a contrary kind had been more widely cultivated, and had taken a firmer hold on the speculative minds of a generation formed by Royer-Collard, Cousin, Jouffroy, and their compeers. The great treatise of M. Comte was scarcely mentioned in French literature or criticism, when it was already working powerfully on the minds of many British students and thinkers. But, agreeably to the usual course of things in France, the new tendency, when it set in, set in more strongly. Those who call themselves Positivists are indeed not numerous; but all French writers who adhere to the common philosophy, now feel it necessary to begin by fortifying their position against "the Positivist school." And the mode of thinking thus designated is already manifesting its importance by one of the most unequivocal signs, the appearance of thinkers who attempt a compromise or *juste milieu* between it and its opposite. The acute critic and metaphysician M. Taine, and the distinguished chemist M. Berthelot, are the authors of the two most conspicuous of these attempts.

The time, therefore, seems to have come, when every philosophic thinker not only ought to form, but may usefully express, a judgment respecting this intellectual movement; endeavouring to understand what it is, whether it is essentially a wholesome movement, and if so, what is to be accepted and what rejected of the direction given to it by its most important movers. There cannot be a more appropriate mode of discussing these points than in the form of a critical examination of the philosophy of Auguste Comte; for which the appearance of a new edition of his fundamental treatise, with a preface by the most eminent, in every point of view, of his professed disciples, M. Littré, affords a good opportunity. The name of M. Comte is more identified than any other with this mode of thought. He is the first who has attempted its complete systematization, and the scientific extension of it to all objects of human knowledge. And in doing this he has displayed a quantity and quality of mental power, and achieved an amount of success, which have not only won but retained the high admiration of thinkers as radically and strenuously opposed as it is possible to be, to nearly the whole of his later tendencies, and to many of his earlier opinions. It would have been a mistake had such thinkers busied themselves in the first instance with drawing attention to what they regarded as errors in his great work. Until it had taken the place in the world of thought which belonged to it, the important matter was not to criticise it, but to help in making it known. To have put those who neither knew nor were capable

of appreciating the greatness of the book, in possession of its vulnerable points, would have indefinitely retarded its progress to a just estimation, and was not needful for guarding against any serious inconvenience. While a writer has few readers, and no influence except on independent thinkers, the only thing worth considering in him is what he can teach us: if there be anything in which he is less wise than we are already, it may be left unnoticed until the time comes when his errors can do harm. But the high place which M. Comte has now assumed among European thinkers, and the increasing influence of his principal work, while they make it a more hopeful task than before to impress and enforce the strong points of his philosophy, have rendered it, for the first time, not inopportune to discuss his mistakes. Whatever errors he may have fallen into are now in a position to be injurious, while the free exposure of them can no longer be so.

We propose, then, to pass in review the main principles of M. Comte's philosophy; commencing with the great treatise by which, in this country, he is chiefly known, and postponing consideration of the writings of the last ten years of his life, except for the occasional illustration of detached points.

When we extend our examination to these later productions, we shall have, in the main, to reverse our judgment. Instead of recognizing, as in the Cours de Philosophic Positive, an essentially sound view of philosophy, with a few capital errors, it is in their general character that we deem the subsequent speculations false and misleading, while in the midst of this wrong general tendency, we find a crowd of valuable thoughts, and suggestions of thought, in detail. For the present we put out of the question this signal anomaly in M. Comte's intellectual career. We shall consider only the principal gift which he has left to the world, his clear, full, and comprehensive exposition, and in part creation, of what he terms the Positive Philosophy: endeavouring to sever what in our estimation is true, from the much less which is erroneous, in that philosophy as he conceived it, and distinguishing, as we proceed, the part which is specially his, from that which belongs to the philosophy of the age, and is the common inheritance of thinkers. This last discrimination has been partially made in a late pamphlet, by Mr Herbert Spencer, in vindication of his own independence of thought: but this does not diminish the utility of doing it, with a less limited purpose, here; especially as Mr Spencer rejects nearly all which properly belongs to M. Comte, and in his abridged mode of statement does scanty justice to what he rejects. The separation is not difficult, even on the direct evidence given by M. Comte himself, who, far from claiming any originality not really belonging to him, was eager to connect his own most original thoughts with every germ of anything similar which he observed in previous thinkers.

The fundamental doctrine of a true philosophy, according to M. Comte, and the character by which he defines Positive Philosophy, is the following:--We have no knowledge of anything but Phaenomena; and our knowledge of phaenomena is relative, not absolute. We know not the essence, nor the real mode of production, of any fact, but only its relations to other facts in the way of succession or of similitude. These relations are constant; that is, always the same in the same circumstances. The constant resemblances which link phaenomena together, and the constant sequences which unite them as antecedent and consequent, are termed their laws. The laws of phaenomena are all we know respecting them. Their essential nature, and their ultimate causes, either efficient or final, are unknown and inscrutable to us.

M. Comte claims no originality for this conception of human knowledge. He avows that it has been virtually acted on from the earliest period by all who have made any real contribution to science, and became distinctly present to the minds of speculative men from the time of Bacon, Descartes, and Galileo, whom he regards as collectively the founders of the Positive Philosophy. As he says, the knowledge which mankind, even in the earliest ages, chiefly pursued, being that which they most needed, was _fore_knowledge: "savoir, pour prevoir." When they sought for the cause, it was mainly in order to control the effect or if it was uncontrollable, to foreknow and adapt their conduct to it. Now, all foresight of phaenomena, and power over them, depend on knowledge of their sequences, and not upon any notion we may have formed respecting their origin or inmost nature. We foresee a fact or event by means of facts which are signs of it, because experience has shown them to be its antecedents. We bring about any fact, other than our own muscular contractions, by means of some fact which experience has shown to be followed by it. All foresight, therefore, and all

intelligent action, have only been possible in proportion as men have successfully attempted to ascertain the successions of phaenomena. Neither foreknowledge, nor the knowledge which is practical power, can be acquired by any other means.

The conviction, however, that knowledge of the successions and co-existences of phaenomena is the sole knowledge accessible to us, could not be arrived at in a very early stage of the progress of thought. Men have not even now left off hoping for other knowledge, nor believing that they have attained it; and that, when attained, it is, in some undefinable manner, greatly more precious than mere knowledge of sequences and co-existences. The true doctrine was not seen in its full clearness even by Bacon, though it is the result to which all his speculations tend: still less by Descartes. It was, however, correctly apprehended by Newton.[1]

But it was probably first conceived in its entire generality by Hume, who carries it a step further than Comte, maintaining not merely that the only causes of phaenomena which can be known to us are other phaenomena, their invariable antecedents, but that there is no other kind of causes: cause, as he interprets it, *means* the invariable antecedent. This is the only part of Hume's doctrine which was contested by his great adversary, Kant; who, maintaining as strenuously as Comte that we know nothing of Things in themselves, of Noumena, of real Substances and real Causes, yet peremptorily asserted their existence. But neither does Comte question this: on the contrary, all his language implies it. Among the direct successors of Hume, the writer who has best stated and defended Comte's fundamental doctrine is Dr Thomas Brown. The doctrine and spirit of Brown's philosophy are entirely Positivist, and no better introduction to Positivism than the early part of his Lectures has yet been produced. Of living thinkers we do not speak; but the same great truth formed the groundwork of all the speculative philosophy of Bentham, and pre-eminently of James Mill: and Sir William Hamilton's famous doctrine of the Relativity of human knowledge has guided many to it, though we cannot credit Sir William Hamilton himself with having understood the principle, or been willing to assent to it if he had.

The foundation of M. Comte's philosophy is thus in no way peculiar to him, but the general property of the age, however far as yet from being universally accepted even by thoughtful minds.

The philosophy called Positive is not a recent invention of M. Comte, but a simple adherence to the traditions of all the great scientific minds whose discoveries have made the human race what it is. M. Comte has never presented it in any other light. But he has made the doctrine his own by his manner of treating it. To know rightly what a thing is, we require to know, with equal distinctness, what it is not. To enter into the real character of any mode of thought, we must understand what other modes of thought compete with it. M. Comte has taken care that we should do so. The modes of philosophizing which, according to him, dispute ascendancy with the Positive, are two in number, both of them anterior to it in date; the Theological, and the Metaphysical.

We use the words Theological, Metaphysical, and Positive, because they are chosen by M. Comte as a vehicle for M. Comte's ideas. Any philosopher whose thoughts another person undertakes to set forth, has a right to require that it should be done by means of his own nomenclature. They are not, however, the terms we should ourselves choose. In all languages, but especially in English, they excite ideas other than those intended. The words Positive and Positivism, in the meaning assigned to them, are ill fitted to take, root in English soil; while Metaphysical suggests, and suggested even to M. Comte, much that in no way deserves to be included in his denunciation. The term Theological is less wide of the mark, though the use of it as a term of condemnation implies, as we shall see, a greater reach of negation than need be included in the Positive creed. Instead of the Theological we should prefer to speak of the Personal, or Volitional explanation of nature; instead of Metaphysical, the Abstractional or Ontological: and the meaning of Positive would be less ambiguously expressed in the objective aspect by Phaenomenal, in the subjective by Experiential. But M. Comte's opinions are best stated in his own phraseology; several of them, indeed, can scarcely be presented in some of their bearings without it.

The Theological, which is the original and spontaneous form of thought, regards the facts of the universe as governed not by invariable laws of sequence, but by single and direct volitions of beings, real or imaginary, possessed of life and intelligence. In the infantile state of reason and experience, individual objects are looked upon as animated. The next step is the conception of invisible beings, each of whom superintends and governs an entire class of objects or events. The last merges this multitude of divinities in a single God, who made the whole universe in the beginning, and guides and carries on its phaenomena by his continued action, or, as others think, only modifies them from time to time by special interferences.

The mode of thought which M. Comte terms Metaphysical, accounts for phaenomena by ascribing them, not to volitions either sublunary or celestial, but to realized abstractions. In this stage it is no longer a god that causes and directs each of the various agencies of nature: it is a power, or a force, or an occult quality, considered as real existences, inherent in but distinct from the concrete bodies in which they reside, and which they in a manner animate. Instead of Dryads presiding over trees, producing and regulating their phaenomena, every plant or animal has now a Vegetative Soul, the [Greek: Threptikè phygè] of Aristotle. At a later period the Vegetative Soul has become a Plastic Force, and still later, a Vital Principle. Objects now do all that they do because it is their Essence to do so, or by reason of an inherent Virtue. Phaenomena are accounted for by supposed tendencies and propensities of the abstraction Nature; which, though regarded as impersonal, is figured as acting on a sort of motives, and in a manner more or less analogous to that of conscious beings. Aristotle affirms a tendency of nature towards the best, which helps him to a theory of many natural phaenomena. The rise of water in a pump is attributed to Nature's horror of a vacuum. The fall of heavy bodies, and the ascent of flame and smoke, are construed as attempts of each to get to its *natural* place. Many important consequences are deduced from the doctrine that Nature has no breaks (non habet saltum). In medicine the curative force (vis medicatrix) of Nature furnishes the explanation of the reparative processes which modern physiologists refer each to its own particular agencies and laws.

Examples are not necessary to prove to those who are acquainted with the past phases of human thought, how great a place both the theological and the metaphysical interpretations of phaenomena have historically occupied, as well in the speculations of thinkers as in the familiar conceptions of the multitude. Many had perceived before M. Comte that neither of these modes of explanation was final: the warfare against both of them could scarcely be carried on more vigorously than it already was, early in the seventeenth century, by Hobbes. Nor is it unknown to any one who has followed the history of the various physical sciences, that the positive explanation of facts has substituted itself, step by step, for the theological and metaphysical, as the progress of inquiry brought to light an increasing number of the invariable laws of phaenomena. In these respects M. Comte has not originated anything, but has taken his place in a fight long since engaged, and on the side already in the main victorious. The generalization which belongs to himself, and in which he had not, to the best of our knowledge, been at all anticipated, is, that every distinct class of human conceptions passes through all these stages, beginning with the theological, and proceeding through the metaphysical to the positive: the metaphysical being a mere state of transition, but an indispensable one, from the theological mode of thought to the positive, which is destined finally to prevail, by the universal recognition that all phaemomena without exception are governed by invariable laws, with which no volitions, either natural or supernatural, interfere. This general theorem is completed by the addition, that the theological mode of thought has three stages, Fetichism, Polytheism, and Monotheism: the successive transitions being prepared, and indeed caused, by the gradual uprising of the two rival modes of thought, the metaphysical and the positive, and in their turn preparing the way for the ascendancy of these; first and temporarily of the metaphysical, finally of the positive.

This generalization is the most fundamental of the doctrines which originated with M. Comte; and the survey of history, which occupies the two largest volumes of the six composing his work, is a continuous exemplification and verification of the law. How well it accords with the facts, and how vast a number of the greater historical phaenomena it explains, is known only to those who have studied its exposition, where alone it can be found--in these most striking and instructive volumes. As this theory is the key to M. Comte's other generalizations, all of which arc more or less dependent on it; as it forms the backbone, if we may so speak, of

his philosophy, and, unless it be true, he has accomplished little; we cannot better employ part of our space than in clearing it from misconception, and giving the explanations necessary to remove the obstacles which prevent many competent persons from assenting to it.

It is proper to begin by relieving the doctrine from a religious prejudice. The doctrine condemns all theological explanations, and replaces them, or thinks them destined to be replaced, by theories which take no account of anything but an ascertained order of phaenomena. It is inferred that if this change were completely accomplished, mankind would cease to refer the constitution of Nature to an intelligent will or to believe at all in a Creator and supreme Governor of the world. This supposition is the more natural, as M. Comte was avowedly of that opinion. He indeed disclaimed, with some acrimony, dogmatic atheism, and even says (in a later work, but the earliest contains nothing at variance with it) that the hypothesis of design has much greater verisimilitude than that of a blind mechanism. But conjecture, founded on analogy, did not seem to him a basis to rest a theory on, in a mature state of human intelligence. He deemed all real knowledge of a commencement inaccessible to us, and the inquiry into it an overpassing of the essential limits of our mental faculties. To this point, however, those who accept his theory of the progressive stages of opinion are not obliged to follow him. The Positive mode of thought is not necessarily a denial of the supernatural; it merely throws back that question to the origin of all things. If the universe had a beginning, its beginning, by the very conditions of the case, was supernatural; the laws of nature cannot account for their own origin. The Positive philosopher is free to form his opinion on the subject, according to the weight he attaches to the analogies which are called marks of design, and to the general traditions of the human race. The value of these evidences is indeed a question for Positive philosophy, but it is not one upon which Positive philosophers must necessarily be agreed. It is one of M. Comte's mistakes that he never allows of open questions. Positive Philosophy maintains that within the existing order of the universe, or rather of the part of it known to us, the direct determining cause of every phaenomenon is not supernatural but natural. It is compatible with this to believe, that the universe was created, and even that it is continuously governed, by an Intelligence, provided we admit that the intelligent Governor adheres to fixed laws, which are only modified or counteracted by other laws of the same dispensation, and are never either capriciously or providentially departed from. Whoever regards all events as parts of a constant order, each one being the invariable consequent of some antecedent condition, or combination of conditions, accepts fully the Positive mode of thought: whether he acknowledges or not an universal antecedent on which the whole system of nature was originally consequent, and whether that universal antecedent is conceived as an Intelligence or not.

There is a corresponding misconception to be corrected respecting the Metaphysical mode of thought. In repudiating metaphysics, M. Comte did not interdict himself from analysing or criticising any of the abstract conceptions of the mind. He was not ignorant (though he sometimes seemed to forget) that such analysis and criticism are a necessary part of the scientific process, and accompany the scientific mind in all its operations. What he condemned was the habit of conceiving these mental abstractions as real entities, which could exert power, produce phaenomena, and the enunciation of which could be regarded as a theory or explanation of facts. Men of the present day with difficulty believe that so absurd a notion was ever really entertained, so repugnant is it to the mental habits formed by long and assiduous cultivation of the positive sciences. But those sciences, however widely cultivated, have never formed the basis of intellectual education in any society. It is with philosophy as with religion: men marvel at the absurdity of other people's tenets, while exactly parallel absurdities remain in their own, and the same man is unaffectedly astonished that words can be mistaken for things, who is treating other words as if they were things every time he opens his mouth to discuss. No one, unless entirely ignorant of the history of thought, will deny that the mistaking of abstractions for realities pervaded speculation all through antiquity and the middle ages. The mistake was generalized and systematized in the famous Ideas of Plato. The Aristotelians carried it on. Essences, quiddities, virtues residing in things, were accepted as a _bonâ fide_ explanation of phaenomena. Not only abstract qualities, but the concrete names of genera and species, were mistaken for objective existences. It was believed that there were General Substances corresponding to all the familiar classes of concrete things: a substance Man, a substance Tree, a substance Animal, which, and not the individual objects so called, were directly denoted by those names. The real existence of Universal Substances was the question at issue in the famous controversy

of the later middle ages between Nominalism and Realism, which is one of the turning points in the history of thought, being its first struggle to emancipate itself from the dominion of verbal abstractions. The Realists were the stronger party, but though the Nominalists for a time succumbed, the doctrine they rebelled against fell, after a short interval, with the rest of the scholastic philosophy. But while universal substances and substantial forms, being the grossest kind of realized abstractions, were the soonest discarded, Essences, Virtues, and Occult Qualities long survived them, and were first completely extruded from real existence by the Cartesians. In Descartes' conception of science, all physical phaenomena were to be explained by matter and motion, that is, not by abstractions but by invariable physical laws: though his own explanations were many of them hypothetical, and turned out to be erroneous. Long after him, however, fictitious entities (as they are happily termed by Bentham) continued to be imagined as means of accounting for the more mysterious phaenomena; above all in physiology, where, under great varieties of phrase, mysterious *forces* and *principles* were the explanation, or substitute for explanation, of the phaenomena of organized beings. To modern philosophers these fictions are merely the abstract names of the classes of phaenomena which correspond to them; and it is one of the puzzles of philosophy, how mankind, after inventing a set of mere names to keep together certain combinations of ideas or images, could have so far forgotten their own act as to invest these creations of their will with objective reality, and mistake the name of a phaenomenon for its efficient cause. What was a mystery from the purely dogmatic point of view, is cleared up by the historical. These abstract words are indeed now mere names of phaenomena, but were not so in their origin. To us they denote only the phaenomena, because we have ceased to believe in what else they once designated; and the employment of them in explanation is to us evidently, as M. Comte says, the naïf reproduction of the phaenomenon as the reason for itself: but it was not so in the beginning. The metaphysical point of view was not a perversion of the positive, but a transformation of the theological. The human mind, in framing a class of objects, did not set out from the notion of a name, but from that of a divinity. The realization of abstractions was not the embodiment of a word, but the gradual disembodiment of a Fetish.

The primitive tendency or instinct of mankind is to assimilate all the agencies which they perceive in Nature, to the only one of which they are directly conscious, their own voluntary activity. Every object which seems to originate power, that is, to act without being first visibly acted upon, to communicate motion without having first received it, they suppose to possess life, consciousness, will. This first rude conception of nature can scarcely, however, have been at any time extended to all phaenomena. The simplest observation, without which the preservation of life would have been impossible, must have pointed out many uniformities in nature, many objects which, under given circumstances, acted exactly like one another: and whenever this was observed, men's natural and untutored faculties led them to form the similar objects into a class, and to think of them together: of which it was a natural consequence to refer effects, which were exactly alike, to a single will, rather than to a number of wills precisely accordant. But this single will could not be the will of the objects themselves, since they were many: it must be the will of an invisible being, apart from the objects, and ruling them from an unknown distance. This is Polytheism. We are not aware that in any tribe of savages or negroes who have been observed, Fetichism has been found totally unmixed with Polytheism, and it is probable that the two coexisted from the earliest period at which the human mind was capable of forming objects into classes. Fetichism proper gradually becomes limited to objects possessing a marked individuality. A particular mountain or river is worshipped bodily (as it is even now by the Hindoos and the South Sea Islanders) as a divinity in itself, not the mere residence of one, long after invisible gods have been imagined as rulers of all the great classes of phaenomena, even intellectual and moral, as war, love, wisdom, beauty, &c. The worship of the earth (Tellus or Pales) and of the various heavenly bodies, was prolonged into the heart of Polytheism. Every scholar knows, though _littérateurs_ and men of the world do not, that in the full vigour of the Greek religion, the Sun and Moon, not a god and goddess thereof, were sacrificed to as deities--older deities than Zeus and his descendants, belonging to the earlier dynasty of the Titans (which was the mythical version of the fact that their worship was older), and these deities had a distinct set of fables or legends connected with them. The father of Phaëthon and the lover of Endymion were not Apollo and Diana, whose identification with the Sungod and the Moongoddess was a late invention. Astrolatry, which, as M. Comte observes, is the last form of Fetichism, survived the other forms, partly because its objects, being inaccessible, were not so soon discovered to be in themselves inanimate, and partly because of the persistent

spontaneousness of their apparent motions.

As far as Fetichism reached, and as long as it lasted, there was no abstraction, or classification of objects, and no room consequently for the metaphysical mode of thought. But as soon as the voluntary agent, whose will governed the phaenomenon, ceased to be the physical object itself, and was removed to an invisible position, from which he or she superintended an entire class of natural agencies, it began to seem impossible that this being should exert his powerful activity from a distance, unless through the medium of something present on the spot. Through the same Natural Prejudice which made Newton unable to conceive the possibility of his own law of gravitation without a subtle ether filling up the intervening space, and through which the attraction could be communicated--from this same natural infirmity of the human mind, it seemed indispensable that the god, at a distance from the object, must act through something residing in it, which was the immediate agent, the god having imparted to the intermediate something the power whereby it influenced and directed the object. When mankind felt a need for naming these imaginary entities, they called them the *nature* of the object, or its *essence*, or *virtues* residing in it, or by many other different names. These metaphysical conceptions were regarded as intensely real, and at first as mere instruments in the hands of the appropriate deities. But the habit being acquired of ascribing not only substantive existence, but real and efficacious agency, to the abstract entities, the consequence was that when belief in the deities declined and faded away, the entities were left standing, and a semblance of explanation of phaenomena, equal to what existed before, was furnished by the entities alone, without referring them to any volitions. When things had reached this point, the metaphysical mode of thought, had completely substituted itself for the theological.

Thus did the different successive states of the human intellect, even at an early stage of its progress, overlap one another, the Fetichistic, the Polytheistic, and the Metaphysical modes of thought coexisting even in the same minds, while the belief in invariable laws, which constitutes the Positive mode of thought, was slowly winning its way beneath them all, as observation and experience disclosed in one class of phaenomena after another the laws to which they are really subject. It was this growth of positive knowledge which principally determined the next transition in the theological conception of the universe, from Polytheism to Monotheism.

It cannot be doubted that this transition took place very tardily. The conception of a unity in Nature, which would admit of attributing it to a single will, is far from being natural to man, and only finds admittance after a long period of discipline and preparation, the obvious appearances all pointing to the idea of a government by many conflicting principles. We know how high a degree both of material civilization and of moral and intellectual development preceded the conversion of the leading populations of the world to the belief in one God. The superficial observations by which Christian travellers have persuaded themselves that they found their own Monotheistic belief in some tribes of savages, have always been contradicted by more accurate knowledge: those who have read, for instance, Mr Kohl's Kitchigami, know what to think of the Great Spirit of the American Indians, who belongs to a well-defined system of Polytheism, interspersed with large remains of an original Fetichism. We have no wish to dispute the matter with those who believe that Monotheism was the primitive religion, transmitted to our race from its first parents in uninterrupted tradition. By their own acknowledgment, the tradition was lost by all the nations of the world except a small and peculiar people, in whom it was miraculously kept alive, but who were themselves continually lapsing from it, and in all the earlier parts of their history did not hold it at all in its full meaning, but admitted the real existence of other gods, though believing their own to be the most powerful, and to be the Creator of the world. A greater proof of the unnaturalness of Monotheism to the human mind before a certain period in its development, could not well be required. The highest form of Monotheism, Christianity, has persisted to the present time in giving partial satisfaction to the mental dispositions that lead to Polytheism, by admitting into its theology the thoroughly polytheistic conception of a devil. When Monotheism, after many centuries, made its way to the Greeks and Romans from the small corner of the world where it existed, we know how the notion of daemons facilitated its reception, by making it unnecessary for Christians to deny the existence of the gods previously believed in, it being sufficient to place them under the absolute power of the new God, as the gods of Olympus were already under that of Zeus, and as the local deities of all the subjugated nations had been subordinated by conquest to the divine patrons of the Roman State.

In whatever mode, natural or supernatural, we choose to account for the early Monotheism of the Hebrews, there can be no question that its reception by the Gentiles was only rendered possible by the slow preparation which the human mind had undergone from the philosophers. In the age of the Caesars nearly the whole educated and cultivated class had outgrown the polytheistic creed, and though individually liable to returns of the superstition of their childhood, were predisposed (such of them as did not reject all religion whatever) to the acknowledgment of one Supreme Providence. It is vain to object that Christianity did not find the majority of its early proselytes among the educated class: since, except in Palestine, its teachers and propagators were mainly of that class--many of them, like St Paul, well versed in the mental culture of their time; and they had evidently found no intellectual obstacle to the new doctrine in their own minds. We must not be deceived by the recrudescence, at a much later date, of a metaphysical Paganism in the Alexandrian and other philosophical schools, provoked not by attachment to Polytheism, but by distaste for the political and social ascendancy of the Christian teachers. The fact was, that Monotheism had become congenial to the cultivated mind: and a belief which has gained the cultivated minds of any society, unless put down by force, is certain, sooner or later, to reach the multitude. Indeed the multitude itself had been prepared for it, as already hinted, by the more and more complete subordination of all other deities to the supremacy of Zeus; from which the step to a single Deity, surrounded by a host of angels, and keeping in recalcitrant subjection an army of devils, was by no means difficult.

By what means, then, had the cultivated minds of the Roman Empire been educated for Monotheism? By the growth of a practical feeling of the invariability of natural laws. Monotheism had a natural adaptation to this belief, while Polytheism naturally and necessarily conflicted with it. As men could not easily, and in fact never did, suppose that beings so powerful had their power absolutely restricted, each to its special department, the will of any divinity might always be frustrated by another: and unless all their wills were in complete harmony (which would itself be the most difficult to credit of all cases of invariability, and would require beyond anything else the ascendancy of a Supreme Deity) it was impossible that the course of any of the phaenomena under their government could be invariable. But if, on the contrary, all the phaenomena of the universe were under the exclusive and uncontrollable influence of a single will, it was an admissible supposition that this will might be always consistent with itself, and might choose to conduct each class of its operations in an invariable manner. In proportion, therefore, as the invariable laws of phaenomena revealed themselves to observers, the theory which ascribed them all to one will began to grow plausible; but must still have appeared improbable until it had come to seem likely that invariability was the common rule of all nature. The Greeks and Romans at the Christian era had reached a point of advancement at which this supposition had become probable. The admirable height to which geometry had already been carried, had familiarized the educated mind with the conception of laws absolutely invariable. The logical analysis of the intellectual processes by Aristotle had shown a similar uniformity of law in the realm of mind. In the concrete external world, the most imposing phaenomena, those of the heavenly bodies, which by their power over the imagination had done most to keep up the whole system of ideas connected with supernatural agency, had been ascertained to take place in so regular an order as to admit of being predicted with a precision which to the notions of those days must have appeared perfect. And though an equal degree of regularity had not been discerned in natural phaenomena generally, even the most empirical observation had ascertained so many cases of an uniformity *almost* complete, that inquiring minds were eagerly on the look-out for further indications pointing in the same direction; and vied with one another in the formation of theories which, though hypothetical and essentially premature, it was hoped would turn out to be correct representations of invariable laws governing large classes of phaenomena. When this hope and expectation became general, they were already a great encroachment on the original domain of the theological principle. Instead of the old conception, of events regulated from day to day by the unforeseen and changeable volitions of a legion of deities, it seemed more and more probable that all the phaenomena of the universe took place according to rules which must have been planned from the beginning; by which conception the function of the gods seemed to be limited to forming the plans, and setting the machinery in motion: their subsequent office appeared to be reduced to a sinecure, or if they continued to reign, it was in the manner of constitutional kings, bound by the laws to which they had previously given their assent. Accordingly, the pretension of philosophers to explain physical phaenomena by physical causes, or to predict their occurrence, was, up to a

very late period of Polytheism, regarded as a sacrilegious insult to the gods. Anaxagoras was banished for it, Aristotle had to fly for his life, and the mere unfounded suspicion of it contributed greatly to the condemnation of Socrates. We are too well acquainted with this form of the religious sentiment even now, to have any difficulty in comprehending what must have been its violence then. It was inevitable that philosophers should be anxious to get rid of at least *these* gods, and so escape from the particular fables which stood immediately in their way; accepting a notion of divine government which harmonized better with the lessons they learnt from the study of nature, and a God concerning whom no mythos, as far as they knew, had yet been invented.

Again, when the idea became prevalent that the constitution of every part of Nature had been planned from the beginning, and continued to take place as it had been planned, this was itself a striking feature of resemblance extending through all Nature, and affording a presumption that the whole was the work, not of many, but of the same hand. It must have appeared vastly more probable that there should be one indefinitely foreseeing Intelligence and immovable Will, than hundreds and thousands of such. The philosophers had not at that time the arguments which might have been grounded on universal laws not yet suspected, such as the law of gravitation and the laws of heat; but there was a multitude, obvious even to them, of analogies and homologies in natural phaenomena, which suggested unity of plan; and a still greater number were raised up by their active fancy, aided by their premature scientific theories, all of which aimed at interpreting some phaenomenon by the analogy of others supposed to be better known; assuming, indeed, a much greater similarity among the various processes of Nature, than ampler experience has since shown to exist. The theological mode of thought thus advanced from Polytheism to Monotheism through the direct influence of the Positive mode of thought, not yet aspiring to complete speculative ascendancy. But, inasmuch as the belief in the invariability of natural laws was still imperfect even in highly cultivated minds, and in the merest infancy in the uncultivated, it gave rise to the belief in one God, but not in an immovable one. For many centuries the God believed in was flexible by entreaty, was incessantly ordering the affairs of mankind by direct volitions, and continually reversing the course of nature by miraculous interpositions; and this is believed still, wherever the invariability of law has established itself in men's convictions as a general, but not as an universal truth.

In the change from Polytheism to Monotheism, the Metaphysical mode of thought contributed its part, affording great aid to the up-hill struggle which the Positive spirit had to maintain against the prevailing form, of the Theological. M. Comte, indeed, has considerably exaggerated the share of the Metaphysical spirit in this mental revolution, since by a lax use of terms he credits the Metaphysical mode of thought with all that is due to dialectics and negative criticism--to the exposure of inconsistencies and absurdities in the received religions. But this operation is quite independent of the Metaphysical mode of thought, and was no otherwise connected with it than in being very generally carried on by the same minds (Plato is a brilliant example), since the most eminent efficiency in it does not necessarily depend on the possession of positive scientific knowledge. But the Metaphysical spirit, strictly so called, did contribute largely to the advent of Monotheism. The conception of impersonal entities, interposed between the governing deity and the phaenomena, and forming the machinery through which these are immediately produced, is not repugnant, as the theory of direct supernatural volitions is, to the belief in invariable laws. The entities not being, like the gods, framed after the exemplar of men--being neither, like them, invested with human passions, nor supposed, like them, to have power beyond the phaenomena which are the special department of each, there was no fear of offending them by the attempt to foresee and define their action, or by the supposition that it took place according to fixed laws. The popular tribunal which condemned Anaxagoras had evidently not risen to the metaphysical point of view. Hippocrates, who was concerned only with a select and instructed class, could say with impunity, speaking of what were called the god-inflicted diseases, that to his mind they were neither more nor less god-inflicted than all others. The doctrine of abstract entities was a kind of instinctive conciliation between the observed uniformity of the facts of nature, and their dependence on arbitrary volition; since it was easier to conceive a single volition as setting a machinery to work, which afterwards went on of itself, than to suppose an inflexible constancy in so capricious and changeable a thing as volition must then have appeared. But though the régime of abstractions was in strictness compatible with Polytheism, it

demanded Monotheism as the condition of its free development. The received Polytheism being only the first remove from Fetichism, its gods were too closely mixed up in the daily details of phaenomena, and the habit of propitiating them and ascertaining their will before any important action of life was too inveterate, to admit, without the strongest shock to the received system, the notion that they did not habitually rule by special interpositions, but left phaenomena in all ordinary cases to the operation of the essences or peculiar natures which they had first implanted in them. Any modification of Polytheism which would have made it fully compatible with the Metaphysical conception of the world, would have been more difficult to effect than the transition to Monotheism, as Monotheism was at first conceived.

We have given, in our own way, and at some length, this important portion of M. Comte's view of the evolution of human thought, as a sample of the manner in which his theory corresponds with and interprets historical facts, and also to obviate some objections to it, grounded on an imperfect comprehension, or rather on a mere first glance. Some, for example, think the doctrine of the three successive stages of speculation and belief, inconsistent with the fact that they all three existed contemporaneously; much as if the natural succession of the hunting, the nomad, and the agricultural state could be refuted by the fact that there are still hunters and nomads. That the three states were contemporaneous, that they all began before authentic history, and still coexist, is M. Comte's express statement: as well as that the advent of the two later modes of thought was the very cause which disorganized and is gradually destroying the primitive one. The Theological mode of explaining phaenomena was once universal, with the exception, doubtless, of the familiar facts which, being even then seen to be controllable by human will, belonged already to the positive mode of thought. The first and easiest generalizations of common observation, anterior to the first traces of the scientific spirit, determined the birth of the Metaphysical mode of thought; and every further advance in the observation of nature, gradually bringing to light its invariable laws, determined a further development of the Metaphysical spirit at the expense of the Theological, this being the only medium through which the conclusions of the Positive mode of thought and the premises of the Theological could be temporarily made compatible. At a later period, when the real character of the positive laws of nature had come to be in a certain degree understood, and the theological idea had assumed, in scientific minds, its final character, that of a God governing by general laws, the positive spirit, having now no longer need of the fictitious medium of imaginary entities, set itself to the easy task of demolishing the instrument by which it had risen. But though it destroyed the actual belief in the objective reality of these abstractions, that belief has left behind it vicious tendencies of the human mind, which are still far enough from being extinguished, and which we shall presently have occasion to characterize.

The next point on which we have to touch is one of greater importance than it seems. If all human speculation had to pass through the three stages, we may presume that its different branches, having always been very unequally advanced, could not pass from one stage to another at the same time. There must have been a certain order of succession in which the different sciences would enter, first into the metaphysical, and afterwards into the purely positive stage; and this order M. Comte proceeds to investigate. The result is his remarkable conception of a scale of subordination of the sciences, being the order of the logical dependence of those which follow on those which precede. It is not at first obvious how a mere classification of the sciences can be not merely a help to their study, but itself an important part of a body of doctrine; the classification, however, is a very important part of M. Comte's philosophy.

He first distinguishes between the abstract and the concrete sciences. The abstract sciences have to do with the laws which govern the elementary facts of Nature; laws on which all phaenomena actually realized must of course depend, but which would have been equally compatible with many other combinations than those which actually come to pass. The concrete sciences, on the contrary, concern themselves only with the particular combinations of phaenomena which are found in existence. For example; the minerals which compose our planet, or are found in it, have been produced and are held together by the laws of mechanical aggregation and by those of chemical union. It is the business of the abstract sciences, Physics and Chemistry, to ascertain these laws: to discover how and under what conditions bodies may become aggregated, and what are the possible modes and results of chemical combination. The great majority of these aggregations and

combinations take place, so far as we are aware, only in our laboratories; with these the concrete science, Mineralogy, has nothing to do. Its business is with those aggregates, and those chemical compounds, which form themselves, or have at some period been formed, in the natural world. Again, Physiology, the abstract science, investigates, by such means as are available to it, the general laws of organization and life. Those laws determine what living beings are possible, and maintain the existence and determine the phaenomena of those which actually exist: but they would be equally capable of maintaining in existence plants and animals very different from these. The concrete sciences, Zoology and Botany, confine themselves to species which really exist, or can be shown to have really existed: and do not concern themselves with the mode in which even these would comport themselves under all circumstances, but only under those which really take place. They set forth the actual mode of existence of plants and animals, the phaenomena which they in fact present: but they set forth all of these, and take into simultaneous consideration the whole real existence of each species, however various the ultimate laws on which it depends, and to whatever number of different abstract sciences these laws may belong. The existence of a date tree, or of a lion, is a joint result of many natural laws, physical, chemical, biological, and even astronomical. Abstract science deals with these laws separately, but considers each of them in all its aspects, all its possibilities of operation: concrete science considers them only in combination, and so far as they exist and manifest themselves in the animals or plants of which we have experience. The distinctive attributes of the two are summed up by M. Comte in the expression, that concrete science relates to Beings, or Objects, abstract science to Events.[2]

The concrete sciences are inevitably later in their development than the abstract sciences on which they depend. Not that they begin later to be studied; on the contrary, they are the earliest cultivated, since in our abstract investigations we necessarily set out from spontaneous facts. But though we may make empirical generalizations, we can form no scientific theory of concrete phaenomena until the laws which govern and explain them are first known; and those laws are the subject of the abstract sciences. In consequence, there is not one of the concrete studies (unless we count astronomy among them) which has received, up to the present time, its final scientific constitution, or can be accounted a science, except in a very loose sense, but only materials for science: partly from insufficiency of facts, but more, because the abstract sciences, except those at the very beginning of the scale, have not attained the degree of perfection necessary to render real concrete sciences possible.

Postponing, therefore, the concrete sciences, as not yet formed, but only tending towards formation, the abstract sciences remain to be classed. These, as marked out by M. Comte, are six in number; and the principle which he proposes for their classification is admirably in accordance with the conditions of our study of Nature. It might have happened that the different classes of phaenomena had depended on laws altogether distinct; that in changing from one to another subject of scientific study, the student left behind all the laws he previously knew, and passed under the dominion of a totally new set of uniformities. The sciences would then have been wholly independent of one another; each would have rested entirely on its own inductions, and if deductive at all, would have drawn its deductions from premises exclusively furnished by itself. The fact, however, is otherwise. The relation which really subsists between different kinds of phaenomena, enables the sciences to be arranged in such an order, that in travelling through them we do not pass out of the sphere of any laws, but merely take up additional ones at each step. In this order M. Comte proposes to arrange them. He classes the sciences in an ascending series, according to the degree of complexity of their phaenomena; so that each science depends on the truths of all those which precede it, with the addition of peculiar truths of its own.

Thus, the truths of number are true of all things, and depend only on their own laws; the science, therefore, of Number, consisting of Arithmetic and Algebra, may be studied without reference to any other science. The truths of Geometry presuppose the laws of Number, and a more special class of laws peculiar to extended bodies, but require no others: Geometry, therefore, can be studied independently of all sciences except that of Number.

Rational Mechanics presupposes, and depends on, the laws of number and those of extension, and along with

them another set of laws, those of Equilibrium and Motion. The truths of Algebra and Geometry nowise depend on these last, and would have been true if these had happened to be the reverse of what we find them: but the phaenomena of equilibrium and motion cannot be understood, nor even stated, without assuming the laws of number and extension, such as they actually are. The phaenomena of Astronomy depend on these three classes of laws, and on the law of gravitation besides; which last has no influence on the truths of number, geometry, or mechanics. Physics (badly named in common English parlance Natural Philosophy) presupposes the three mathematical sciences, and also astronomy; since all terrestrial phaenomena are affected by influences derived from the motions of the earth and of the heavenly bodies. Chemical phaenomena depend (besides their own laws) on all the preceding, those of physics among the rest, especially on the laws of heat and electricity; physiological phaenomena, on the laws of physics and chemistry, and their own laws in addition. The phaenomena of human society obey laws of their own, but do not depend solely upon these: they depend upon all the laws of organic and animal life, together with those of inorganic nature, these last influencing society not only through their influence on life, but by determining the physical conditions under which society has to be carried on. "Chacun de ces degré's successifs exige des inductions qui lui sont propres; mais elles ne peuvent jamais devenir systématiques que sous l'impulsion déductive resultée de tous les ordres moins compliqués."[3]

Thus arranged by M. Comte in a series, of which each term represents an advance in speciality beyond the term preceding it, and (what necessarily accompanies increased speciality) an increase of complexity--a set of phaenomena determined by a more numerous combination of laws; the sciences stand in the following order: 1st, Mathematics; its three branches following one another on the same principle, Number, Geometry, Mechanics. 2nd, Astronomy. 3rd, Physics. 4th, Chemistry. 5th, Biology. 6th, Sociology, or the Social Science, the phaemomena, of which depend on, and cannot be understood without, the principal truths of all the other sciences. The subject matter and contents of these various sciences are obvious of themselves, with the exception of Physics, which is a group of sciences rather than a single science, and is again divided by M. Comte into five departments: Barology, or the science of weight; Thermology, or that of heat; Acoustics, Optics, and Electrology. These he attempts to arrange on the same principle of increasing speciality and complexity, but they hardly admit of such a scale, and M. Comte's mode of placing them varied at different periods. All the five being essentially independent of one another, he attached little importance to their order, except that barology ought to come first, as the connecting link with astronomy, and electrology last, as the transition to chemistry.

If the best classification is that which is grounded on the properties most important for our purposes, this classification will stand the test. By placing the sciences in the order of the complexity of their subject matter, it presents them in the order of their difficulty. Each science proposes to itself a more arduous inquiry than those which precede it in the series; it is therefore likely to be susceptible, even finally, of a less degree of perfection, and will certainly arrive later at the degree attainable by it. In addition to this, each science, to establish its own truths, needs those of all the sciences anterior to it. The only means, for example, by which the physiological laws of life could have been ascertained, was by distinguishing, among the multifarious and complicated facts of life, the portion which physical and chemical laws cannot account for. Only by thus isolating the effects of the peculiar organic laws, did it become possible to discover what these are. It follows that the order in which the sciences succeed one another in the series, cannot but be, in the main, the historical order of their development; and is the only order in which they can rationally be studied. For this last there is an additional reason: since the more special and complete sciences require not only the truths of the simpler and more general ones, but still more their methods. The scientific intellect, both in the individual and in the race, must learn in the move elementary studies that art of investigation and those canons of proof which are to be put in practice in the more elevated. No intellect is properly qualified for the higher part of the scale, without due practice in the lower.

Mr Herbert Spencer, in his essay entitled "The Genesis of Science," and more recently in a pamphlet on "the Classification of the Sciences," has criticised and condemned M. Comte's classification, and proposed a more elaborate one of his own: and M. Littré, in his valuable biographical and philosophical work on M. Comte

("Auguste Comte et la Philosophie Positive"), has at some length criticised the criticism. Mr Spencer is one of the small number of persons who by the solidity and encyclopedical character of their knowledge, and their power of co-ordination and concatenation, may claim to be the peers of M. Comte, and entitled to a vote in the estimation of him. But after giving to his animadversions the respectful attention due to all that comes from Mr Spencer, we cannot find that he has made out any case. It is always easy to find fault with a classification. There are a hundred possible ways of arranging any set of objects, and something may almost always be said against the best, and in favour of the worst of them. But the merits of a classification depend on the purposes to which it is instrumental. We have shown the purposes for which M. Comte's classification is intended. Mr Spencer has not shown that it is ill adapted to those purposes: and we cannot perceive that his own answers any ends equally important. His chief objection is that if the more special sciences need the truths of the more general ones, the latter also need some of those of the former, and have at times been stopped in their progress by the imperfect state of sciences which follow long after them in M. Comte's scale; so that, the dependence being mutual, there is a *consensus*, but not an ascending scale or hierarchy of the sciences. That the earlier sciences derive help from the later is undoubtedly true; it is part of M. Comte's theory, and amply exemplified in the details of his work. When he affirms that one science historically precedes another, he does not mean that the perfection of the first precedes the humblest commencement of those which follow. Mr Spencer does not distinguish between the empirical stage of the cultivation of a branch of knowledge, and the scientific stage. The commencement of every study consists in gathering together unanalyzed facts, and treasuring up such spontaneous generalizations as present themselves to natural sagacity. In this stage any branch of inquiry can be carried on independently of every other; and it is one of M. Comte's own remarks that the most complex, in a scientific point of view, of all studies, the latest in his series, the study of man as a moral and social being, since from its absorbing interest it is cultivated more or less by every one, and pre-eminently by the great practical minds, acquired at an early period a greater stock of just though unscientific observations than the more elementary sciences. It is these empirical truths that the later and more special sciences lend to the earlier; or, at most, some extremely elementary scientific truth, which happening to be easily ascertainable by direct experiment, could be made available for carrying a previous science already founded, to a higher stage of development; a re-action of the later sciences on the earlier which M. Comte not only fully recognized, but attached great importance to systematizing.[4]

But though detached truths relating to the more complex order of phaenomena may be empirically observed, and a few of them even scientifically established, contemporaneously with an early stage of some of the sciences anterior in the scale, such detached truths, as M. Littré justly remarks, do not constitute a science. What is known of a subject, only becomes a science when it is made a connected body of truth; in which the relation between the general principles and the details is definitely made out, and each particular truth can be recognized as a case of the operation of wider laws. This point of progress, at which the study passes from the preliminary state of mere preparation, into a science, cannot be reached by the more complex studies until it has been attained by the simpler ones. A certain regularity of recurrence in the celestial appearances was ascertained empirically before much progress had been made in geometry; but astronomy could no more be a science until geometry was a highly advanced one, than the rule of three could have been practised before addition and subtraction. The truths of the simpler sciences are a part of the laws to which the phaenomena of the more complex sciences conform: and are not only a necessary element in their explanation, but must be so well understood as to be traceable through complex combinations, before the special laws which co-exist and co-operate with them can be brought to light. This is all that M. Comte affirms, and enough for his purpose.[5] He no doubt occasionally indulges in more unqualified expressions than can be completely justified, regarding the logical perfection of the construction of his series, and its exact correspondence with the historical evolution of the sciences; exaggerations confined to language, and which the details of his exposition often correct. But he is sufficiently near the truth, in both respects, for every practical purpose.[6] Minor inaccuracies must often be forgiven even to great thinkers. Mr Spencer, in the very-writings in which he criticises M. Comte, affords signal instances of them.[7]

Combining the doctrines, that every science is in a less advanced state as it occupies a higher place in the ascending scale, and that all the sciences pass through the three stages, theological, metaphysical, and

positive, it follows that the more special a science is, the tardier is it in effecting each transition, so that a completely positive state of an earlier science has often coincided with the metaphysical state of the one next to it, and a purely theological state of those further on. This statement correctly represents the general course of the facts, though requiring allowances in the detail. Mathematics, for example, from the very beginning of its cultivation, can hardly at any time have been in the theological state, though exhibiting many traces of the metaphysical. No one, probably, ever believed that the will of a god kept parallel lines from meeting, or made two and two equal to four; or ever prayed to the gods to make the square of the hypothenuse equal to more or less than the sum of the squares of the sides. The most devout believers have recognized in propositions of this description a class of truths independent of the devine omnipotence. Even among the truths which popular philosophy calls by the misleading name of Contingent the few which are at once exact and obvious were probably, from the very first, excepted from the theological explanation. M. Comte observes, after Adam Smith, that we are not told in any age or country of a god of Weight. It was otherwise with Astronomy: the heavenly bodies were believed not merely to be moved by gods, but to be gods themselves: and when this theory was exploded, there movements were explained by metaphysical conceptions; such as a tendency of Nature to perfection, in virtue of which these sublime bodies, being left to themselves, move in the most perfect orbit, the circle. Even Kepler was full of fancies of this description, which only terminated when Newton, by unveiling the real physical laws of the celestial motions, closed the metaphysical period of astronomical science. As M. Comte remarks, our power of foreseeing phaenomena, and our power of controlling them, are the two things which destroy the belief of their being governed by changeable wills. In the case of phaenomena which science has not yet taught us either to foresee or to control, the theological mode of thought has not ceased to operate: men still pray for rain, or for success in war, or to avert a shipwreck or a pestilence, but not to put back the stars in their courses, to abridge the time necessary for a journey, or to arrest the tides. Such vestiges of the primitive mode of thought linger in the more intricate departments of sciences which have attained a high degree of positive development. The metaphysical mode of explanation, being less antagonistic than the theological to the idea of invariable laws, is still slower in being entirely discarded. M. Comte finds remains of it in the sciences which are the most completely positive, with the single exception of astronomy, mathematics itself not being, he thinks, altogether free from them: which is not wonderful, when we see at how very recent a date mathematicians have been able to give the really positive interpretation of their own symbols.[8] We have already however had occasion to notice M. Comte's propensity to use the term metaphysical in cases containing nothing that truly answers to his definition of the word. For instance, he considers chemistry as tainted with the metaphysical mode of thought by the notion of chemical affinity. He thinks that the chemists who said that bodies combine because they have an affinity for each other, believed in a mysterious entity residing in bodies and inducing them to combine. On any other supposition, he thinks the statement could only mean that bodies combine because they combine. But it really meant more. It was the abstract expression of the doctrine, that bodies have an invariable tendency to combine with one thing in preference to another: that the tendencies of different substances to combine are fixed quantities, of which the greater always prevails over the less, so that if A detaches B from C in one case it will do so in every other; which was called having a greater attraction, or, more technically, a greater affinity for it. This was not a metaphysical theory, but a positive generalization, which accounted for a great number of facts, and would have kept its place as a law of nature, had it not been disproved by the discovery of cases in which though A detached B from C in some circumstances, C detached it from A in others, showing the law of elective chemical combination to be a less simple one than had at first been supposed. In this case, therefore, M. Comte made a mistake: and he will be found to have made many similar ones. But in the science next after chemistry, biology, the empty mode of explanation by scholastic entities, such as a plastic force, a vital principle, and the like, has been kept up even to the present day. The German physiology of the school of Oken, notwithstanding his acknowledged genius, is almost as metaphysical as Hegel, and there is in France a quite recent revival of the Animism of Stahl. These metaphysical explanations, besides their inanity, did serious harm, by directing the course of positive scientific inquiry into wrong channels. There was indeed nothing to prevent investigating the mode of action of the supposed plastic or vital force by observation and experiment; but the phrases gave currency and coherence to a false abstraction and generalization, setting inquirers to look out for one cause of complex phaenomena which undoubtedly depended on many.

According to M. Comte, chemistry entered into the positive stage with Lavoisier, in the latter half of the last century (in a subsequent treatise he places the date a generation earlier); and biology at the beginning of the present, when Bichat drew the fundamental distinction between nutritive or vegetative and properly animal life, and referred the properties of organs to the general laws of the component tissues. The most complex of all sciences, the Social, had not, he maintained, become positive at all, but was the subject of an ever-renewed and barren contest between the theological and the metaphysical modes of thought. To make this highest of the sciences positive, and thereby complete the positive character of all human speculations, was the principal aim of his labours, and he believed himself to have accomplished it in the last three volumes of his Treatise. But the term Positive is not, any more than Metaphysical, always used by M. Comte in the same meaning. There never can have been a period in any science when it was not in some degree positive, since it always professed to draw conclusions from experience and observation. M. Comte would have been the last to deny that previous to his own speculations, the world possessed a multitude of truths, of greater or less certainty, on social subjects, the evidence of which was obtained by inductive or deductive processes from observed sequences of phaenomena. Nor could it be denied that the best writers on subjects upon which so many men of the highest mental capacity had employed their powers, had accepted as thoroughly the positive point of view, and rejected the theological and metaphysical as decidedly, as M. Comte himself. Montesquieu; even Macchiavelli; Adam Smith and the political economists universally, both in France and in England; Bentham, and all thinkers initiated by him,--had a full conviction that social phaenomena conform to invariable laws, the discovery and illustration of which was their great object as speculative thinkers. All that can be said is, that those philosophers did not get so far as M. Comte in discovering the methods best adapted to bring these laws to light. It was not, therefore, reserved for M. Comte to make sociological inquiries positive. But what he really meant by making a science positive, is what we will call, with M. Littré, giving it its final scientific constitution; in other words, discovering or proving, and pursuing to their consequences, those of its truths which are fit to form the connecting links among the rest: truths which are to it what the law of gravitation is to astronomy, what the elementary properties of the tissues are to physiology, and we will add (though M. Comte did not) what the laws of association are to psychology. This is an operation which, when accomplished, puts an end to the empirical period, and enables the science to be conceived as a co-ordinated and coherent body of doctrine. This is what had not yet been done for sociology; and the hope of effecting it was, from his early years, the prompter and incentive of all M. Comte's philosophic labours.

It was with a view to this that he undertook that wonderful systematization of the philosophy of all the antecedent sciences, from mathematics to physiology, which, if he had done nothing else, would have stamped him, in all minds competent to appreciate it, as one of the principal thinkers of the age. To make its nature intelligible to those who are not acquainted with it, we must explain what we mean by the philosophy of a science, as distinguished from the science itself. The proper meaning of philosophy we take to be, what the ancients understood by it--the scientific knowledge of Man, as an intellectual, moral, and social being. Since his intellectual faculties include his knowing faculty, the science of Man includes everything that man can know, so far as regards his mode of knowing it: in other words, the whole doctrine of the conditions of human knowledge. The philosophy of a Science thus comes to mean the science itself, considered not as to its results, the truths which it ascertains, but as to the processes by which the mind attains them, the marks by which it recognises them, and the co-ordinating and methodizing of them with a view to the greatest clearness of conception and the fullest and readiest availibility for use: in one word, the logic of the science. M. Comte has accomplished this for the first five of the fundamental sciences, with a success which can hardly be too much admired. We never reopen even the least admirable part of this survey, the volume on chemistry and biology (which was behind the actual state of those sciences when first written, and is far in the rear of them now), without a renewed sense of the great reach of its speculations, and a conviction that the way to a complete rationalizing of those sciences, still very imperfectly conceived by most who cultivate them, has been shown nowhere so successfully as there.

Yet, for a correct appreciation of this great philosophical achievement, we ought to take account of what has not been accomplished, as well as of what has. Some of the chief deficiencies and infirmities of M. Comte's system of thought will be found, as is usually the case, in close connexion with its greatest successes.

The philosophy of Science consists of two principal parts; the methods of investigation, and the requisites of proof. The one points out the roads by which the human intellect arrives at conclusions, the other the mode of testing their evidence. The former if complete would be an Organon of Discovery, the latter of Proof. It is to the first of these that M. Comte principally confines himself, and he treats it with a degree of perfection hitherto unrivalled. Nowhere is there anything comparable, in its kind, to his survey of the resources which the mind has at its disposal for investigating the laws of phaenomena; the circumstances which render each of the fundamental modes of exploration suitable or unsuitable to each class of phaenomena; the extensions and transformations which the process of investigation has to undergo in adapting itself to each new province of the field of study; and the especial gifts with which every one of the fundamental sciences enriches the method of positive inquiry, each science in its turn being the best fitted to bring to perfection one process or another. These, and many cognate subjects, such as the theory of Classification, and the proper use of scientific Hypotheses, M. Comte has treated with a completeness of insight which leaves little to be desired. Not less admirable is his survey of the most comprehensive truths that had been arrived at by each science, considered as to their relation to the general sum of human knowledge, and their logical value as aids to its further progress. But after all this, there remains a further and distinct question. We are taught the right way of searching for results, but when a result has been reached, how shall we know that it is true? How assure ourselves that the process has been performed correctly, and that our premises, whether consisting of generalities or of particular facts, really prove the conclusion we have grounded on them? On this question M. Comte throws no light. He supplies no test of proof. As regards deduction, he neither recognises the syllogistic system of Aristotle and his successors (the insufficiency of which is as evident as its utility is real) nor proposes any other in lieu of it: and of induction he has no canons whatever. He does not seem to admit the possibility of any general criterion by which to decide whether a given inductive inference is correct or not. Yet he does not, with Dr Whewell, regard an inductive theory as proved if it accounts for the facts: on the contrary, he sets himself in the strongest opposition to those scientific hypotheses which, like the luminiferous ether, are not susceptible of direct proof, and are accepted on the sole evidence of their aptitude for explaining phenomena. He maintains that no hypothesis is legitimate unless it is susceptible of verification, and that none ought to be accepted as true unless it can be shown not only that it accords with the facts, but that its falsehood would be inconsistent with them. He therefore needs a test of inductive proof; and in assigning none, he seems to give up as impracticable the main problem of Logic properly so called. At the beginning of his treatise he speaks of a doctrine of Method, apart from particular applications, as conceivable, but not needful: method, according to him, is learnt only by seeing it in operation, and the logic of a science can only usefully be taught through the science itself. Towards the end of the work, he assumes a more decidedly negative tone, and treats the very conception of studying Logic otherwise than in its applications as chimerical. He got on, in his subsequent writings, to considering it as wrong. This indispensable part of Positive Philosophy he not only left to be supplied by others, but did all that depended on him to discourage them from attempting it.

This hiatus in M. Comte's system is not unconnected with a defect in his original conception of the subject matter of scientific investigation, which has been generally noticed, for it lies on the surface, and is more apt to be exaggerated than overlooked. It is often said of him that he rejects the study of causes. This is not, in the correct acceptation, true, for it is only questions of ultimate origin, and of Efficient as distinguished from what are called Physical causes, that he rejects. The causes that he regards as inaccessible are causes which are not themselves phaenomena. Like other people he admits the study of causes, in every sense in which one physical fact can be the cause of another. But he has an objection to the *word* cause; he will only consent to speak of Laws of Succession: and depriving himself of the use of a word which has a Positive meaning, he misses the meaning it expresses. He sees no difference between such generalizations as Kepler's laws, and such as the theory of gravitation. He fails to perceive the real distinction between the laws of succession and coexistence which thinkers of a different school call Laws of Phaenomena, and those of what they call the action of Causes: the former exemplified by the succession of day and night, the latter by the earth's rotation which causes it. The succession of day and night is as much an invariable sequence, as the alternate exposure of opposite sides of the earth to the sun. Yet day and night are not the causes of one another; why? Because their sequence, though invariable in our experience, is not unconditionally so: those facts only succeed each

other, provided that the presence and absence of the sun succeed each other, and if this alternation were to cease, we might have either day or night unfollowed by one another. There are thus two kinds of uniformities of succession, the one unconditional, the other conditional on the first: laws of causation, and other successions dependent on those laws. All ultimate laws are laws of causation, and the only universal law beyond the pale of mathematics is the law of universal causation, namely, that every phaenomenon has a phaenomenal cause; has some phaenomenon other than itself, or some combination of phaenomena, on which it is invariably and unconditionally consequent. It is on the universality of this law that the possibility rests of establishing a canon of Induction. A general proposition inductively obtained is only then proved to be true, when the instances on which it rests are such that if they have been correctly observed, the falsity of the generalization would be inconsistent with the constancy of causation; with the universality of the fact that the phaenomena of nature take place according to invariable laws of succession.[9] It is probable, therefore, that M. Comte's determined abstinence from the word and the idea of Cause, had much to do with his inability to conceive an Inductive Logic, by diverting his attention from the only basis upon which it could be founded.

We are afraid it must also be said, though shown only by slight indications in his fundamental work, and coming out in full evidence only in his later writings--that M. Comte, at bottom, was not so solicitous about completeness of proof as becomes a positive philosopher, and that the unimpeachable objectivity, as he would have called it, of a conception--its exact correspondence to the realities of outward fact--was not, with him, an indispensable condition of adopting it, if it was subjectively useful, by affording facilities to the mind for grouping phaenomena. This appears very curiously in his chapters on the philosophy of Chemistry. He recommends, as a judicious use of "the degree of liberty left to our intelligence by the end and purpose of positive science," that we should accept as a convenient generalization the doctrine that all chemical composition is between two elements only; that every substance which our analysis decomposes, let us say into four elements, has for its immediate constituents two hypothetical substances, each compounded of two simpler ones. There would have been nothing to object to in this as a scientific hypothesis, assumed tentatively as a means of suggesting experiments by which its truth may be tested. With this for its destination, the conception, would have been legitimate and philosophical; the more so, as, if confirmed, it would have afforded an explanation of the fact that some substances which analysis shows to be composed of the same elementary substances in the same proportions, differ in their general properties, as for instance, sugar and gum.[10] And if, besides affording a reason for difference between things which differ, the hypothesis had afforded a reason for agreement between things which agree; if the intermediate link by which the quaternary compound was resolved into two binary ones, could have been so chosen as to bring each of them within the analogies of some known class of binary compounds (which it is easy to suppose possible, and which in some particular instances actually happens);[11] the universality of binary composition would have been a successful example of an hypothesis in anticipation of a positive theory, to give a direction to inquiry which might end in its being either proved or abandoned. But M. Comte evidently thought that even though it should never be proved--however many cases of chemical composition might always remain in which the theory was still as hypothetical as at first--so long as it was not actually disproved (which it is scarcely in the nature of the case that it should ever be) it would deserve to be retained, for its mere convenience in bringing a large body of phaenomena under a general conception. In a _résumé_ of the general principles of the positive method at the end of the work, he claims, in express terms, an unlimited license of adopting "without any vain scruple" hypothetical conceptions of this sort; "in order to satisfy, within proper limits, our just mental inclinations, which always turn, with an instinctive predilection, towards simplicity, continuity, and generality of conceptions, while always respecting the reality of external laws in so far as accessible to us" (vi. 639). "The most philosophic point of view leads us to conceive the study of natural laws as destined to represent the external world so as to give as much satisfaction to the essential inclinations of our intelligence, as is consistent with the degree of exactitude commanded by the aggregate of our practical wants" (vi. 642). Among these "essential inclinations" he includes not only our "instinctive predilection for order and harmony," which makes us relish any conception, even fictitious, that helps to reduce phaenomena to system; but even our feelings of taste, "les convenances purement esthétiques," which, he says, have a legitimate part in the employment of the "genre de liberté" resté facultatif pour notre intelligence." After the due satisfaction of our "most eminent mental inclinations," there will still remain "a considerable margin of

indeterminateness, which should be made use of to give a direct gratification to our *besoin* of ideality, by embellishing our scientific thoughts, without injury to their essential reality" (vi. 647). In consistency with all this, M. Comte warns thinkers against too severe a scrutiny of the exact truth of scientific laws, and stamps with "severe reprobation" those who break down "by too minute an investigation" generalizations already made, without being able to substitute others (vi. 639): as in the case of Lavoisier's general theory of chemistry, which would have made that science more satisfactory than at present to "the instinctive inclinations of our intelligence" if it had turned out true, but unhappily it did not. These mental dispositions in M. Comte account for his not having found or sought a logical criterion of proof; but they are scarcely consistent with his inveterate hostility to the hypothesis of the luminiferous ether, which certainly gratifies our "predilection for order and harmony," not to say our "besoin d'idéalite", in no ordinary degree. This notion of the "destination" of the study of natural laws is to our minds a complete dereliction of the essential principles which form the Positive conception of science; and contained the germ of the perversion of his own philosophy which marked his later years. It might be interesting, but scarcely worth while, to attempt to penetrate to the just thought which misled M. Comte, for there is almost always a grain of truth in the errors of an original and powerful mind. There is another grave aberration in M. Comte's view of the method of positive science, which though not more unphilosophical than the last mentioned, is of greater practical importance. He rejects totally, as an invalid process, psychological observation properly so called, or in other words, internal consciousness, at least as regards our intellectual operations. He gives no place in his series of the science of Psychology, and always speaks of it with contempt. The study of mental phaenomena, or, as he expresses it, of moral and intellectual functions, has a place in his scheme, under the head of Biology, but only as a branch of physiology. Our knowledge of the human mind must, he thinks, be acquired by observing other people. How we are to observe other people's mental operations, or how interpret the signs of them without having learnt what the signs mean by knowledge of ourselves, he does not state. But it is clear to him that we can learn very little about the feelings, and nothing at all about the intellect, by self-observation. Our intelligence can observe all other things, but not itself: we cannot observe ourselves observing, or observe ourselves reasoning: and if we could, attention to this reflex operation would annihilate its object, by stopping the process observed.

There is little need for an elaborate refutation of a fallacy respecting which the only wonder is that it should impose on any one. Two answers may be given to it. In the first place, M. Comte might be referred to experience, and to the writings of his countryman M. Cardaillac and our own Sir William Hamilton, for proof that the mind can not only be conscious of, but attend to, more than one, and even a considerable number, of impressions at once.[12] It is true that attention is weakened by being divided; and this forms a special difficulty in psychological observation, as psychologists (Sir William Hamilton in particular) have fully recognised; but a difficulty is not an impossibility. Secondly, it might have occurred to M. Comte that a fact may be studied through the medium of memory, not at the very moment of our perceiving it, but the moment after: and this is really the mode in which our best knowledge of our intellectual acts is generally acquired. We reflect on what we have been doing, when the act is past, but when its impression in the memory is still fresh. Unless in one of these ways, we could not have acquired the knowledge, which nobody denies us to have, of what passes in our minds. M. Comte would scarcely have affirmed that we are not aware of our own intellectual operations. We know of our observings and our reasonings, either at the very time, or by memory the moment after; in either case, by direct knowledge, and not (like things done by us in a state of somnambulism) merely by their results. This simple fact destroys the whole of M. Comte's argument. Whatever we are directly aware of, we can directly observe.

And what Organon for the study of "the moral and intellectual functions" does M. Comte offer, in lieu of the direct mental observation which he repudiates? We are almost ashamed to say, that it is Phrenology! Not, indeed, he says, as a science formed, but as one still to be created; for he rejects almost all the special organs imagined by phrenologists, and accepts only their general division of the brain into the three regions of the propensities, the sentiments, and the intellect,[13] and the subdivision of the latter region between the organs of meditation and those of observation. Yet this mere first outline of an apportionment of the mental functions among different organs, he regards as extricating the mental study of man from the metaphysical stage, and

elevating it to the positive. The condition of mental science would be sad indeed if this were its best chance of being positive; for the later course of physiological observation and speculation has not tended to confirm, but to discredit, the phrenological hypothesis. And even if that hypothesis were true, psychological observation would still be necessary; for how is it possible to ascertain the correspondence between two things, by observation of only one of them? To establish a relation between mental functions and cerebral conformations, requires not only a parallel system of observations applied to each, but (as M. Comte himself, with some inconsistency, acknowledges) an analysis of the mental faculties, "des diverses facultés élémentaires," (iii. 573), conducted without any reference to the physical conditions, since the proof of the theory would lie in the correspondence between the division of the brain into organs and that of the mind into faculties, each shown by separate evidence. To accomplish this analysis requires direct psychological study carried to a high pitch of perfection; it being necessary, among other things, to investigate the degree in which mental character is created by circumstances, since no one supposes that cerebral conformation does all, and circumstances nothing. The phrenological study of Mind thus supposes as its necessary preparation the whole of the Association psychology. Without, then, rejecting any aid which study of the brain and nerves can afford to psychology (and it has afforded, and will yet afford, much), we may affirm that M. Comte has done nothing for the constitution of the positive method of mental science. He refused to profit by the very valuable commencements made by his predecessors, especially by Hartley, Brown, and James Mill (if indeed any of those philosophers were known to him), and left the psychological branch of the positive method, as well as psychology itself, to be put in their true position as a part of Positive Philosophy by successors who duly placed themselves at the twofold point of view of physiology and psychology, Mr Bain and Mr Herbert Spencer. This great mistake is not a mere hiatus in M. Comte's system, but the parent of serious errors in his attempt to create a Social Science. He is indeed very skilful in estimating the effect of circumstances in moulding the general character of the human race; were he not, his historical theory could be of little worth: but in appreciating the influence which circumstances exercise, through psychological laws, in producing diversities of character, collective or individual, he is sadly at fault.

After this summary view of M. Comte's conception of Positive Philosophy, it remains to give some account of his more special and equally ambitious attempt to create the Science of Sociology, or, as he expresses it, to elevate the study of social phaenomena to the positive state.

He regarded all who profess any political opinions as hitherto divided between the adherents of the theological and those of the metaphysical mode of thought: the former deducing all their doctrines from divine ordinances, the latter from abstractions. This assertion, however, cannot be intended in the same sense as when the terms are applied to the sciences of inorganic nature; for it is impossible that acts evidently proceeding from the human will could be ascribed to the agency (at least immediate) of either divinities or abstractions. No one ever regarded himself or his fellow-man as a mere piece of machinery worked by a god, or as the abode of an entity which was the true author of what the man himself appeared to do. True, it was believed that the gods, or God, could move or change human wills, as well as control their consequences, and prayers were offered to them accordingly, rather as able to overrule the spontaneous course of things, than as at each instant carrying it on. On the whole, however, the theological and metaphysical conceptions, in their application to sociology, had reference not to the production of phaenomena, but to the rule of duty, and conduct in life. It is this which was based, either on a divine will, or on abstract mental conceptions, which, by an illusion of the rational faculty, were invested with objective validity. On the one hand, the established rules of morality were everywhere referred to a divine origin. In the majority of countries the entire civil and criminal law was looked upon as revealed from above; and it is to the petty military communities which escaped this delusion, that man is indebted for being now a progressive being. The fundamental institutions of the state were almost everywhere believed to have been divinely established, and to be still, in a greater or less degree, of divine authority. The divine right of certain lines of kings to rule, and even to rule absolutely, was but lately the creed of the dominant party in most countries of Europe; while the divine right of popes and bishops to dictate men's beliefs (and not respecting the invisible world alone) is still striving, though under considerable difficulties, to rule mankind. When these opinions began to be out of date, a rival theory presented itself to take their place. There were, in truth, many such theories, and to some of them the term

metaphysical, in M. Comte's sense, cannot justly be applied. All theories in which the ultimate standard of institutions and rules of action was the happiness of mankind, and observation and experience the guides (and some such there have been in all periods of free speculation), are entitled to the name Positive, whatever, in other respects, their imperfections may be. But these were a small minority. M. Comte was right in affirming that the prevailing schools of moral and political speculation, when not theological, have been metaphysical. They affirmed that moral rules, and even political institutions, were not means to an end, the general good, but corollaries evolved from the conception of Natural Rights. This was especially the case in all the countries in which the ideas of publicists were the offspring of the Roman Law. The legislators of opinion on these subjects, when not theologians, were lawyers: and the Continental lawyers followed the Roman jurists, who followed the Greek metaphysicians, in acknowledging as the ultimate source of right and wrong in morals, and consequently in institutions, the imaginary law of the imaginary being Nature. The first systematizers of morals in Christian Europe, on any other than a purely theological basis, the writers on International Law, reasoned wholly from these premises, and transmitted them to a long line of successors. This mode of thought reached its culmination in Rousseau, in whose hands it became as powerful an instrument for destroying the past, as it was impotent for directing the future. The complete victory which this philosophy gained, in speculation, over the old doctrines, was temporarily followed by an equally complete practical triumph, the French Revolution: when, having had, for the first time, a full opportunity of developing its tendencies, and showing what it could not do, it failed so conspicuously as to determine a partial reaction to the doctrines of feudalism and Catholicism. Between these and the political metaphysics (meta-politics as Coleridge called it) of the Revolution, society has since oscillated; raising up in the process a hybrid intermediate party, termed Conservative, or the party of Order, which has no doctrines of its own, but attempts to hold the scales even between the two others, borrowing alternately the arguments of each, to use as weapons against whichever of the two seems at the moment most likely to prevail.

Such, reduced to a very condensed form, is M. Comte's version of the state of European opinion on politics and society. An Englishman's criticism would be, that it describes well enough the general division of political opinion in France and the countries which follow her lead, but not in England, or the communities of English origin: in all of which, divine right died out with the Jacobites, and the law of nature and natural rights have never been favourites even with the extreme popular party, who preferred to rest their claims on the historical traditions of their own country, and on maxims drawn from its law books, and since they outgrew this standard, almost always base them on general expediency. In England, the preference of one form of government to another seldom turns on anything but the practical consequences which it produces, or which are expected from it. M. Comte can point to little of the nature of metaphysics in English politics, except "la métaphysique constitutionnelle," a name he chooses to give to the conventional fiction by which the occupant of the throne is supposed to be the source from whence all power emanates, while nothing can be further from the belief or intention of anybody than that such should really be the case. Apart from this, which is a matter of forms and words, and has no connexion with any belief except belief in the proprieties, the severest criticism can find nothing either worse or better, in the modes of thinking either of our conservative or of our liberal party, than a particularly shallow and flimsy kind of positivism. The working classes indeed, or some portion of them, perhaps still rest their claim to universal suffrage on abstract right, in addition to more substantial reasons, and thus far and no farther does metaphysics prevail in the region of English politics. But politics is not the entire art of social existence: ethics is a still deeper and more vital part of it: and in that, as much in England as elsewhere, the current opinions are still divided between the theological mode of thought and the metaphysical. What is the whole doctrine of Intuitive Morality, which reigns supreme wherever the idolatry of Scripture texts has abated and the influence of Bentham's philosophy has not reached, but the metaphysical state of ethical science? What else, indeed, is the whole *a priori* philosophy, in morals, jurisprudence, psychology, logic, even physical science, for it does not always keep its hands off that, the oldest domain of observation and experiment? It has the universal diagnostic of the metaphysical mode of thought, in the Comtean sense of the word; that of erecting a mere creation of the mind into a test or *norma* of external truth, and presenting the abstract expression of the beliefs already entertained, as the reason and evidence which justifies them. Of those who still adhere to the old opinions we need not speak; but when one of the most vigorous as well as boldest thinkers that English speculation has yet produced, full of the true

scientific spirit, Mr Herbert Spencer, places in the front of his philosophy the doctrine that the ultimate test of the truth of a proposition is the inconceivableness of its negative; when, following in the steps of Mr Spencer, an able expounder of positive philosophy like Mr Lewes, in his meritorious and by no means superficial work on Aristotle, after laying, very justly, the blame of almost every error of the ancient thinkers on their neglecting to *verify* their opinions, announces that there are two kinds of verification, the Real and the Ideal, the ideal test of truth being that its negative is unthinkable, and by the application of that test judges that gravitation must be universal even in the stellar regions, because in the absence of proof to the contrary, "the idea of matter without gravity is unthinkable;"--when those from whom it was least to be expected thus set up acquired necessities of thought in the minds of one or two generations as evidence of real necessities in the universe, we must admit that the metaphysical mode of thought still rules the higher philosophy, even in the department of inorganic nature, and far more in all that relates to man as a moral, intellectual, and social being.

But, while M. Comte is so far in the right, we often, as already intimated, find him using the name metaphysical to denote certain practical conclusions, instead of a particular kind of theoretical premises. Whatever goes by the different names of the revolutionary, the radical, the democratic, the liberal, the free-thinking, the sceptical, or the negative and critical school or party in religion, politics, or philosophy, all passes with him under the designation of metaphysical, and whatever he has to say about it forms part of his description of the metaphysical school of social science. He passes in review, one after another, what he deems the leading doctrines of the revolutionary school of politics, and dismisses them all as mere instruments of attack upon the old social system, with no permanent validity as social truth.

He assigns only this humble rank to the first of all the articles of the liberal creed, "the absolute right of free examination, or the dogma of unlimited liberty of conscience." As far as this doctrine only means that opinions, and their expression, should be exempt from *legal* restraint, either in the form of prevention or of penalty, M. Comte is a firm adherent of it: but the *moral* right of every human being, however ill-prepared by the necessary instruction and discipline, to erect himself into a judge of the most intricate as well as the most important questions that can occupy the human intellect, he resolutely denies. "There is no liberty of conscience," he said in an early work, "in astronomy, in physics, in chemistry, even in physiology, in the sense that every one would think it absurd not to accept in confidence the principles established in those sciences by the competent persons. If it is otherwise in politics, the reason is merely because, the old doctrines having gone by and the new ones not being yet formed, there are not properly, during the interval, any established opinions." When first mankind outgrew the old doctrines, an appeal from doctors and teachers to the outside public was inevitable and indispensable, since without the toleration and encouragement of discussion and criticism from all quarters, it would have been impossible for any new doctrines to grow up. But in itself, the practice of carrying the questions which more than all others require special knowledge and preparation, before the incompetent tribunal of common opinion, is, he contends, radically irrational, and will and ought to cease when once mankind have again made up their minds to a system of doctrine. The prolongation of this provisional state, producing an ever-increasing divergence of opinions, is already, according to him, extremely dangerous, since it is only when there is a tolerable unanimity respecting the rule of life, that a real moral control can be established over the self-interest and passions of individuals. Besides which, when every man is encouraged to believe himself a competent judge of the most difficult social questions, he cannot be prevented from thinking himself competent also to the most important public duties, and the baneful competition for power and official functions spreads constantly downwards to a lower and lower grade of intelligence. In M. Comte's opinion, the peculiarly complicated nature of sociological studies, and the great amount of previous knowledge and intellectual discipline requisite for them, together with the serious consequences that may be produced by even, temporary errors on such subjects, render it necessary in the case of ethics and politics, still more than of mathematics and physics, that whatever legal liberty may exist of questioning and discussing, the opinions of mankind should really be formed for them by an exceedingly small number of minds of the highest class, trained to the task by the most thorough and laborious mental preparation: and that the questioning of their conclusions by any one, not of an equivalent grade of intellect and instruction, should be accounted equally presumptuous, and more blamable, than the

attempts occasionally made by sciolists to refute the Newtonian astronomy. All this is, in a sense, true: but we confess our sympathy with those who feel towards it like the man in the story, who being asked whether he admitted that six and five make eleven, refused to give an answer until he knew what use was to be made of it. The doctrine is one of a class of truths which, unless completed by other truths, are so liable to perversion, that we may fairly decline to take notice of them except in connexion with some definite application. In justice to M. Comte it should be said that he does not wish this intellectual dominion to be exercised over an ignorant people. Par from him is the thought of promoting the allegiance of the mass to scientific authority by withholding from them scientific knowledge. He holds it the duty of society to bestow on every one who grows up to manhood or womanhood as complete a course of instruction in every department of science, from mathematics to sociology, as can possibly be made general: and his ideas of what is possible in that respect are carried to a length to which few are prepared to follow him. There is something startling, though, when closely looked into, not Utopian or chimerical, in the amount of positive knowledge of the most varied kind which he believes may, by good methods of teaching, be made the common inheritance of all persons with ordinary faculties who are born into the world: not the mere knowledge of results, to which, except for the practical arts, he attaches only secondary value, but knowledge also of the mode in which those results were attained, and the evidence on which they rest, so far as it can be known and understood by those who do not devote their lives to its study.

We have stated thus fully M. Comte's opinion on the most fundamental doctrine of liberalism, because it is the clue to much of his general conception of politics. If his object had only been to exemplify by that doctrine the purely negative character of the principal liberal and revolutionary schools of thought, he need not have gone so far: it would have been enough to say, that the mere liberty to hold and express any creed, cannot itself *be* that creed. Every one is free to believe and publish that two and two make ten, but the important thing is to know that they make four. M. Comte has no difficulty in making out an equally strong case against the other principal tenets of what he calls the revolutionary school; since all that they generally amount to is, that something ought not to be: which cannot possibly be the whole truth, and which M. Comte, in general, will not admit to be even part of it. Take for instance the doctrine which denies to governments any initiative in social progress, restricting them to the function of preserving order, or in other words keeping the peace: an opinion which, so far as grounded on so-called rights of the individual, he justly regards as purely metaphysical; but does not recognise that it is also widely held as an inference from the laws of human nature and human affairs, and therefore, whether true or false, as a Positive doctrine. Believing with M. Comte that there are no absolute truths in the political art, nor indeed in any art whatever, we agree with him that the *laisser faire* doctrine, stated without large qualifications, is both unpractical and unscientific; but it does not follow that those who assert it are not, nineteen times out of twenty, practically nearer the truth than those who deny it. The doctrine of Equality meets no better fate at M. Comte's hands. He regards it as the erection into an absolute dogma of a mere protest against the inequalities which came down from the middle ages, and answer no legitimate end in modern society. He observes, that mankind in a normal state, having to act together, are necessarily, in practice, organized and classed with some reference to their unequal aptitudes, natural or acquired, which demand that some should be under the direction of others: scrupulous regard being at the same time had to the fulfilment towards all, of "the claims rightfully inherent in the dignity of a human being; the aggregate of which, still very insufficiently appreciated, will constitute more and more the principle of universal morality as applied to daily use... a grand moral obligation, which has never been directly denied since the abolition of slavery" (iv. 51). There is not a word to be said against these doctrines: but the practical question is one which M. Comte never even entertains--viz., when, after being properly educated, people are left to find their places for themselves, do they not spontaneously class themselves in a manner much more conformable to their unequal or dissimilar aptitudes, than governments or social institutions are likely to do it for them? The Sovereignty of the People, again,--that metaphysical axiom which in France and the rest of the Continent has so long been the theoretic basis of radical and democratic politics,--he regards as of a purely negative character, signifying the right of the people to rid themselves by insurrection of a social order that has become oppressive; but, when erected into a positive principle of government, which condemns indefinitely all superiors to "an arbitrary dependence upon the multitude of their inferiors," he considers it as a sort of "transportation to peoples of the divine right so much reproached to kings" (iv. 55, 56). On the doctrine

as a metaphysical dogma or an absolute principle, this criticism is just; but there is also a Positive doctrine, without any pretension to being absolute, which claims the direct participation of the governed in their own government, not as a natural right, but as a means to important ends, under the conditions and with the limitations which those ends impose. The general result of M. Comte's criticism on the revolutionary philosophy, is that he deems it not only incapable of aiding the necessary reorganization of society, but a serious impediment thereto, by setting up, on all the great interests of mankind, the mere negation of authority, direction, or organization, as the most perfect state, and the solution of all problems: the extreme point of this aberration being reached by Rousseau and his followers, when they extolled the savage state, as an ideal from which civilization was only a degeneracy, more or less marked and complete.

The state of sociological speculation being such as has been described--divided between a feudal and theological school, now effete, and a democratic and metaphysical one, of no value except for the destruction of the former; the problem, how to render the social science positive, must naturally have presented itself, more or less distinctly, to superior minds. M. Comte examines and criticises, for the most part justly, some of the principal efforts which have been made by individual thinkers for this purpose. But the weak side of his philosophy comes out prominently in his strictures on the only systematic attempt yet made by any body of thinkers, to constitute a science, not indeed of social phenomena generally, but of one great class or division of them. We mean, of course, political economy, which (with a reservation in favour of the speculations of Adam Smith as valuable preparatory studies for science) he deems unscientific, unpositive, and a mere branch of metaphysics, that comprehensive category of condemnation in which he places all attempts at positive science which are not in his opinion directed by a right scientific method. Any one acquainted with the writings of political economists need only read his few pages of animadversions on them (iv. 193 to 205), to learn how extremely superficial M. Comte can sometimes be. He affirms that they have added nothing really new to the original _aperçus_ of Adam Smith; when every one who has read them knows that they have added so much as to have changed the whole aspect of the science, besides rectifying and clearing up in the most essential points the _aperçus_ themselves. He lays an almost puerile stress, for the purpose of disparagement, on the discussions about the meaning of words which are found in the best books on political economy, as if such discussions were not an indispensable accompaniment of the progress of thought, and abundant in the history of every physical science. On the whole question he has but one remark of any value, and that he misapplies; namely, that the study of the conditions of national wealth as a detached subject is unphilosophical, because, all the different aspects of social phaenomena acting and reacting on one another, they cannot be rightly understood apart: which by no means proves that the material and industrial phaenomena of society are not, even by themselves, susceptible of useful generalizations, but only that these generalizations must necessarily be relative to a given form of civilization and a given stage of social advancement. This, we apprehend, is what no political economist would deny. None of them pretend that the laws of wages, profits, values, prices, and the like, set down in their treatises, would be strictly true, or many of them true at all, in the savage state (for example), or in a community composed of masters and slaves. But they do think, with good reason, that whoever understands the political economy of a country with the complicated and manifold civilization of the nations of Europe, can deduce without difficulty the political economy of any other state of society, with the particular circumstances of which he is equally well acquainted.[14] We do not pretend that political economy has never been prosecuted or taught in a contracted spirit. As often as a study is cultivated by narrow minds, they will draw from it narrow conclusions. If a political economist is deficient in general knowledge, he will exaggerate the importance and universality of the limited class of truths which he knows. All kinds of scientific men are liable to this imputation, and M. Comte is never weary of urging it against them; reproaching them with their narrowness of mind, the petty scale of their thoughts, their incapacity for large views, and the stupidity of those they occasionally attempt beyond the bounds of their own subjects. Political economists do not deserve these reproaches more than other classes of positive inquirers, but less than most. The principal error of narrowness with which they are frequently chargeable, is that of regarding, not any economical doctrine, but their present experience of mankind, as of universal validity; mistaking temporary or local phases of human character for human nature itself; having no faith in the wonderful pliability of the human mind; deeming it impossible, in spite of the strongest evidence, that the earth can produce human beings of a different type from that which is familiar to

them in their own age, or even, perhaps, in their own country. The only security against this narrowness is a liberal mental cultivation, and all it proves is that a person is not likely to be a good political economist who is nothing else.

Thus far, we have had to do with M. Comte, as a sociologist, only in his critical capacity. We have now to deal with him as a constructor--the author of a sociological system. The first question is that of the Method proper to the study. His view of this is highly instructive.

The Method proper to the Science of Society must be, in substance, the same as in all other sciences; the interrogation and interpretation of experience, by the twofold process of Induction and Deduction. But its mode of practising these operations has features of peculiarity. In general, Induction furnishes to science the laws of the elementary facts, from which, when known, those of the complex combinations are thought out deductively: specific observation of complex phaenomena yields no general laws, or only empirical ones; its scientific function is to verify the laws obtained by deduction. This mode of philosophizing is not adequate to the exigencies of sociological investigation. In social phaemomena the elementary facts are feelings and actions, and the laws of these are the laws of human nature, social facts being the results of human acts and situations. Since, then, the phaenomena of man in society result from his nature as an individual being, it might be thought that the proper mode of constructing a positive Social Science must be by deducing it from the general laws of human nature, using the facts of history merely for verification. Such, accordingly, has been the conception of social science by many of those who have endeavoured to render it positive, particularly by the school of Bentham. M. Comte considers this as an error. We may, he says, draw from the universal laws of human nature some conclusions (though even these, we think, rather precarious) concerning the very earliest stages of human progress, of which there are either no, or very imperfect, historical records. But as society proceeds in its development, its phaenomena are determined, more and more, not by the simple tendencies of universal human nature, but by the accumulated influence of past generations over the present. The human beings themselves, on the laws of whose nature the facts of history depend, are not abstract or universal but historical human beings, already shaped, and made what they are, by human society. This being the case, no powers of deduction could enable any one, starting from the mere conception of the Being Man, placed in a world such as the earth may have been before the commencement of human agency, to predict and calculate the phaenomena of his development such as they have in fact proved. If the facts of history, empirically considered, had not given rise to any generalizations, a deductive study of history could never have reached higher than more or less plausible conjecture. By good fortune (for the case might easily have been otherwise) the history of our species, looked at as a comprehensive whole, does exhibit a determinate course, a certain order of development: though history alone cannot prove this to be a necessary law, as distinguished from a temporary accident. Here, therefore, begins the office of Biology (or, as we should say, of Psychology) in the social science. The universal laws of human nature are part of the data of sociology, but in using them we must reverse the method of the deductive physical sciences: for while, in these, specific experience commonly serves to verify laws arrived at by deduction, in sociology it is specific experience which suggests the laws, and deduction which verifies them. If a sociological theory, collected from historical evidence, contradicts the established general laws of human nature; if (to use M. Comte's instances) it implies, in the mass of mankind, any very decided natural bent, either in a good or in a bad direction; if it supposes that the reason, in average human beings, predominates over the desires, or the disinterested desires over the personal; we may know that history has been misinterpreted, and that the theory is false. On the other hand, if laws of social phaenomena, empirically generalized from history, can when once suggested be affiliated to the known laws of human nature; if the direction actually taken by the developments and changes of human society, can be seen to be such as the properties of man and of his dwelling-place made antecedently probable, the empirical generalizations are raised into positive laws, and Sociology becomes a science.

Much has been said and written for centuries past, by the practical or empirical school of politicians, in condemnation of theories founded on principles of human nature, without an historical basis; and the theorists, in their turn, have successfully retaliated on the practicalists. But we know not any thinker who, before M. Comte, had penetrated to the philosophy of the matter, and placed the necessity of historical studies as the

foundation of sociological speculation on the true footing. From this time any political thinker who fancies himself able to dispense with a connected view of the great facts of history, as a chain of causes and effects, must be regarded as below the level of the age; while the vulgar mode of using history, by looking in it for parallel cases, as if any cases were parallel, or as if a single instance, or even many instances not compared and analysed, could reveal a law, will be more than ever, and irrevocably, discredited.

The inversion of the ordinary relation between Deduction and Induction is not the only point in which, according to M. Comte, the Method proper to Sociology differs from that of the sciences of inorganic nature. The common order of science proceeds from the details to the whole. The method of Sociology should proceed from the whole to the details. There is no universal principle for the order of study, but that of proceeding from the known to the unknown; finding our way to the facts at whatever point is most open to our observation. In the phaenomena of the social state, the collective phaenomenon is more accessible to us than the parts of which it is composed. This is already, in a great degree, true of the mere animal body. It is essential to the idea of an organism, and it is even more true of the social organism than of the individual. The state of every part of the social whole at any time, is intimately connected with the contemporaneous state of all the others. Religious belief, philosophy, science, the fine arts, the industrial arts, commerce, navigation, government, all are in close mutual dependence on one another, insomuch that when any considerable change takes place in one, we may know that a parallel change in all the others has preceded or will follow it. The progress of society from one general state to another is not an aggregate of partial changes, but the product of a single impulse, acting through all the partial agencies, and can therefore be most easily traced by studying them together. Could it even be detected in them separately, its true nature could not be understood except by examining them in the *ensemble*. In constructing, therefore, a theory of society, all the different aspects of the social organization must be taken into consideration at once.

Our space is not consistent with inquiring into all the limitations of this doctrine. It requires many of which M. Comte's theory takes no account. There is one, in particular, dependent on a scientific artifice familiar to students of science, especially of the applications of mathematics to the study of nature. When an effect depends on several variable conditions, some of which change less, or more slowly, than others, we are often able to determine, either by reasoning or by experiment, what would be the law of variation of the effect if its changes depended only on some of the conditions, the remainder being supposed constant. The law so found will be sufficiently near the truth for all times and places in which the latter set of conditions do not vary greatly, and will be a basis to set out from when it becomes necessary to allow for the variations of those conditions also. Most of the conclusions of social science applicable to practical use are of this description. M. Comte's system makes no room for them. We have seen how he deals with the part of them which are the most scientific in character, the generalizations of political economy.

There is one more point in the general philosophy of sociology requiring notice. Social phaenomena, like all others, present two aspects, the statical, and the dynamical; the phaenomena of equilibrium, and those of motion. The statical aspect is that of the laws of social existence, considered abstractedly from progress, and confined to what is common to the progressive and the stationary state. The dynamical aspect is that of social progress. The statics of society is the study of the conditions of existence and permanence of the social state. The dynamics studies the laws of its evolution. The first is the theory of the _consensus,_ or interdependence of social phaenomena. The second is the theory of their filiation.

The first division M. Comte, in his great work, treats in a much more summary manner than the second; and it forms, to our thinking, the weakest part of the treatise. He can hardly have seemed even to himself to have originated, in the statics of society, anything new,[15] unless his revival of the Catholic idea of a Spiritual Power may be so considered. The remainder, with the exception of detached thoughts, in which even his feeblest productions are always rich, is trite, while in our judgment far from being always true.

He begins by a statement of the general properties of human nature which make social existence possible. Man has a spontaneous propensity to the society of his fellow-beings, and seeks it instinctively, for its own

sake, and not out of regard to the advantages it procures for him, which, in many conditions of humanity, must appear to him very problematical. Man has also a certain, though moderate, amount of natural benevolence. On the other hand, these social propensities are by nature weaker than his selfish ones; and the social state, being mainly kept in existence through the former, involves an habitual antagonism between the two. Further, our wants of all kinds, from the purely organic upwards, can only be satisfied by means of labour, nor does bodily labour suffice, without the guidance of intelligence. But labour, especially when prolonged and monotonous, is naturally hateful, and mental labour the most irksome of all; and hence a second antagonism, which must exist in all societies whatever. The character of the society is principally determined by the degree in which the better incentive, in each of these cases, makes head against the worse. In both the points, human nature is capable of great amelioration. The social instincts may approximate much nearer to the strength of the personal ones, though never entirely coming up to it; the aversion to labour in general, and to intellectual labour in particular, may be much weakened, and the predominance of the inclinations over the reason greatly diminished, though never completely destroyed. The spirit of improvement results from the increasing strength of the social instincts, combined with the growth of an intellectual activity, which guiding the personal propensities, inspires each individual with a deliberate desire to improve his condition. The personal instincts left to their own guidance, and the indolence and apathy natural to mankind, are the sources which mainly feed the spirit of Conservation. The struggle between the two spirits is an universal incident of the social state.

The next of the universal elements in human society is family life; which M. Comte regards as originally the sole, and always the principal, source of the social feelings, and the only school open to mankind in general, in which unselfishness can be learnt, and the feelings and conduct demanded by social relations be made habitual. M. Comte takes this opportunity of declaring his opinions on the proper constitution of the family, and in particular of the marriage institution. They are of the most orthodox and conservative sort. M. Comte adheres not only to the popular Christian, but to the Catholic view of marriage in its utmost strictness, and rebukes Protestant nations for having tampered with the indissolubility of the engagement, by permitting divorce. He admits that the marriage institution has been, in various respects, beneficially modified with the advance of society, and that we may not yet have reached the last of these modifications; but strenuously maintains that such changes cannot possibly affect what he regards as the essential principles of the institution--the irrevocability of the engagement, and the complete subordination of the wife to the husband, and of women generally to men; which are precisely the great vulnerable points of the existing constitution of society on this important subject. It is unpleasant to have to say it of a philosopher, but the incidents of his life which have been made public by his biographers afford an explanation of one of these two opinions: he had quarrelled with his wife.[16] At a later period, under the influence of circumstances equally personal, his opinions and feelings respecting women were very much modified, without becoming more rational: in his final scheme of society, instead of being treated as grown children, they were exalted into goddesses: honours, privileges, and immunities, were lavished on them, only not simple justice. On the other question, the irrevocability of marriage, M. Comte must receive credit for impartiality, since the opposite doctrine would have better suited his personal convenience: but we can give him no other credit, for his argument is not only futile but refutes itself. He says that with liberty of divorce, life would be spent in a constant succession of experiments and failures; and in the same breath congratulates himself on the fact, that modern manners and sentiments have in the main prevented the baneful effects which the toleration of divorce in Protestant countries might have been expected to produce. He did not perceive that if modern habits and feelings have successfully resisted what he deems the tendency of a less rigorous marriage law, it must be because modern habits and feelings are inconsistent with the perpetual series of new trials which he dreaded. If there are tendencies in human nature which seek change and variety, there are others which demand fixity, in matters which touch the daily sources of happiness; and one who had studied history as much as M. Comte, ought to have known that ever since the nomad mode of life was exchanged for the agricultural, the latter tendencies have been always gaining ground on the former. All experience testifies that regularity in domestic relations is almost in direct proportion to industrial civilization. Idle life, and military life with its long intervals of idleness, are the conditions to which, either sexual profligacy, or prolonged vagaries of imagination on that subject, are congenial. Busy men have no time for them, and have too much other occupation for their

thoughts: they require that home should be a place of rest, not of incessantly renewed excitement and disturbance. In the condition, therefore, into which modern society has passed, there is no probability that marriages would often be contracted without a sincere desire on both sides that they should be permanent. That this has been the case hitherto in countries where divorce was permitted, we have on M. Comte's own showing: and everything leads us to believe that the power, if granted elsewhere, would in general be used only for its legitimate purpose--for enabling those who, by a blameless or excusable mistake, have lost their first throw for domestic happiness, to free themselves (with due regard for all interests concerned) from the burthensome yoke, and try, under more favourable auspices, another chance. Any further discussion of these great social questions would evidently be incompatible with the nature and limits of the present paper.

Lastly, a phaenomenon universal in all societies, and constantly assuming a wider extension as they advance in their progress, is the co-operation of mankind one with another, by the division of employments and interchange of commodities and services; a communion which extends to nations as well as individuals. The economic importance of this spontaneous organization of mankind as joint workers with and for one another, has often been illustrated. Its moral effects, in connecting them by their interests, and as a more remote consequence, by their sympathies, are equally salutary. But there are some things to be said on the other side. The increasing specialisation of all employments; the division of mankind into innumerable small fractions, each engrossed by an extremely minute fragment of the business of society, is not without inconveniences, as well moral as intellectual, which, if they could not be remedied, would be a serious abatement from the benefits of advanced civilization. The interests of the whole--the bearings of things on the ends of the social union--are less and less present to the minds of men who have so contracted a sphere of activity. The insignificant detail which forms their whole occupation--the infinitely minute wheel they help to turn in the machinery of society--does not arouse or gratify any feeling of public spirit, or unity with their fellow-men. Their work is a mere tribute to physical necessity, not the glad performance of a social office. This lowering effect of the extreme division of labour tells most of all on those who are set up as the lights and teachers of the rest. A man's mind is as fatally narrowed, and his feelings towards the great ends of humanity as miserably stunted, by giving all his thoughts to the classification of a few insects or the resolution of a few equations, as to sharpening the points or putting on the heads of pins. The "dispersive speciality" of the present race of scientific men, who, unlike their predecessors, have a positive aversion to enlarged views, and seldom either know or care for any of the interests of mankind beyond the narrow limits of their pursuit, is dwelt on by M. Comte as one of the great and growing evils of the time, and the one which most retards moral and intellectual regeneration. To contend against it is one of the main purposes towards which he thinks the forces of society should be directed. The obvious remedy is a large and liberal general education, preparatory to all special pursuits: and this is M. Comte's opinion: but the education of youth is not in his estimation enough: he requires an agency set apart for obtruding upon all classes of persons through the whole of life, the paramount claims of the general interest, and the comprehensive ideas that demonstrate the mode in which human actions promote or impair it. In other words, he demands a moral and intellectual authority, charged with the duty of guiding men's opinions and enlightening and warning their consciences; a Spiritual Power, whose judgments on all matters of high moment should deserve, and receive, the same universal respect and deference which is paid to the united judgment of astronomers in matters astronomical. The very idea of such an authority implies that an unanimity has been attained, at least in essentials, among moral and political thinkers, corresponding or approaching to that which already exists in the other sciences. There cannot be this unanimity, until the true methods of positive science have been applied to all subjects, as completely as they have been applied to the study of physical science: to this, however, there is no real obstacle; and when once it is accomplished, the same degree of accordance will naturally follow. The undisputed authority which astronomers possess in astronomy, will be possessed on the great social questions by Positive Philosophers; to whom will belong the spiritual government of society, subject to two conditions: that they be entirely independent, within their own sphere, of the temporal government, and that they be peremptorily excluded from all share in it, receiving instead the entire conduct of education.

This is the leading feature in M. Comte's conception of a regenerated society; and however much this ideal differs from that which is implied more or less confusedly in the negative philosophy of the last three

centuries, we hold the amount of truth in the two to be about the same. M. Comte has got hold of half the truth, and the so-called liberal or revolutionary school possesses the other half; each sees what the other does not see, and seeing it exclusively, draws consequences from it which to the other appear mischievously absurd. It is, without doubt, the necessary condition of mankind to receive most of their opinions on the authority of those who have specially studied the matters to which they relate. The wisest can act on no other rule, on subjects with which they are not themselves thoroughly conversant; and the mass of mankind have always done the like on all the great subjects of thought and conduct, acting with implicit confidence on opinions of which they did not know, and were often incapable of understanding, the grounds, but on which as long as their natural guides were unanimous they fully relied, growing uncertain and sceptical only when these became divided, and teachers who as far as they could judge were equally competent, professed contradictory opinions. Any doctrines which come recommended by the nearly universal verdict of instructed minds will no doubt continue to be, as they have hitherto been, accepted without misgiving by the rest. The difference is, that with the wide diffusion of scientific education among the whole people, demanded by M. Comte, their faith, however implicit, would not be that of ignorance: it would not be the blind submission of dunces to men of knowledge, but the intelligent deference of those who know much, to those who know still more. It is those who have some knowledge of astronomy, not those who have none at all, who best appreciate how prodigiously more Lagrange or Laplace knew than themselves. This is what can be said in favour of M. Comte. On the contrary side it is to be said, that in order that this salutary ascendancy over opinion should be exercised by the most eminent thinkers, it is not necessary that they should be associated and organized. The ascendancy will come of itself when the unanimity is attained, without which it is neither desirable nor possible. It is because astronomers agree in their teaching that astronomy is trusted, and not because there is an Academy of Sciences or a Royal Society issuing decrees or passing resolutions. A constituted moral authority can only be required when the object is not merely to promulgate and diffuse principles of conduct, but to direct the detail of their application; to declare and inculcate, not duties, but each person's duty, as was attempted by the spiritual authority of the middle ages. From this extreme application of his principle M. Comte does not shrink. A function of this sort, no doubt, may often be very usefully discharged by individual members of the speculative class; but if entrusted to any organized body, would involve nothing less than a spiritual despotism. This however is what M. Comte really contemplated, though it would practically nullify that peremptory separation of the spiritual from the temporal power, which he justly deemed essential to a wholesome state of society. Those whom an irresistible public opinion invested with the right to dictate or control the acts of rulers, though without the means of backing their advice by force, would have all the real power of the temporal authorities, without their labours or their responsibilities. M. Comte would probably have answered that the temporal rulers, having the whole legal power in their hands, would certainly not pay to the spiritual authority more than a very limited obedience: which amounts to saying that the ideal form of society which he sets up, is only fit to be an ideal because it cannot possibly be realized.

That education should be practically directed by the philosophic class, when there is a philosophic class who have made good their claim to the place in opinion hitherto filled by the clergy, would be natural and indispensable. But that all education should be in the hands of a centralized authority, whether composed of clergy or of philosophers, and be consequently all framed on the same model, and directed to the perpetuation of the same type, is a state of things which instead of becoming more acceptable, will assuredly be more repugnant to mankind, with every step of their progress in the unfettered exercise of their highest faculties. We shall see, in the Second Part, the evils with which the conception of the new Spiritual Power is pregnant, coming out into full bloom in the more complete development which M. Comte gave to the idea in his later years.

After this unsatisfactory attempt to trace the outline of Social Statics, M. Comte passes to a topic on which he is much more at home--the subject of his most eminent speculations; Social Dynamics, or the laws of the evolution of human society.

Two questions meet us at the outset: Is there a natural evolution in human affairs? and is that evolution an improvement? M. Comte resolves them both in the affirmative by the same answer. The natural progress of

society consists in the growth of our human attributes, comparatively to our animal and our purely organic ones: the progress of our humanity towards an ascendancy over our animality, ever more nearly approached though incapable of being completely realized. This is the character and tendency of human development, or of what is called civilization; and the obligation of seconding this movement--of working in the direction of it--is the nearest approach which M. Comte makes in this treatise to a general principle or standard of morality.

But as our more eminent, and peculiarly human, faculties are of various orders, moral, intellectual, and aesthetic, the question presents itself, is there any one of these whose development is the predominant agency in the evolution of our species? According to M. Comte, the main agent in the progress of mankind is their intellectual development.

Not because the intellectual is the most powerful part of our nature, for, limited to its inherent strength, it is one of the weakest: but because it is the guiding part, and acts not with its own strength alone, but with the united force of all parts of our nature which it can draw after it. In a social state the feelings and propensities cannot act with their full power, in a determinate direction, unless the speculative intellect places itself at their head. The passions are, in the individual man, a more energetic power than a mere intellectual conviction; but the passions tend to divide, not to unite, mankind: it is only by a common belief that passions are brought to work together, and become a collective force instead of forces neutralizing one another. Our intelligence is first awakened by the stimulus of our animal wants and of our stronger and coarser desires; and these for a long time almost exclusively determine the direction in which our intelligence shall work: but once roused to activity, it assumes more and more the management of the operations of which stronger impulses are the prompters, and constrains them to follow its lead, not by its own strength, but because in the play of antagonistic forces, the path it points out is (in scientific phraseology) the direction of least resistance. Personal interests and feelings, in the social state, can only obtain the maximum of satisfaction by means of co-operation, and the necessary condition of co-operation is a common belief. All human society, consequently, is grounded on a system of fundamental opinions, which only the speculative faculty can provide, and which when provided, directs our other impulses in their mode of seeking their gratification. And hence the history of opinions, and of the speculative faculty, has always been the leading element in the history of mankind.

This doctrine has been combated by Mr Herbert Spencer, in the pamphlet already referred to; and we will quote, in his own words, the theory he propounds in opposition to it:--

/# "Ideas do not govern and overthrow the world; the world is governed or overthrown by feelings, to which ideas serve only as guides. The social mechanism does not rest finally upon opinions, but almost wholly upon character. Not intellectual anarchy, but moral antagonism, is the cause of political crises. All social phaenomena are produced by the totality of human emotions and beliefs, of which the emotions are mainly predetermined, while the beliefs are mainly post-determined. Men's desires are chiefly inherited; but their beliefs are chiefly acquired, and depend on surrounding conditions; and the most important surrounding conditions depend on the social state which the prevalent desires have produced. The social state at any time existing, is the resultant of all the ambitions, self-interests, fears, reverences, indignations, sympathies, &c., of ancestral citizens and existing citizens. The ideas current in this social state must, on the average, lie congruous with the feelings of citizens, and therefore, on the average, with the social state these feelings have produced. Ideas wholly foreign to this social state cannot be evolved, and if introduced from without, cannot get accepted--or, if accepted, die out when the temporary phase of feeling which caused their acceptance ends. Hence, though advanced ideas, when once established, act upon society and aid its further advance, yet the establishment of such ideas depends on the fitness of society for receiving them. Practically, the popular character and the social state determine what ideas shall be current; instead of the current ideas determining the social state and the character. The modification of men's moral natures, caused by the continuous discipline of social life, which adapts them more and more to social relations, is therefore the chief proximate cause of social progress."[17] #/

A great part of these statements would have been acknowledged as true by M. Comte, and belong as much to his theory as to Mr Spencer's. The re-action of all other mental and social elements upon the intellectual not only is fully recognized by him, but his philosophy of history makes great use of it, pointing out that the principal intellectual changes could not have taken place unless changes in other elements of society had preceded; but also showing that these were themselves consequences of prior intellectual changes. It will not be found, on a fair examination of what M. Comte has written, that he has overlooked any of the truth that there is in Mr Spencer's theory. He would not indeed have said (what Mr Spencer apparently wishes us to say) that the effects which can be historically traced, for example to religion, were not produced by the belief in God, but by reverence and fear of him. He would have said that the reverence and fear presuppose the belief: that a God must be believed in before he can be feared or reverenced. The whole influence of the belief in a God upon society and civilization, depends on the powerful human sentiments which are ready to attach themselves to the belief; and yet the sentiments are only a social force at all, through the definite direction given to them by that or some other intellectual conviction; nor did the sentiments spontaneously throw up the belief in a God, since in themselves they were equally capable of gathering round some other object. Though it is true that men's passions and interests often dictate their opinions, or rather decide their choice among the two or three forms of opinion, which the existing condition of human intelligence renders possible, this disturbing cause is confined to morals, politics, and religion; and it is the intellectual movement in other regions than these, which is at the root of all the great changes in human affairs. It was not human emotions and passions which discovered the motion of the earth, or detected the evidence of its antiquity; which exploded Scholasticism, and inaugurated the exploration of nature; which invented printing, paper, and the mariner's compass. Yet the Reformation, the English and French revolutions, and still greater moral and social changes yet to come, are direct consequences of these and similar discoveries. Even alchemy and astrology were not believed because people thirsted for gold and were anxious to pry into the future, for these desires are as strong now as they were then: but because alchemy and astrology were conceptions natural to a particular stage in the growth of human knowledge, and consequently determined during that stage the particular means whereby the passions which always exist, sought their gratification. To say that men's intellectual beliefs do not determine their conduct, is like saying that the ship is moved by the steam and not by the steersman. The steam indeed is the motive power; the steersman, left to himself, could not advance the vessel a single inch; yet it is the steersman's will and the steersman's knowledge which decide in what direction it shall move and whither it shall go.

Examining next what is the natural order of intellectual progress among mankind, M. Comte observes, that as their general mode of conceiving the universe must give its character to all their conceptions of detail, the determining fact in their intellectual history must be the natural succession of theories of the universe; which, it has been seen, consists of three stages, the theological, the metaphysical, and the positive. The passage of mankind through these stages, including the successive modifications of the theological conception by the rising influence of the other two, is, to M. Comte's mind, the most decisive fact in the evolution of humanity. Simultaneously, however, there has been going on throughout history a parallel movement in the purely temporal department of things, consisting of the gradual decline of the military mode of life (originally the chief occupation of all freemen) and its replacement by the industrial. M. Comte maintains that there is a necessary connexion and interdependence between this historical sequence and the other: and he easily shows that the progress of industry and that of positive science are correlative; man's power to modify the facts of nature evidently depending on the knowledge he has acquired of their laws. We do not think him equally successful in showing a natural connexion between the theological mode of thought and the military system of society: but since they both belong to the same age of the world--since each is, in itself, natural and inevitable, and they are together modified and together undermined by the same cause, the progress of science and industry, M. Comte is justified in considering them as linked together, and the movement by which mankind emerge from them as a single evolution.

These propositions having been laid down as the first principles of social dynamics, M. Comte proceeds to verify and apply them by a connected view of universal history. This survey nearly fills two large volumes, above a third of the work, in all of which there is scarcely a sentence that does not add an idea. We regard it as

by far his greatest achievement, except his review of the sciences, and in some respects more striking even than that. We wish it were practicable in the compass of an essay like the present, to give even a faint conception of the extraordinary merits of this historical analysis. It must be read to be appreciated. Whoever disbelieves that the philosophy of history can be made a science, should suspend his judgment until he has read these volumes of M. Comte. We do not affirm that they would certainly change his opinion; but we would strongly advise him to give them a chance.

We shall not attempt the vain task of abridgment, a few words are all we can give to the subject. M. Comte confines himself to the main stream of human progress, looking only at the races and nations that led the van, and regarding as the successors of a people not their actual descendants, but those who took up the thread of progress after them. His object is to characterize truly, though generally, the successive states of society through which the advanced guard of our species has passed, and the filiation of these states on one another--how each grew out of the preceding and was the parent of the following state. A more detailed explanation, taking into account minute differences and more special and local phaenomena, M. Comte does not aim at, though he does not avoid it when it falls in his path. Here, as in all his other speculations, we meet occasional misjudgments, and his historical correctness in minor matters is now and then at fault; but we may well wonder that it is not oftener so, considering the vastness of the field, and a passage in one of his prefaces in which he says of himself that he *rapidly* amassed the materials for his great enterprise (vi. 34). This expression in his mouth does not imply what it would in that of the majority of men, regard being had to his rare capacity of prolonged and concentrated mental labour: and it is wonderful that he so seldom gives cause to wish that his collection of materials had been less "rapid." But (as he himself remarks) in an inquiry of this sort the vulgarest facts are the most important. A movement common to all mankind--to all of them at least who do move--must depend on causes affecting them all; and these, from the scale on which they operate, cannot require abstruse research to bring them to light: they are not only seen, but best seen, in the most obvious, most universal, and most undisputed phaenomena. Accordingly M. Comte lays no claim to new views respecting the mere facts of history; he takes them as he finds them, builds almost exclusively on those concerning which there is no dispute, and only tries what positive results can be obtained by combining them. Among the vast mass of historical observations which he has grouped and co-ordinated, if we have found any errors they are in things which do not affect his main conclusions. The chain of causation by which he connects the spiritual and temporal life of each era with one another and with the entire series, will be found, we think, in all essentials, irrefragable. When local or temporary disturbing causes have to be taken into the account as modifying the general movement, criticism has more to say. But this will only become important when the attempt is made to write the history or delineate the character of some given society on M. Comte's principles.

Such doubtful statements, or misappreciations of states of society, as we have remarked, are confined to cases which stand more or less apart from the principal line of development of the progressive societies. For instance, he makes greatly too much of what, with many other Continental thinkers, he calls the Theocratic state. He regards this as a natural, and at one time almost an universal, stage of social progress, though admitting that it either never existed or speedily ceased in the two ancient nations to which mankind are chiefly indebted for being permanently progressive. We hold it doubtful if there ever existed what M. Comte means by a theocracy. There was indeed no lack of societies in which, the civil and penal law being supposed to have been divinely revealed, the priests were its authorized interpreters. But this is the case even in Mussulman countries, the extreme opposite of theocracy. By a theocracy we understand to be meant, and we understand M. Comte to mean, a society founded on caste, and in which the speculative, necessarily identical with the priestly caste, has the temporal government in its hands or under its control. We believe that no such state of things ever existed in the societies commonly cited as theocratic. There is no reason to think that in any of them, the king, or chief of the government, was ever, unless by occasional usurpation, a member of the priestly caste.[18] It was not so in Israel, even in the time of the Judges; Jephtha, for example, was a Gileadite, of the tribe of Manasseh, and a military captain, as all governors in such an age and country needed to be. Priestly rulers only present themselves in two anomalous cases, of which next to nothing is known: the Mikados of Japan and the Grand Lamas of Thibet: in neither of which instances was the general constitution

of society one of caste, and in the latter of them the priestly sovereignty is as nominal as it has become in the former. India is the typical specimen of the institution of caste--the only case in which we are certain that it ever really existed, for its existence anywhere else is a matter of more or less probable inference in the remote past. But in India, where the importance of the sacerdotal order was greater than in any other recorded state of society, the king not only was not a priest, but, consistently with the religious law, could not be one: he belonged to a different caste. The Brahmins were invested with an exalted character of sanctity, and an enormous amount of civil privileges; the king was enjoined to have a council of Brahmin advisers; but practically he took their advice or disregarded it exactly as he pleased. As is observed by the historian who first threw the light of reason on Hindoo society,[19] the king, though in dignity, to judge by the written code, he seemed vastly inferior to the Brahmins, had always the full power of a despotic monarch: the reason being that he had the command of the army, and the control of the public revenue. There is no case known to authentic history in which either of these belonged to the sacerdotal caste. Even in the cases most favourable to them, the priesthood had no voice in temporal affairs, except the "consultative" voice which M. Comte's theory allows to every spiritual power. His collection of materials must have been unusually "rapid" in this instance, for he regards almost all the societies of antiquity, except the Greek and Roman, as theocratic, even Gaul under the Druids, and Persia under Darius; admitting, however, that in these two countries, when they emerge into the light of history, the theocracy had already been much broken down by military usurpation. By what evidence he could have proved that it ever existed, we confess ourselves unable to divine.

The only other imperfection worth noticing here, which we find in M. Comte's view of history, is that he has a very insufficient understanding of the peculiar phaenomena of English development; though he recognizes, and on the whole correctly estimates, its exceptional character in relation to the general European movement. His failure consists chiefly in want of appreciation of Protestantism; which, like almost all thinkers, even unbelievers, who have lived and thought exclusively in a Catholic atmosphere, he sees and knows only on its negative side, regarding the Reformation as a mere destructive movement, stopped short in too early a stage. He does not seem to be aware that Protestantism has any positive influences, other than the general ones of Christianity; and misses one of the most important facts connected with it, its remarkable efficacy, as contrasted with Catholicism, in cultivating the intelligence and conscience of the individual believer. Protestantism, when not merely professed but actually taken into the mind, makes a demand on the intelligence; the mind is expected to be active, not passive, in the reception of it. The feeling of a direct responsibility of the individual immediately to God, is almost wholly a creation of Protestantism. Even when Protestants were nearly as persecuting as Catholics (quite as much so they never were); even when they held as firmly as Catholics that salvation depended on having the true belief, they still maintained that the belief was not to be accepted from a priest, but to be sought and found by the believer, at his eternal peril if he failed; and that no one could answer to God for him, but that he had to answer for himself. The avoidance of fatal error thus became in a great measure a question of culture; and there was the strongest inducement to every believer, however humble, to seek culture and to profit by it. In those Protestant countries, accordingly, whose Churches were not, as the Church of England always was, principally political institutions--in Scotland, for instance, and the New England States--an amount of education was carried down to the poorest of the people, of which there is no other example; every peasant expounded the Bible to his family (many to their neighbours), and had a mind practised in meditation and discussion on all the points of his religious creed. The food may not have been the most nourishing, but we cannot be blind to the sharpening and strengthening exercise which such great topics gave to the understanding--the discipline in abstraction and reasoning which such mental occupation brought down to the humblest layman, and one of the consequences of which was the privilege long enjoyed by Scotland of supplying the greater part of Europe with professors for its universities, and educated and skilled workmen for its practical arts.

This, however, notwithstanding its importance, is, in a comprehensive view of universal history, only a matter of detail. We find no fundamental errors in M. Comte's general conception of history. He is singularly exempt from most of the twists and exaggerations which we are used to find in almost all thinkers who meddle with speculations of this character. Scarcely any of them is so free (for example) from the opposite errors of ascribing too much or too little influence to accident, and to the qualities of individuals. The vulgar mistake of

supposing that the course of history has no tendencies of its own, and that great events usually proceed from small causes, or that kings, or conquerors, or the founders of philosophies and religions, can do with society what they please, no one has more completely avoided or more tellingly exposed. But he is equally free from the error of those who ascribe all to general causes, and imagine that neither casual circumstances, nor governments by their acts, nor individuals of genius by their thoughts, materially accelerate or retard human progress. This is the mistake which pervades the instructive writings of the thinker who in England and in our own times bore the nearest, though a very remote, resemblance to M. Comte--the lamented Mr Buckle; who, had he not been unhappily cut off in an early stage of his labours, and before the complete maturity of his powers, would probably have thrown off an error, the more to be regretted as it gives a colour to the prejudice which regards the doctrine of the invariability of natural laws as identical with fatalism. Mr Buckle also fell into another mistake which M. Comte avoided, that of regarding the intellectual as the only progressive element in man, and the moral as too much the same at all times to affect even the annual average of crime. M. Comte shows, on the contrary, a most acute sense of the causes which elevate or lower the general level of moral excellence; and deems intellectual progress in no other way so beneficial as by creating a standard to guide the moral sentiments of mankind, and a mode of bringing those sentiments effectively to bear on conduct.

M. Comte is equally free from the error of considering any practical rule or doctrine that can be laid down in politics as universal and absolute. All political truth he deems strictly relative, implying as its correlative a given state or situation of society. This conviction is now common to him with all thinkers who are on a level with the age, and comes so naturally to any intelligent reader of history, that the only wonder is how men could have been prevented from reaching it sooner. It marks one of the principal differences between the political philosophy of the present time and that of the past; but M. Comte adopted it when the opposite mode of thinking was still general, and there are few thinkers to whom the principle owes more in the way of comment and illustration.

Again, while he sets forth the historical succession of systems of belief and forms of political society, and places in the strongest light those imperfections in each which make it impossible that any of them should be final, this does not make him for a moment unjust to the men or the opinions of the past. He accords with generous recognition the gratitude due to all who, with whatever imperfections of doctrine or even of conduct, contributed materially to the work of human improvement. In all past modes of thought and forms of society he acknowledged a useful, in many a necessary, office, in carrying mankind through one stage of improvement into a higher. The theological spirit in its successive forms, the metaphysical in its principal varieties, are honoured by him for the services they rendered in bringing mankind out of pristine savagery into a state in which more advanced modes of belief became possible. His list of heroes and benefactors of mankind includes, not only every important name in the scientific movement, from Thales of Miletus to Fourier the mathematician and Blainville the biologist, and in the aesthetic from Homer to Manzoni, but the most illustrious names in the annals of the various religions and philosophies, and the really great politicians in all states of society.[20] Above all, he has the most profound admiration for the services rendered by Christianity, and by the Church of the middle ages. His estimate of the Catholic period is such as the majority of Englishmen (from whom we take the liberty to differ) would deem exaggerated, if not absurd. The great men of Christianity, from St Paul to St Francis of Assisi, receive his warmest homage: nor does he forget the greatness even of those who lived and thought in the centuries in which the Catholic Church, having stopt short while the world had gone on, had become a hindrance to progress instead of a promoter of it; such men as Fénélon and St Vincent de Paul, Bossuet and Joseph de Maistre. A more comprehensive, and, in the primitive sense of the term, more catholic, sympathy and reverence towards real worth, and every kind of service to humanity, we have not met with in any thinker. Men who would have torn each other in pieces, who even tried to do so, if each usefully served in his own way the interests of mankind, are all hallowed to him.

Neither is his a cramped and contracted notion of human excellence, which cares only for certain forms of development. He not only personally appreciates, but rates high in moral value, the creations of poets and artists in all departments, deeming them, by their mixed appeal to the sentiments and the understanding,

admirably fitted to educate the feelings of abstract thinkers, and enlarge the intellectual horizon of people of the world.[21] He regards the law of progress as applicable, in spite of appearances, to poetry and art as much as to science and politics. The common impression to the contrary he ascribes solely to the fact, that the perfection of aesthetic creation requires as its condition a consentaneousness in the feelings of mankind, which depends for its existence on a fixed and settled state of opinions: while the last five centuries have been a period not of settling, but of unsettling and decomposing, the most general beliefs and sentiments of mankind. The numerous monuments of poetic and artistic genius which the modern mind has produced even under this great disadvantage, are (he maintains) sufficient proof what great productions it will be capable of, when one harmonious vein of sentiment shall once more thrill through the whole of society, as in the days of Homer, of Aeschylus, of Phidias, and even of Dante.

After so profound and comprehensive a view of the progress of human society in the past, of which the future can only be a prolongation, it is natural to ask, to what use does he put this survey as a basis of practical recommendations? Such recommendations he certainly makes, though, in the present Treatise, they are of a much less definite character than in his later writings. But we miss a necessary link; there is a break in the otherwise close concatenation of his speculations. We fail to see any scientific connexion between his theoretical explanation of the past progress of society, and his proposals for future improvement. The proposals are not, as we might expect, recommended as that towards which human society has been tending and working through the whole of history. It is thus that thinkers have usually proceeded, who formed theories for the future, grounded on historical analysis of the past. Tocqueville, for example, and others, finding, as they thought, through all history, a steady progress in the direction of social and political equality, argued that to smooth this transition, and make the best of what is certainly coming, is the proper employment of political foresight. We do not find M. Comte supporting his recommendations by a similar line of argument. They rest as completely, each on its separate reasons of supposed utility, as with philosophers who, like Bentham, theorize on politics without any historical basis at all. The only bridge of connexion which leads from his historical speculations to his practical conclusions, is the inference, that since the old powers of society, both in the region of thought and of action, are declining and destined to disappear, leaving only the two rising powers, positive thinkers on the one hand, leaders of industry on the other, the future necessarily belongs to these: spiritual power to the former, temporal to the latter. As a specimen of historical forecast this is very deficient; for are there not the masses as well as the leaders of industry? and is not theirs also a growing power? Be this as it may, M. Comte's conceptions of the mode in which these growing powers should be organized and used, are grounded on anything rather than on history. And we cannot but remark a singular anomaly in a thinker of M. Comte's calibre. After the ample evidence he has brought forward of the slow growth of the sciences, all of which except the mathematico-astronomical couple are still, as he justly thinks, in a very early stage, it yet appears as if, to his mind, the mere institution of a positive science of sociology were tantamount to its completion; as if all the diversities of opinion on the subject, which set mankind at variance, were solely owing to its having been studied in the theological or the metaphysical manner, and as if when the positive method which has raised up real sciences on other subjects of knowledge, is similarly employed on this, divergence would at once cease, and the entire body of positive social inquirers would exhibit as much agreement in their doctrines as those who cultivate any of the sciences of inorganic life. Happy would be the prospects of mankind if this were so. A time such as M. Comte reckoned upon may come; unless something stops the progress of human improvement, it is sure to come: but after an unknown duration of hard thought and violent controversy. The period of decomposition, which has lasted, on his own computation, from the beginning of the fourteenth century to the present, is not yet terminated: the shell of the old edifice will remain standing until there is another ready to replace it; and the new synthesis is barely begun, nor is even the preparatory analysis completely finished. On other occasions M. Comte is very well aware that the Method of a science is not the science itself, and that when the difficulty of discovering the right processes has been overcome, there remains a still greater difficulty, that of applying them. This, which is true of all sciences, is truest of all in Sociology. The facts being more complicated, and depending on a greater concurrence of forces, than in any other science, the difficulty of treating them deductively is proportionally increased, while the wide difference between any one case and every other in some of the circumstances which affect the result, makes the pretence of direct induction usually no better than

empiricism. It is therefore, out of all proportion, more uncertain than in any other science, whether two inquirers equally competent and equally disinterested will take the same view of the evidence, or arrive at the same conclusion. When to this intrinsic difficulty is added the infinitely greater extent to which personal or class interests and predilections interfere with impartial judgment, the hope of such accordance of opinion among sociological inquirers as would obtain, in mere deference to their authority, the universal assent which M. Comte's scheme of society requires, must be adjourned to an indefinite distance.

M. Comte's own theory is an apt illustration of these difficulties, since, though prepared for these speculations as no one had ever been prepared before, his views of social regeneration even in the rudimentary form in which they appear above-ground in this treatise (not to speak of the singular system into which he afterwards enlarged them) are such as perhaps no other person of equal knowledge and capacity would agree in. Were those views as true as they are questionable, they could not take effect until the unanimity among positive thinkers, to which he looked forward, shall have been attained; since the mainspring of his system is a Spiritual Power composed of positive philosophers, which only the previous attainment of the unanimity in question could call into existence. A few words will sufficiently express the outline of his scheme. A corporation of philosophers, receiving a modest support from the state, surrounded by reverence, but peremptorily excluded not only from all political power or employment, but from all riches, and all occupations except their own, are to have the entire direction of education: together with, not only the right and duty of advising and reproving all persons respecting both their public and their private life, but also a control (whether authoritative or only moral is not defined) over the speculative class itself, to prevent them from wasting time and ingenuity on inquiries and speculations of no value to mankind (among which he includes many now in high estimation), and compel them to employ all their powers on the investigations which may be judged, at the time, to be the most urgently important to the general welfare. The temporal government which is to coexist with this spiritual authority, consists of an aristocracy of capitalists, whose dignity and authority are to be in the ratio of the degree of generality of their conceptions and operations--bankers at the summit, merchants next, then manufacturers, and agriculturists at the bottom of the scale. No representative system, or other popular organization, by way of counterpoise to this governing power, is ever contemplated. The checks relied upon for preventing its abuse, are the counsels and remonstrances of the Spiritual Power, and unlimited liberty of discussion and comment by all classes of inferiors. Of the mode in which either set of authorities should fulfil the office assigned to it, little is said in this treatise: but the general idea is, while regulating as little as possible by law, to make the pressure of opinion, directed by the Spiritual Power, so heavy on every individual, from the humblest to the most powerful, as to render legal obligation, in as many cases as possible, needless. Liberty and spontaneity on the part of individuals form no part of the scheme. M. Comte looks on them with as great jealousy as any scholastic pedagogue, or ecclesiastical director of consciences. Every particular of conduct, public or private, is to be open to the public eye, and to be kept, by the power of opinion, in the course which the Spiritual corporation shall judge to be the most right.

This is not a sufficiently tempting picture to have much chance of making converts rapidly, and the objections to the scheme are too obvious to need stating. Indeed, it is only thoughtful persons to whom it will be credible, that speculations leading to this result can deserve the attention necessary for understanding them. We propose in the next Essay to examine them as part of the elaborate and coherent system of doctrine, which M. Comte afterwards put together for the reconstruction of society. Meanwhile the reader will gather, from what has been said, that M. Comte has not, in our opinion, created Sociology. Except his analysis of history, to which there is much to be added, but which we do not think likely to be ever, in its general features, superseded, he has done nothing in Sociology which does not require to be done over again, and better. Nevertheless, he has greatly advanced the study. Besides the great stores of thought, of various and often of eminent merit, with which he has enriched the subject, his conception of its method is so much truer and more profound than that of any one who preceded him, as to constitute an era in its cultivation. If it cannot be said of him that he has created a science, it may be said truly that he has, for the first time, made the creation possible. This is a great achievement, and, with the extraordinary merit of his historical analysis, and of his philosophy of the physical sciences, is enough to immortalize his name. But his renown with posterity would probably have been greater

than it is now likely to be, if after showing the way in which the social science should be formed, he had not flattered himself that he had formed it, and that it was already sufficiently solid for attempting to build upon its foundation the entire fabric of the Political Art.

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PART II.

THE LATER SPECULATIONS OF M. COMTE.[22]

The appended list of publications contain the materials for knowing and estimating what M. Comte termed his second career, in which the *savant*, historian, and philosopher of his fundamental treatise, came forth transfigured as the High Priest of the Religion of Humanity. They include all his writings except the Cours de Philosophic Positive: for his early productions, and the occasional publications of his later life, are reprinted as Preludes or Appendices to the treatises here enumerated, or in Dr Robinet's volume, which, as well as that of M. Littré, also contains copious extracts from his correspondence.

In the concluding pages of his great systematic work, M. Comte had announced four other treatises as in contemplation: on Politics; on the Philosophy of Mathematics; on Education, a project subsequently enlarged to include the systematization of Morals; and on Industry, or the action of man upon external nature. Our list comprises the only two of these which he lived to execute. It further contains a brief exposition of his final doctrines, in the form of a Dialogue, or, as he terms it, a Catechism, of which a translation has been published by his principal English adherent, Mr Congreve. There has also appeared very recently, under the title of "A General View of Positivism," a translation by Dr Bridges, of the Preliminary Discourse in six chapters, prefixed to the Système de Politique Positive. The remaining three books on our list are the productions of disciples in different degrees. M. Littré, the only thinker of established reputation who accepts that character, is a disciple only of the Cours de Philosophie Positive, and can see the weak points even in that. Some of them he has discriminated and discussed with great judgment: and the merits of his volume, both as a sketch of M. Comte's life and an appreciation of his doctrines, would well deserve a fuller notice than we are able to give it here. M. de Blignières is a far more thorough adherent; so much so, that the reader of his singularly well and attractively written condensation and popularization of his master's doctrines, does not easily discover in what it falls short of that unqualified acceptance which alone, it would seem, could find favour with M. Comte. For he ended by casting off M. de Blignières, as he had previously cast off M. Littré, and every other person who, having gone with him a certain length, refused to follow him to the end. The author of the last work in our enumeration, Dr Robinet, is a disciple after M. Comte's own heart; one whom no difficulty stops, and no absurdity startles. But it is far from our disposition to speak otherwise than respectfully of Dr Robinet and the other earnest men, who maintain round the tomb of their master an organized co-operation for the diffusion of doctrines which they believe destined to regenerate the human race. Their enthusiastic veneration for him, and devotion to the ends he pursued, do honour alike to them and to their teacher, and are an evidence of the personal ascendancy he exercised over those who approached him; an ascendancy which for a time carried away even M. Littré, as he confesses, to a length which his calmer judgment does not now approve.

These various writings raise many points of interest regarding M. Comte's personal history, and some, not without philosophic bearings, respecting his mental habits: from all which matters we shall abstain, with the exception of two, which he himself proclaimed with great emphasis, and a knowledge of which is almost indispensable to an apprehension of the characteristic difference between his second career and his first. It should be known that during his later life, and even before completing his first great treatise, M. Comte adopted a rule, to which he very rarely made any exception: to abstain systematically, not only from newspapers or periodical publications, even scientific, but from all reading whatever, except a few favourite poets in the ancient and modern European languages. This abstinence he practised for the sake of mental health; by way, as he said, of "_hygiène cérébrale_." We are far from thinking that the practice has nothing