Harris, Marjorie Silliman
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of Auguste Comte

THE POSITIVE PHILOSOPHY OF AUGUSTE COMTE

BY

MARJORIE SILLIMAN HARRIS, A. B.

A THESIS
PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF CORNELL UNIVERSITY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY, JUNE, 1921.

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PREFACE.

The purpose of this study is to present the leading ideas of the Positive Philosophy in such way as to point to a correct estimate of that philosophy as a whole.

The references to Comte's works are to the first edition of the *Cours de philosophie positive,* Paris, 1830-42; to the *Système de politique positive,* Paris, 1851-54; and to the *Catéchisme positiviste,* Paris, 1852. Throughout the monograph references to the first-named work are indicated merely by *Cours,* and to the second-named work by *Système.* The translations which I have incorporated in the text were made with the authorized translations of Comte's works before me. Needless to say the Martineau translation — New York and London, 1853 — was only a partial check for my own translations but the others were more adequate guides. These translations are: *System of Positive Polity,* translated from the French by J. H. Bridges (Vol. I, London, 1875), Frederic Harrison (Vol. II, London, 1875), E. S. Beesly and others (Vol. III, London, 1876), Richard Congreve (Vol. IV, London, 1877); and *The Catechism of Positive Religion* translated from the French by Richard Congreve, London, 1858.

To my professors at Cornell University I wish to express my gratitude, especially to Professor J. E. Creighton, whose constant help with criticisms and suggestions throughout the progress of the work enabled me to complete it. I am also indebted to Dr. Marie Swabey for her careful reading of part of the proofs; and I wish to express my thanks to Dr. Lucy Crawford for checking references to three books unavailable to me at the time the manuscript was to go to press.

M. S. H.

THE POSITIVE PHILOSOPHY OF AUGUSTE COMTE

INTRODUCTION.

Before examining the leading ideas of the Positive Philosophy, it will be well briefly to recall to the reader the historical conditions and environment of Comte's thought. For only by seeing Comte's theory in the light of its relation to the theories of earlier thinkers can we understand its full significance. It will be necessary, however, to limit our examination of the historical relations between the Positive Philosophy and its more immediate predecessors to a few of the more central doctrines of that system. Given such a restricted survey, it will be sufficient to indicate the existence of tendencies of philosophical speculation already dominant, particularly in France, which influenced, to a considerable extent, the formation of Comte's ideas. Thus we shall not only be able to account historically for certain tendencies in Comte's thought, but we shall be able to indicate more clearly the implications of his leading ideas.

We may begin by considering, in relation to its historical background, the doctrine which defines the essential characteristic of the Positive Philosophy as the search for law rather than for causes. The necessity of abandoning the search for causes had been proclaimed in France before Comte's time. It had found an exponent in Voltaire, who, with Montesquieu, naturalized the philosophy of Newton and the philosophy of Locke in France.[1] The combined influence of the sensationalism of Locke and the physics of Newton had brought Voltaire to the

[1] Of Voltaire's influence, Du Bois-Reymond says: "Paradox as it may sound . . . we are all more or less Voltaireans." (*Cf.* A. Lange, *History of Materialism*, tr. by E. Thomas, London, 1890, Vol. II, p. 13.)

relativistic point of view with regard to knowledge. Following the lead of Newton, Voltaire rejects the Cartesian notion of the world as extended substance, as analogous to a machine.[1] Voltaire conceives of nature as a whole, constituted of powers. Furthermore, he conceives of science as the analytical study of nature. Hence he does not, like Descartes, seek through science a synthetic construction of the universe. Indeed it is true both Newton and Voltaire are opposed to a universal systematization. Newton's work results in establishing a method of correlating the most diverse kinds of phenomena rather than in constructing a whole philosophy or a whole science. His hypotheses are only provisional guides, the inadequacy of which may be revealed by further experience. Laws, then, are to be regarded as not absolute, or ultimate statements of the nature of reality. Thus he does not consider his law of gravitation as the last word, but only as a means of correlating certain facts. This law is the first example in astronomy of the complete and unambiguous substitution of simple mathematical relations for causal explanations.

Voltaire does not fail to understand the importance of the relational view which Newton inaugurates in astronomy. Consequently, he seeks to introduce it into all domains of science. Locke's sensationalistic philosophy also tended to contribute to the confirmation of this view of the relativity of knowledge. But Voltaire goes beyond Locke in deriving everything from sensation. Consequently, what is not observable, what can not be discerned through the senses, is unknowable. Hence the essence of things is beyond our ken. In general, regarding the limits of human knowledge, Voltaire says: "I will say, in the spirit of the wise Locke, philosophy consists in stopping where the torch of the physical sciences fails us. I observe the effects of nature but I freely own that of first principles I have no more conception than you have." [2]

Comte shows the influence of these conceptions in his philosophy. He not only holds to the general view expressed here

[1] For a more explicit statement of the points noted here *cf.* Léon Blich, *Philosophie de Newton*, Paris, 1908, pp. 523 ff.

[2] *Oeuvres*, Paris, 1826, Vol. XXIV, *Dictionnaire Philosophique*, Vol. 1, p. 239.

in regard to the conception that the aim of knowledge is to ascertain laws and not to penetrate to causes, but he also looks upon hypotheses as merely aids. They are to be held tentatively, and not to be regarded as absolute. Further investigation may disprove them. A law that now seems valid may have to be changed, with the advance of knowledge. Comte is not, however, satisfied with discovering a proper method of procedure; he would construct a system. In this matter, Comte is in sympathy with the zeal of Descartes for systematization.

Voltaire's conception of the relativity of knowledge was developed by the men who were 'arrayed around him.' The immediate promulgators of his views were the Encyclopædists, under the leadership of Diderot. "It was Francis Bacon's idea of the systematic classification of knowledge which inspired Diderot and guided his hand throughout." [1] The undertaking of the Encyclopædists is best characterized by D'Alembert as "the present century which thinks itself destined to alter laws of all kinds and to secure justice." [2] Lévy-Bruhl considers the constructive philosophical results which they achieved as rather small. Yet he says that "hatred of falsehood, superstition, oppression, confidence in the progress of reason and science, belief in the power of education and law to overcome ignorance, error, and misery, which are the sources of all our misfortunes, and lastly warm sympathy for all that is human were shed abroad from this focus to the ends of the civilized world." [3] In other words, the Encyclopædists believed that the advancement and spread of knowledge — especially scientific knowledge — would dispel the current evils. Moreover, they had the interests of humanity at heart. Diderot's view concerning the scope of knowledge represents, in the main, the thought of the school on this point. He says, "Who are we that we should explain the ends of nature? . . . The most common phenomena suffice to show that the search for causes is contrary to true science." [4] Diderot carries the doctrine of the relativity of

[1] J. Morley, *Diderot and the Encyclopaedists*, New York, 1878, p. 80.

[2] *Cf.* L. Lévy-Bruhl, *History of Modern Philosophy in France*, tr. by G. Coblence, Chicago, 1899, p. 235.

[3] *Ibid.*

[4] *Oeuvres*, Paris, 1875, Vol. 2, *Philosophie*, Vol. 2, p. 53.

knowledge even further. Not only are first causes unknowable, but knowledge is relative to the organism. His *Lettre sur les Aveugles* " was the first effective introduction into France of these great fundamental principles: that all knowledge is relative to our intelligence, that thought is not the measure of existence, nor the conceivableness of a proposition the test of its truth, and that our experience is not the limit to the possibilities of things."[1] This phase of the doctrine of the limits of knowledge is developed at length by Comte. He, too, considers our knowledge relative to the organism. He, too, believes that there is much in the universe that we can not know. He, too, rejects the notion that a proposition is true simply because it is conceivable. The test of the truth of a proposition for him is its verifiability in experience. Comte also holds that our experience does not potentially reach all that takes place in the universe. He thinks that there may be phenomena which even minds superior to ours would be totally unable to subsume under laws. Comte makes no marked contribution to this phase of the conception of the relativity of human knowledge.

Comte expresses himself on the first phase of the conception in the following manner. " The first characteristic of the Positive Philosophy is precisely to regard as insoluble by man all these great questions (questions on the origin and end of the universe). In interdicting to our intellect all research for first and final causes of phenomena, it limits the field of its work to the discovery of their actual relations."[2] In other words, the concern of philosophy is solely with the discovery of laws, *i.e.*, the constant relations of similarity and succession which bind facts together. All search after causes is regarded as vain. The human mind is incapable of penetrating to causes. This view, Comte maintains, is substantiated by a consideration of the mind's development. At first man believes himself capable of penetrating to the essence of things. He has gradually come to realize that he can know only laws. The view is also supported by evidence from the

[1] Morley, *Diderot and the Encyclopaedists*, p. 56.

[2] *Système*, Vol. IV, *Appendice générale*, p. 142.

evolution of the sciences. Once science sought, according to Comte, to determine the agents to which certain effects could be referred. Now, in the sciences where the greatest progress has been made, it has become clear that investigation should be limited to relations of similarity and succession. Comte's particular contribution to the development in France of the notion that final causes are unknowable was an insight that the mind had gradually come to this position through a necessary process. Others, as we shall see, had anticipated his statement of the law of the three stages. This law states that mind, in its development, passes through three stages: the theological, the metaphysical, and the positive. But Comte himself sees in the past history of the human mind, not a history of mere 'aberrations of the intellect.' The human mind has not existed in a state of madness, but those earlier stages were indispensable to the mind's evolution. It is only through experience that man can discern the limits of his knowledge. Thus Comte shows that the essential feature of the Positive Philosophy had been gradually coming to light through the evolution of knowledge. This idea of development had received very little explication in France. Descartes had broken with the past and proposed to construct a philosophy on a new basis without reference to past thought. Voltaire had followed his lead. In France, the prevalent tendency had been to look into the mind itself for a decision as to its limits.

This brings us to a consideration of the second leading principle of Comte's philosophy — that the intellect is subordinate to the heart. This principle implies a view of the nature of the mind that must be considered in its historical setting before taking up this particular principle. Comte's belief that the mind reveals its laws through its functioning was not the common property of the French empiricistic philosophers. Locke sought the limits of the human understanding by looking within. Voltaire endorsed Locke's procedure. Thus "various philosophers have . . . written a romance of the soul; finally a wise man modestly wrote a history of it." [1] It was Condillac, however, who worked out

[1] *Oeuvres*, Paris, 1826, Vol. XXIV, *Dictionnaire philosophique*, Vol. 1, p. 233.

the psychological basis of the French Enlightenment. His object was to examine the operations of the mind and see how they are combined. That is, his design was " to relate to one principle all that concerns the human understanding." [1]

Condillac starts out, as did Locke, with two sources of knowledge: sensation and reflection. Later, however, he considers sensation the only source of our knowledge. The fundamental sense, he thinks, is that of touch, for that is the only sense which can, at first, judge by itself of exterior objects. From this fundamental sense, he derives all the others. He calls this sense *le moi.* To make his view clearer, Condillac suggests that we imagine an animated statue. In this statue, he awakens one sense after another. At first the statue receives a simple impression, due to the presence of an object. The pleasure or pain which this impression gives determines further development. Thus " pleasure and pain are the unique principles which determine all operations of his — the statue's — spirit and they raise *it* by degrees to all the knowledge of which it is capable." [2] A simple sensation, consequently, makes of itself memory, attention, judgment, will, imagination, and reason. The intelligence, in short, is composed of atomic bits.

We have considered Condillac's theory, not because of any direct effect it had upon Comte, but because his sensationalism forms the point of departure for the ' Ideologues.' They, in turn, influenced Comte. ' Ideology ' was the name given to the science of thinking by Destutt de Tracy to distinguish it from metaphysics. What the thinkers of this school sought may be summed up in the following way: " They demanded a cerebral psychology to furnish them the subject of which they had need as a principle and cause of sensation. . . . Physiology, opposed to psychology, . . . and leading materialism with it, became the

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[1] The " statue man " was probably suggested by an hypothesis in La Mettrie's *Histoire Naturelle de l'Ame,* an hypothesis founded on a myth borrowed from Arnobius's *Adversus Gentes.* La Mettrie imagines a child placed at birth in a dimly lighted subterranean chamber. He is scantily fed by a silent nurse until he reaches the age of twenty or thirty or forty. He is then allowed to leave his place of confinement. *Cf.* A. Lange, *History of Materialism,* tr. by E. Thomas, London, 1890, Vol. II, pp. 53 and 62.

[2] *Oeuvres,* Paris, 1798, Vol. III, p. 60.

visible sign of the Condillac school." [1] That is, the Ideologues sought for a physical substratum of sensation. They attempted to determine the nature and changes going on in the organ which was actually affected in the process of transformation. A brief statement of relevant points in the theories of two Ideologues, Cabanis and Gall, will be sufficient to show their anticipation of Comte's phrenological psychology.

Cabanis, the French physician, developed a physiological psychology. "Physical sensibility is," he says, "the last term to which one comes in the study of phenomena of life and in the methodical investigation of their real connection. It is also the last result or . . . the most general principle which is revealed by the analysis of intellectual facts and the affections of the soul. Hence the physical and moral life are confounded at their source; or rather, the moral being is but the physical considered under certain more specific points of view." [2] Without such sensibility we would not notice the presence of exterior objects. We would not have any means of perceiving our own existence, or rather, we would not exist. Hence the essential state of all living organisms is feeling: "the moment we feel, we are." [3]

Condillac had developed the view that the source of all ideas is the senses. Indeed, as we have seen, he made the sense of touch the source of all the different ways in which the mind functions. But Cabanis considers that there is within us "a whole system of inclinations and determinations formed by impressions almost totally unconnected with those of the external world; and these inclinations necessarily influence our way of considering objects." [4] Thus he holds, in opposition to Condillac's denial of instinct, that the first trace of instinct originates with the formation of the fœtus. Consequently the "new born child has, in its brain, . . . traces of the fundamental notions that its relations with the sensible universe and the action of objects on the

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[1] Ch. Renouvier, *Historie et solution des problèmes métaphysiques,* Paris, 1901, pp. 386-7.

[2] *Oeuvres complètes,* Paris, 1824, Vol. III, pp. 66-7.

[3] *Ibid.,* p. 67.

[4] Lévy-Bruhl, *History of Modern Philosophy,* tr. by G. Coblence, p. 309.

nervous extremities should successively develop." [1] Hence the brain is not passive. Thus Condillac's description of the awakening of the different senses and their intellectual accompaniments in the statue man is not a true account of what actually takes place. Not only does the external world shape our thoughts, but the self, in turn, by its predeterminations, shapes the material it receives from the external world. Cabanis does, however, follow Condillac in making touch the general sense of which all other senses are modifications. But we do not, as Condillac supposed, know exterior objects through that sense. It is by the resistance that they oppose to will that we know them. Thus, while retaining touch as the source of sense modifications, Cabanis does not regard it as the source of all functioning of the mind. There are innate tendencies in the mind.

Certain of the ideas expressed here appear later in Comte. Comte also seeks for a physical substratum for psychological investigation. He too might say with Cabanis that 'the moral being is the physical considered under a certain point of view.' Indeed Comte locates in sections of the brain the affective functions which are the organs of the moral life. He thinks, for a time,[2] that the anatomical study of these brain sections will contribute to knowledge of the affective functions. Moreover, Comte is thoroughly in sympathy with the theory that we do not view the world passively. Mind has to bring to experience certain categories or hypotheses, in order that such experience may have meaning. Perhaps it would be impossible even to observe external happenings without these hypotheses. Comte does not, however, attempt to show that the different senses are developed from one original sense. He is not interested in showing how things came to be. He holds that, accepting the given without asking its origin, we should attempt to subsume under laws the relations exhibited. Consequently, Comte does not consider the origin of touch a problem for philosophy, so this part of Cabanis' theory would appear to him idle. But Condillac's error is still

[1] Picavet, *Les Idéologues*, Paris, 1891, pp. 259-60.

[2] Comte later modifies his view as to the importance of anatomical study.

greater than Cabanis', for the former does not even admit those inner determinations which the latter assumes. On this point Comte refers to Condillac as one of those metaphysicians who "sees in our intelligence only the action of the external senses, disregarding every predisposition of the internal, cerebral organs." [1]

Gall's *Anatomie et physiologie du système nerveux* is thoroughly examined by Comte. The significance of Gall's work is said to be "the important discovery that the convolutions of the brain are the organ of the soul, that these convolutions are of different functional significance, and that a thorough system of fibres is present in the medullary substance." [2] The work is known chiefly, however, for its theory of skull formation. Gall started out with the hope of discovering the relation of the intellectual faculties to the organism.[3] He concludes that the intellectual faculties are very much under the influence of bodily conditions.[4] Moreover, Gall examines the faculties only as they become phenomena for us by means of material organs.[5] He does not take under consideration inanimate body, or soul separate from body, but the two in union, as given in experience. Gall concludes from experiment that the fundamental dispositions are innate. He also gathers from his experiments that there are many faculties. Comte was, at first, much influenced by Gall although he later modified his views. He criticizes Gall for having multiplied the elementary functions too much and for having separated the nervous system too sharply from the rest of the organism.

Thus far, in considering conceptions of mind, we have noted certain views which evolved from the Lockian procedure of investigating the human understanding. And we have indicated their bearing on that aspect of Comte's view of mind which makes the study of mind a positive science. Intellect, so viewed, assumes

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[1] *Système*, IV, *Appendice général*, p. 221.

[2] M. Dessoir, *Outline of the History of Psychology*, tr. by Fisher, New York, 1912, pp. 223-4.

[3] Cf. F. J. Gaul et G. Spurzheim, Anatomie et Physiologie du système nerveux en *général et du cerveau en particulier*, Paris, 1810, Vol. I, p. IV (preface).

[4] *Cf. ibid.*, p. VIII (preface).

[5] *Cf. ibid.*, pp. 6-10.

a minor rôle in the regulation of life. Thus Comte advances the theory that the intellect is subordinate to the heart. But the conclusions from the analyses of mind we have just been considering were not the only views influencing Comte's principle. True, they pointed a way to minimizing the importance of mind. The Encyclopædists, however, did not see that their theories pointed this way. Reason had its limits, they admitted, but, in its sphere, it was supreme. They conceived of it as a faculty of abstract cognition, in the clear, cold light of which all metaphysical and mystical vagaries vanished. It was 'the light that lighteth every man.' Rousseau's philosophy, on the other hand, was the second influence to which we have alluded as shaping Comte's view. Rousseau developed a philosophy of feeling, regarding feeling as 'the rival' of the intellect.

Though for a time associated with the Encyclopædists, Rousseau came to regard their intellectual analyses in terms of clear and distinct ideas as inadequate methods of arriving at truth. The Encyclopædists disintegrated concrete experience by their analytical methods and expected to find, among the dissevered parts, some first principle which they might use as a foundation on which to build what they had torn down. Rousseau saw the artificiality of the method. He realized that all that was vital and concrete was left out. The Encyclopædists were suspicious of feeling. They thought that it might dim the clear light of reason. Rousseau, on the contrary, believed that the abstractness of the result of the empirical philosophy was due principally to its failure to take account of feeling. This belief and his own temperament led him to develop a philosophy of feeling. Yet feeling, as Rousseau usually conceives it, is just as abstract as the *reason* of the Encyclopædists. There are truths, he maintains, revealed directly through feeling. These truths abstract speculation can never attain. Yet, at its best, Rousseau's philosophy is not a mere philosophy of sentiment. Thus, in the *Contrat Social,* he indicates that the advantages of a civilized state have changed man from a stupid and unthinking animal into an intelligent being.[1] He also shows that the desires of individuals must be

[1] *Cf.* E. Caird, *Essays on Literature and Philosophy,* 1892, Vol. I, pp. 121-22.

subordinated to the *volonté générale*. He seems thereby to recognize universality in the domain of feeling.[1] Again, he distinguishes between subjective feeling and feeling as the utterance of the *raison commune:* "And I fear that on this occasion you are confusing the secret inclinations of our heart which lead us astray with the more secret, more inward voice which reclaims and murmurs against these interested decisions, and brings us back, in spite of ourselves, to the way of truth."[2] This attitude, which would not abstractly separate feeling and intellect, is nearer the truth than Rousseau at other times gets. For it must be admitted that he frequently seems to regard the individual, controlled by his feelings, as an isolated, atomic individual. In his endeavor to show the antithesis between the artificiality of life as he sees it in Paris and the naturalness of life which conserves the fundamental values, he hypostatizes the individual. His statement implying that man is naturally good but that society corrupts him was interpreted to mean that society as such is bad. In the *Contrat Social,* Rousseau is merely seeking the 'analytical genesis' of society. Critics made the mistake of supposing that he was giving an account of its historical genesis. Consequently, he was regarded as starting from an atomistic conception of society. In fact, Rousseau himself does not always seem to realize that man apart from society is an abstraction. Moreover, the statement "the man who meditates is a depraved animal" was taken out of its context and made much of by the reactionists to show that Rousseau was a mere sentimentalist. And Rousseau does, at times, emphasize the feeling side of life to the exclusion of the thought side. At times, he endorses unrationalized emotion. Hence, in trying to oppose the tendency that 'would rather grant feeling to stones than a soul to man,' Rousseau develops a philosophy of feeling which, on its weaker side, implies just as abstract a conception of man as that of the intellectualists. This is the side of his philosophy that his many opponents emphasized and consequently, is the better known aspect. Thus it must be ad-

[1] *Cf.* Hibben, *The Philosophy of the Enlightenment,* New York, 1910, p. 141.

[2] Quoted by E. Caird, *Essays on Literature and Philosophy,* Vol. I, p. 133.

mitted that Rousseau does not adequately get beyond the individualism and the atomism of his century.

Comte was influenced in opposite directions by these two currents of thought, and it is little wonder that he felt the necessity of setting feeling above the intellect. On the other hand, he never advances beyond an abstract conception of reason, which remains for him, as for the Encyclopædists and for Rousseau, the faculty of abstract cognition. But he sees, as the Encyclopædists did not, the fallacy of trusting to the dominance of such a faculty. Consequently, he places above it feeling. The intellect must always be subordinate to the heart. But it is not feeling *per se* that is placed in this exalted position. Comte sees, more clearly than Rousseau, that the preponderance of feeling may mean the preponderance of purely egoistic passions. The ruling power for him is social sympathy. Thus Comte never makes Rousseau's mistake of separating man from society. The Revolution had taught the fallacy of the individualism that this implies. Indeed, Comte never fails to insist that man develops only in society and by society.

Comte, although trusting less in the intellect than did the eighteenth century philosophers, believes, however, that it is capable of solving what problems need to be solved. Though ultimate knowledge exceeds our grasp, we can know what we need to know. Moreover, our investigations should be limited to what we need to know. Otherwise our speculations end in wild extravagances. The highest possible synthesis of knowledge is, then, the subjective synthesis in which knowledge is unified with respect to its relation to man. This is the third leading idea which Comte advances and which we are to consider in its historical setting. A similar view with regard to knowledge was already entertained by Voltaire, Diderot, and others. Thus Voltaire holds that we do not need to know the essence of things. "God has given thee understanding, O man! for thy good conduct and not to penetrate to the essence of things which he has created." [1] That is, the operation of the understanding is limited to practical mat-

[1] Voltaire, *Oeuvres*, Paris, 1826, Vol. XXIV, *Dictionnaire philosophique*, Vol. 1, pp. 264-5.

ters. Our knowledge does not extend to penetration into the essential nature of things. Diderot also voices this idea in saying that "utility circumscribes all . . . It is, without contradiction, the basis of our real knowledge." [1] And, again, "since reason can not understand everything, imagination foresee everything, sense observe everything, our memory retain everything; since great men are born at such rare intervals and the progress of science is so interrupted by revolution that whole ages of study are passed in recovering the knowledge of the centuries that are gone, to observe everything in nature without distinction is to fail in duty to the human race. Men who are beyond the common run in their talents ought to respect themselves and posterity in the employment of their time." [2] The implication here is that, since our knowledge is circumscribed, we should limit it to our needs. "For what would posterity think of us if we had nothing to transmit to it save a complete insectology, an immense history of microscopic animals?" [3] The thought presented here is the germ of Comte's conception of the subjective synthesis as the highest possible synthesis. Like these men, Comte is certain that we can know all that we need to know. Like them also, he is certain that we must not seek our knowledge beyond that which will satisfy our needs. This phase of Comte's thought has been developed at length, in our own generation, by the Pragmatists. They also consider as 'otiose' all knowledge that is not 'operative.' They, too, discard many problems as vague and unmeaning because these problems have no bearing on practical difficulties. Knowledge for them is valuable only as a guide to man's action. They would agree with Comte that the pursuit of knowledge having any other ultimate aim ends in 'wild extravagances.'

Up to this point, we have been noting historical conceptions which anticipate leading ideas in Comte's philosophy. In con-

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[1] *Oeuvres*, Paris, 1875, Vol. 2, *Philosophie*, Vol. 2, p. 13.

[2] *Ibid.*, pp. 50-1.

[3] *Ibid.*, 51.

structing this philosophy, Comte's aim was essentially social. To make clearer the reason for this, we turn to note circumstances preceding the development of that philosophy. The atomism and the individualism of the eighteenth century had been 'written in letters of blood' at the end of the century. Following the Revolution, the all-important question was concerning the method of allaying the social evils. Constitutions were drawn up without any philosophical basis. Of them, Comte says: "The multitude of pretended constitutions produced by the people since the beginning of the crisis, and the excessive minuteness of the details which one finds more or less in all is sufficient to show . . . that the nature of the difficulty of forming a plan of reorganization has been misunderstood up to the present. . . . Such verbiage would disgrace the human mind in politics, if it was not, in the natural progress of ideas, an inevitable transition toward a true final doctrine." [1] It follows that "the fundamental errors committed by the people in their manner of conceiving the reorganization of society have, for their first cause, the erroneous course by which they have proceeded to this organization. The error of this course is this: the social reorganization has been regarded as a purely practical operation, though it is essentially theoretical." [2]

Besides these attempts at reconstruction, there were the attempts of the traditionalists and of the Saint-Simonists, which should be recalled. The traditionalists attempted to restore the *ancien régime*. The leaders of the movement were Bonald and De Maistre. Bonald does not believe, with the eighteenth century philosophers, that society is a human institution — brought about by convention, according to Locke; by contract, according to Rousseau,[3] — but regards society as of divine origin. Furthermore, he thinks that society is the cause of what little good there is in man rather than of his depravity. Thus 'the natural man

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[1] *Système*, Vol. IV, *Appendice général*, p. 61.

[2] *Ibid.*, p. 76.

[3] Bonald thinks that, in the eighteenth century, human nature was treated too arithmetically. (*Cf.* Ch. Adam, *La philosophie en France*, Paris, 1894, p. 40.)

is the man of society.' Bonald asserts that the individual does not exist as an atomic individual. Only living humanity has real existence. Since society is of divine origin, law and sovereignty must also be of divine origin. In fact, all originates from God. Consequently man owes allegiance to God. Thus Bonald's philosophy is essentially a philosophy of authority.

Joseph de Maistre desires *restauration*. He wishes not only the restoration of the king but more especially that of God and the Pope. He also regards God as the source of all. He thinks that the eighteenth century over-simplified matters. In desiring to see clearly, it chose too narrow a point of view. Human affairs are not such as can be expressed in terms of clear and distinct ideas. They are complex and obscure. Consequently, they are mysterious and divine; in God is their source. All is thus under God's authority. According to these traditionalistic theories, then, the solution of social evils lies in restoration; the restoration of God, the Pope, and the king.

These theories had the merit of recognizing that man, apart from society, is an abstraction. But the effort to restore things as they were indicates the failure of the traditionalists to understand the significance of the trend of progress. Comte makes this clear in the following statement: "The downfall of the feudal and theological system was not due . . . to recent, isolated causes that were, in a way, accidental. . . . The decline . . . was the necessary consequence of the progress of civilization. . . . In order to re-establish a former system, it would not then be sufficient to push back society to the epoch where the crisis actually began to make itself pronounced. For, even supposing that this could be done, which is absolutely impossible, we would only have replaced the body politic in the situation that necessitated the crisis. It would be necessary, then, in retracing the ages, to repair all the losses that the *ancien système* has suffered in six hundred years."[1] In this way, Comte has shown retrogression impossible. The efforts of the traditionalists were, for the most part, necessarily fruitless. They did, however, succeed in pre-

[1] *Système*, Vol. IV, *Appendice général*, p. 49.

senting a more organic theory of society than did the eighteenth century philosophers.

On the other hand, Saint-Simon and Comte instituted a wholly new movement. Saint-Simon thinks that there must be a new science of society. In the theoretical sphere, he wishes to extend the principles and methods of science to the study of man. He thinks that 'the great world of the universe' should be studied simultaneously with the 'little world of man' — man regarded from the physical standpoint chiefly. In 1812, he announces a course in positive philosophy which is chiefly a course in psychology treated as a branch of physiology.[1] Furthermore, he indicates the progress of science toward a positive state. Soon, however, he loses confidence in studying man in this way, *i.e.*, from the physiological aspect. He decides that man should be studied more positively. That is, to arrive at a knowledge of man, one must study him through his material and industrial interests. Thus the science of human nature, as he formerly understood it, does not seem to him to reveal the laws of the moral and social world. Later, Saint-Simon casts aside these questions too. He thinks now that the reorganization of society must be directly studied without this preliminary approach to the subject. In the *De la réorganization de la société européene,* he indicates that there should be a division between the temporal and the spiritual powers. The temporal power should be in the hands of the industrial class and the spiritual in the hands of the scientists. There should, however, be a league between them so that men of action will execute what the scientists propose. Furthermore, he thinks that a religious faith would again organize and pacify society. The new religion must be a progressive religion. Its end should be to ameliorate the physiological, moral, and intellectual condition of the most numerous and poorest class.[2]

Comte was greatly influenced by Saint-Simon. Four years before the discovery of his law of the three stages, he came under

[1] *Cf.* Ch. Adam, *La Philosophie en France,* Paris, 1894, p. 282.

[2] *Cf.* Lévy-Bruhl, *History of Modern Philosophy in France,* tr. by G. Coblence, Chicago, 1899, p. 357.

the influence of Saint-Simon, to whom, for a time, he was passionately devoted. He wrote, after he had been with Saint-Simon a short time, that his spirit had made more progress in six months than it would have made alone in three years. In writing of this period later, however, he spoke of it as detrimental in that it had hindered his spontaneous growth. What had drawn him to Saint-Simon was that the latter also felt the need of social regeneration founded on mental regeneration. For two years, Comte was quite under Saint-Simon's influence. But the discovery of the law of the three stages made a great change in Comte's relation to Saint-Simon. Comte now became master, a master who perceived the powerlessness of Saint-Simon to raise himself to the *facts* of science, philosophy, and politics. As we have indicated, Saint-Simon came to believe that the reorganization of society could be accomplished without preliminary mental reorganization. Comte's thought had advanced in the opposite direction. A rupture was inevitable. It was precipitated by Saint-Simon's attempt to induce Comte to allow the publication of his *Plan des travaux scientifiques nécessaires pour réorganiser la société*[1] as the third book of the *Catéchisme des industriels.* Comte opposed this; whereupon Saint-Simon declared that all was over between them. The thing that proved the last straw was that Saint-Simon finally published Comte's *Plan* in such a way as to make it appear as the third volume of his *Catéchisme des industriels.*[2]

It is a little difficult to estimate just how much Comte owes to Saint-Simon. Various opinions have been expressed on this point.[3] We can say, however, that constant association with a

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[1] This opuscule was published two years before the time referred to here. Comte wrote it after his discovery of the law of the three stages.

[2] *Cf.* E. Littré, *A. Comte et la philosophie positive,* Paris, 1863, p. 17.

[3] *Cf. Cours,* Vol. VI, p. VIII note. Here Comte expresses the idea that the association with Saint-Simon was detrimental.

Mme. Comte believed that Saint-Simon never had anything to give to Comte. *Cf.* Littré, *A. Comte et la philosophie positive,* p. 14. M. Alengry has said: "Saint-Simon has written a plan but Comte realized it. But there is in this realization such an abundance of original knowledge, such a personal effort of reflection, such an abundance of new views that the work achieved makes one sometimes forget the primitive plan, or at least eclipses it." *Cf.* F. Alengry, *Essaie historique et critique sur la sociologie chez A. Comte,* Paris, 1900, p. 473. M. G. Dumas considers that Comte owes the better part of his ideas to Saint-Simon. He adds: "In the history of ideas, Saint-Simon, with his disordered production, his unachieved books, his incomplete

man who had such a fund of ideas as Saint-Simon could hardly have failed to prove stimulating and suggestive to Comte. Furthermore, the fact that Comte was under Saint-Simon's influence for a time showed his comprehension of the uselessness of mere rebellion; while his separation from Saint-Simon indicated his realization of the fact that a sound philosophy was needed from which to deduce principles of social reorganization.[1]

Comte's problem, then, is to give a sound philosophical foundation to a social program. To accomplish this, he attempts to construct a science of society which shall have the same character of positivity that marks the natural sciences. Social phenomena are to be handled in the same rigorously scientific way as mathematical phenomena. When Comte effects the establishment of such a science he considers the positive philosophy constituted. Thus at the beginning of the century were developed two opposing philosophies, each with a social aim, — a traditional philosophy and a scientific philosophy. To the present day, the classical and the scientific philosophers are sharply divided in France. The one school is " attracted more and more by the considerable progress of the positive sciences. . . . They do not believe that they will reach all truth. Far from that, they perceive that they possess only meagre and unimportant fragments. But they are struck by the fact that all that which is considered as certain and all that which has succeeded in satisfying their mind, has been acquired by the scientific method and by that exclusively. Science and science alone permits them to know." [2] On the other hand, there are the traditional philosophers. Mediating between the two is a third group who value science, recognizing its importance. " They seek to use science for ends which are outside of it and even against it. They see in man, besides intelligence, . . . an

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theories, appears always as a first sketch of Comte. . . . Without him, Auguste Comte would, without doubt, have written and thought, but he would not have founded the Positive Philosophy and the religion of humanity. (*Psychologie de deux Messies positivises,* Paris, 1905, preface, p. 8.) Levy-Bruhl credits Saint-Simon with having started Comte on the line best suited to his genius. (*The Philosophy of Comte,* tr. by K. Beaumont-Klein, New York, 1903, page 9).

[1] *Cf.* E. Caird, *The Social Philosophy and Religion of Comte,* 2nd edition, New York, 1893, p. 5.

[2] Abel Rey, *La philosophie moderne,* Paris, 1919, p. 4.

inexhaustible mine of feeling, instincts, tendencies, needs, aspirations irreducible to terms of clear and distinct ideas. . . . It is in the irrational source of our being . . . that we should seek what we are." [1] Bergson is perhaps the most prominent of the philosophers of the third group to which reference is made in this quotation. In short, the movements initiated at the beginning of the century have exerted far-reaching influence.

Comte's problem, then, is to give a sound philosophical foundation to a social program. This philosophical basis must be determined, in part, by the observation of the past. For it is only in the light of the past that we can understand the social system which the course of civilization tends to produce today.[2] The philosophical basis thus determined, Comte thinks, will be supplied by the Positive Philosophy. "To understand the true nature . . . of the Positive Philosophy, it is indispensable to take first a general view of the progressive advance of the human mind, envisaged as a whole, for no conception can be understood except by its history." [3] Hence, in considering Comte's Positive Philosophy in detail, we shall first give an account of his law of the three stages. We shall next discuss his theory of the relativity of knowledge. In the third chapter, we shall consider his theory of mind. This will be followed by an examination of his notion of the objective order. Next we propose to note his theory of the nature of the highest possible synthesis of knowledge. Finally, we shall attempt an estimation of the results of the philosophy.

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[1] *Op. cit.*, pp. 6-7.

[2] *Système*, Vol. IV, *Appendice général*, p. 111.

[3] *Cours*, Vol. I, pp. 2-3.

CHAPTER I.

THE LAW OF THE THREE STAGES.

THE discovery of the "law of the three stages" forms the point of departure for the development of Comte's philosophical system. With regard to the evolution of his thought which led up to that discovery, Comte tells us[1] that his early mathematical training suggested the method of satisfying the need for political and philosophical regeneration.

Further scientific training gave him fuller insight into the possibilities of the method as extended to social speculations. Finally, the discovery of the 'law of the three stages' established harmony between his intellectual and social tendencies. This discovery showed that, since mental development has evolved through three different stages, homogeneity of doctrine will be reached when all branches of knowledge have attained the final stage — a homogeneity essential to social order. Consequently the 'law of the three stages' is absolutely fundamental to Comte's system. Before proceeding to an examination of the law as formulated by Comte, we may briefly indicate some anticipations of it by previous thinkers.

The law of the three stages has its germ in a realization of the fact that the present is unintelligible apart from the past. This appreciation of man's oneness with the past is quite the antithesis of the spirit of the method 'fathered' by Descartes. But, although the historical sense was undeveloped in most of Comte's predecessors in France, the developmental idea was prevalent in Germany some time before 1822. However, Comte read Kant's *Idee zu einer allgemeinen Geschichte in weltburglicher*

[1] *Cf. op. cit.*, Vol. VI, pp. VII-VIII.

Absicht only after the discovery of the 'law of the three stages.' He was never aware of the existence of Fichte's *Grundzüge des gegenwärtigen Zeitalters*. And he knew nothing of Hegel as the founder of the historical method. Hence these anticipations of the spirit of the law of the three stages had no influence on his thought.

But Comte was acquainted with the writings of Montesquieu and Condorcet. The fundamental conception of the former writer, however, he regards as dogmatic and not historical.[1] On the other hand, he looks upon Condorcet's *Tableau des progres de l'esprit humain* as a 'rung on which he rested his feet' in arriving at his law. Of Condorcet, Comte says: "He first saw clearly that civilization is subject to a progressive course, every step of which is strictly connected with the rest in accordance with natural laws, which philosophical observation of the past can reveal. These laws determine, in a positive manner for each epoch, the improvements adapted to the social state as a whole and to each portion of it."[2] Condorcet's attempt to demonstrate the theory in his *Esquisse d'un tableau historique des progres de l'esprit humain* was, however, unsuccessful, Comte thinks, for he did not realize the importance of finding some principle that would co-ordinate the facts in a homogeneous series. He chose almost arbitrarily some remarkable event — industrial, or scientific, or political — and used this for the commencement of an epoch.[3] Blinded by eighteenth-century prejudices, he condemned rather than observed the past. Consequently, for him, the "progressive march of civilization becomes an effect without a cause."[4] Thus only in a general way did Condorcet prove suggestive to Comte in connection with the working out of the law of the development of the human mind.

Laws of three stages were formulated by Turgot and Dr.

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[1] But Comte's estimate of Montesquieu should be modified, for although the latter did not co-ordinate the various stages in the history of the past by subsuming them under one law, he did recognize in it inevitable movements and transformations.

[2] *Système*, Vol. IV, *Appendice général*, p. 109.

[3] Cf. *ibid.*, p. 110.

[4] *Ibid.*, p. 115.

Burdin in much the same terms as those employed by Comte. According to Turgot: "All ages are linked by a succession of causes and effects which bind each epoch to all that has preceded it."[1] That is, the ages are filiated in a causal sequence. Speaking more in detail on this point, Turgot says: "Before the knowledge of the *liaison* of physical effects between themselves, there was nothing more natural than to suppose that they were produced by intelligent beings, invisible and like ourselves; for whom else should they resemble? All that happened in which man had no part had its god, to whom, through fear or hope, worship was rendered. . . . When the philosophers had recognized the absurdity of these fables, without, however, having acquired true light on natural history, they imagined that they had explained the causes of phenomena by abstract expressions like *essences* or *faculties* — expressions which, nevertheless, explained nothing. Yet persons reason about these as if they were new beings, divinities substituted for the old ones. . . . The faculties are multiplied in order to give reason for each effect. It has not been till quite recently, in observing mechanical action, that other hypotheses have been formed which mathematics can develop and experience can verify."[2] In other words, man interpreted experience first in 'theological' terms, then in 'metaphysical,' and finally in 'positive' terms. It is evident that this law is very similar to Comte's, yet Comte does not mention Turgot as a precursor. However, since Comte was quite ready to call Condorcet his spiritual father and to give Condorcet full credit for whatever conceptions of his were suggestive, one need not hesitate to assume that, if Comte had come across these special passages in Turgot, or had remembered having seen them, he would have named Turgot with Condorcet.[3] Nevertheless, it seems evident that the law had not for Turgot the significance that it had for Comte. Turgot did not consider his law as affording a sketch, or plan, of the development of the human mind. Moreover, he

[1] *Oeuvres*, Paris, 1808, Vol. 2, p. 52.

[2] *Ibid.*, pp. 294-5.

[3] *Cf.* Littrè, *A. Comte et la philosophie positive*, Paris, 1863, pp. 39-40.

did not perceive that it contained one of the elements necessary for a philosophy. Comte, on the other hand, saw in it the key to the understanding of social progress. He developed a philosophy of history through its aid, and from this scientific view of history, he advanced to a positive philosophy.[1]

A law of three stages was also formulated by M. Burdin during a conversation with Saint-Simon. M. Burdin saw that science commenced by being conjectural and gradually became positive. He drew the conclusion that, since science advances in this way, philosophy ought to do the same.[2] This, then, is a second statement of the law — a second statement prior to Comte's. Yet, as we have already indicated, Comte's conception of the law was original, at least in the application and working out which the law received at his hands.

Comte formulates the law of the three stages as follows: "From the study of the development of human intelligence, in its different spheres of activity, . . . I believe I have discovered a great fundamental law, to which it is subject by an invariable necessity and which seems to me to be firmly established, both by rational proofs furnished by the knowledge of our organization and by historical verifications resulting from an attentive examination of the past. The law is this: that each of our principal conceptions — each branch of our knowledge — passes successively through three different theoretical conditions: the Theological, or fictitious; the Metaphysical, or abstract; and the Scientific, or positive. . . . Hence arise three philosophies, or general systems of conceptions of phenomena, each of which excludes the others. The first is the necessary point of departure of the human understanding. The third is its fixed and definite state. The second is uniquely destined to serve as a state of transition."[3] In other words, the human mind employs, in the process of its development, three different modes of philosophizing: *i.e.*, the theological method, the metaphysical, and the positive.

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[1] *Cf. op. cit.*, p. 48.

[2] *Cf. ibid.*, p. 94.

[3] *Cours*, Vol. I, pp. 3-4.

To be more specific, in its first effort to explain the given, the mind posits transcendental beings as the producers of the effects observed. Later, the explanation of sense data is given in terms of abstract entities. And, finally, the positivist sees the uselessness of trying to arrive at ultimate causes and becomes satisfied with discovering the laws underlying what is presented to him in experience.

The proofs of this law of the development of the human mind are of two sorts: actual and theoretical. As to the actual proofs, one is derived from a consideration of the historical development of the sciences. The sciences themselves show marks of the first two periods through which they have passed. The other is derived from the observation of the development of the human mind.[1] That is, the progress of the individual mind gives evidence of what the mental development of the race has been, for the individual mind recapitulates that development. In the case of the individual, he is aware, if he looks back on his own past, that he was a "theologian in his childhood, a metaphysician in his youth, and a natural philosopher in his manhood."[2] The inference is that the race has passed successively through these stages. Thus the law is supported by the evidence of actual fact.

With regard to the theoretical proofs of the law, it should be noted that, though real knowledge must be based on observed fact, it is equally true that a theory is necessary to observe facts. That is, mind has to bring something to experience in order to apprehend it, in the true sense of the word. Comte says that without such guidance our facts would be desultory and fruitless. "We would even be entirely unable to retain them; and for the most part, the facts would remain unperceived under our eyes."[3] Consequently, in the beginning, it was necessary to observe facts in order to formulate a theory. It was also necessary to have a theory in order to observe facts. Thus, "the mind . . . would have been entangled in a vicious circle . . . but for the natural

[1] *Cf. op. cit.*, pp. 6-7.

[2] *Ibid.*, p. 7.

[3] *Ibid.*, p. 9.

opening afforded by the spontaneous development of theological conceptions." [1] Such is, in part, the *raison d'être* of the theological doctrine. Moreover, this doctrine opened a whole world to the earliest researches of the human mind. Comte believes that the idea of 'unlimited empire' over the external world was a stimulus to the human reason to undertake what it might not otherwise have attempted. While the discovery of laws is sufficient stimulus at the positive stage, it was not so to begin with. Consequently, astrology and alchemy were necessary steps toward the science of today.[2] But the advance from the theological to the positive stage would have been too great a transition. Hence the metaphysical stage was necessary. At this stage entities were substituted for supernatural beings. Such facts constitute the preliminary theoretical proofs of the law.

We have stated the law and its preliminary proofs and must now turn to a more complete demonstration of it; for only by following through a general view of the progressive advance of the human mind, envisaged as a whole, can we hope to understand the true nature of the Positive Philosophy — since no conception can be understood except by its history.

In the first place, the theological stage has three different phases: fetichism, polytheism, and monotheism. This stage originates in fetichism, which "consists in explaining the essential nature of phenomena and their essential mode of production by likening them, as much as possible, to the acts produced by human wills, in accordance with our own primordial tendency of considering all beings whatever as living a life analogous to ours." [3] That is, the original interpretation of cause was in terms of will, and not in terms of reason. Phenomena were regarded as products of *volontés humaines* rather than of *esprits humains*. The first causes were not conceived of as thinkers preëminently but as

[1] *Op. cit.*

[2] *Cf. ibid.*, p. 12.

[3] *Ibid.*, Vol. IV, p. 662.

agens surnaturels. In other words, man's 'intimate sense of his own nature' was a sense of the instrumental aspect of his mind. Man interpreted himself as will and consequently believed that all external manifestations were manifestations of abstract will. Man anthropomorphized the data of sense perception in terms of the volitional aspect of mind. At the stage of fetichism, these wills were regarded as existing in the objects through which the *agens surnaturels* were believed to manifest themselves. At the polytheistic stage, the wills were supposed to exist remote from the objects, each will dominating a group of objects. Finally, at the monotheistic stage, all was attributed to the activity of a single being. Hence, whether the phenomena were conceived of as due to many causes or to one, they were attributed to the action of supernatural agents.

Not only did the human mind at first anthropomorphize phenomena, interpreting them as expressions of will, but it is inevitable that mind should at first read off experience in this way; such is the only possible beginning of our intellectual evolution; only so could mind orientate itself. Thus it was 'the original and indispensable office' of fetichism to lead the human mind out of the vicious circle in which it was at first confined. For, at the outset, mind was confronted with the necessity "of observing first in order to arrive at suitable conceptions and . . . of conceiving first in order to interpenetrate effectively consequent observations."[1] Only the spontaneous fetichistic hypothesis satisfied the intellectual need. Fetichism 'drew the human spirit out of its animal torpor' not only by supplying a bond for our conceptions, but also by the lure of the notion that man could exercise his will over an illimitable empire; for man thought that, by placating the gods, he could influence them to promote his personal desires. Concerning the fetichistic hypothesis, Comte merely means what Kant had made more explicit; that, without an original synthesis which, though blind and unconscious, is yet living, primordial, fundamental to experience, the understanding would have nothing to interpret, the intelligence would not be 'awakened.' Mind

[1] *Op. cit.*, p. 667.

met experience with the inherent tendency to view all phenomena as similar to human acts. That is, it could project into the situation its own categories. Indeed, it is of the very nature of mind so to do.[1]

The fetichistic method, though the original way in which the mind apprehended reality, prevented the further expansion of real knowledge. It so colored man's view of the world that he could not see phenomena as they really are. Such is the view expressed in Comte's fundamental treatise. In the *Système,* on the contrary, we are told that " fetichism, far from being always hostile to this scientific expansion, as is supposed today, aided for a long time its spontaneous growth." [2] These statements seem contradictory, and yet the difference in statement is due to the fact that, in the one case, Comte is thinking of the results of scientific investigation and, in the second case, of the process of scientific investigation. Hence there is no real contradiction. That is, in the first case, the idea is that, since a deity resides in each object, its acts can not be subsumed under any uniform law. The deity acts in accordance with its capricious desires. The results of scientific investigation would be, therefore, contrary to such explanation. In the second case, Comte is merely indicating the fact that the immediate presence of the objects of primitive man's adoration stimulates in him observation of those objects in order that he may the better please the immanent deity. Thus Comte refers to the fetichistic régime as ' consecrating concrete observation.' [3] It becomes evident, then, that the statements merely represent a change in emphasis — a change which may well be accounted for by the change in purpose in the two treatises. In the *Cours,* Comte is presenting a new system and wants to

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[1] We should note that the *hypotheses* of Comte are comparable only in a most general way with the *categories* of Kant; for, to indicate but two important differences, the hypotheses are fictitious to begin with — their *raison d'être* being that they ' work,' they do for the time being. Hence, in this respect, they stand in direct contrast to the ' universal and necessary ' categories which are fundamental to experience. Furthermore, the hypotheses are ever changing with the mind's development, they are always being modified by the objective order; whereas the categories are the only ones under which we can perceive the space-time world.

[2] *Système,* Vol. III, p. 93.

[3] *Cf. ibid.*

show a gradual development toward a scientific point of view. He is concerned to show that the new doctrine is superior to all past doctrines. In the *Système,* on the other hand, Comte has thought through his whole doctrine in detail and, as was natural, his conception of its significance has developed. He sees in the first phase an analogy to the last phase of mental development. Hence he points out the value of the first stage, looking back, as it were, from the scientific point of view of the third stage.

We have thus far been concerned with indicating the nature and function of the fetichistic hypothesis, and we have also noted its scientific value. Comte, however, admits that fetichism did not dominate all thought. Even in the earliest period there were elementary germs of Positive Philosophy; that is, certain facts were always regarded as subject to natural law. Indeed, "the illustrious Adam Smith has . . . very happily remarked in his philosophical essays that one can not find at any time or in any country a god of weight." [1] The positive spirit in man was evidenced not only by his recognition of certain facts as subject to natural law, but also by his increased generalizations on his observations. This practice tended to bring about the transition to polytheism; for, when man noted the similarity of phenomena, he abstracted the common attributes and applied them to a more remote being.

Since, under polytheism,[2] each god was conceived as existing apart from the objects on which he was supposed to operate, matter was no longer regarded as animated but as inert, as having its form superimposed on it from without. Comte regards this change in the conception of matter as the greatest effort in purely speculative activity. This revolution in the conception of matter assisted in the expansion of the concept of natural law for bodies were no longer regarded as divine and hence were set free for observation. A further substantiation of the theory of invariable natural law was the conception of destiny. This conception was made concrete by the creation of a god of destiny, dominating,

[1] *Cours,* Vol. IV, p. 694.

[2] Polytheism is divided by Comte into two different phases: the theocratic and the military.

in a sense, all other gods. Moreover, in the Greek period, mathematical development fostered universal ideas of order and fitness. These ideas furnished the Greeks with a vague notion that, not only mathematical, but all phenomena were subject to natural law. Intellectual development along scientific lines was further promoted by theological divination, which opened the way for scientific prevision — a most important office if we consider, as Comte does, that the determination of the future is the end of all philosophical speculation.[1] That is, he believes that the aim of all knowledge is foreknowledge in order that one may either control effects or, if they are uncontrollable, that one may adapt oneself to them. Comte, however, though considering social betterment the end of knowledge, realizes that science can not advance if it is always tied down to practical consequences.[2] But Comte supports the hypothesis that the sciences must be ultimately synthetized by their relation to the purpose of man.

The transition to monotheism was due to the latent influence of the positive spirit. Geometrical research had developed a sense of natural law that suggested an underlying unity of which the phenomena observed were manifestations. Hence arose the conception of one principle to explain all. Reason could not be satisfied with a multitude of capricious divinities when the regularity of the external world was becoming more and more evident to extended observation. What facilitated the transition was the belief in a god of destiny, who was the forerunner of the god of providence of the monotheist. Because of its subordination of different phenomena to a supreme will, monotheism was not fully compatible with the conception of the invariability of natural law. But under monotheism only a few vague formulas were to be respected, hence the scientific spirit had a wider scope.

So far we have been describing the three phases of the theological stage and have been tracing the rise of the positive spirit in that stage. We must now consider, in a preliminary way,[3]

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[1] *Cf. Cours,* Vol. V, p. 131.

[2] *Cf. op. cit.,* I, pp. 63-67; III, 279-283.

[3] This point will be developed more at length in chapter three.

how the intellect in its development was modified by feeling. At the stage of fetichism, the intellect was excessively dominated by feeling. Its predominance Comte considers always necessary; though this preponderance is diminished more and more in the course of human evolution.[1] He therefore, like James, places abstract reason under emotional control. Comte, however, gives to feeling not only the function of exercising control over reason, but also that of calling out and stimulating its exercise. He believes that, in the polytheistic régime, intellectual expansion was modified by æsthetic development. The æsthetic evolution, by its 'sweet and irresistible influence' was then practically the only means of stimulating the mental activity, aside from the stimulus of necessity. Thus Comte differs from the instrumentalists, who consider that a practical need is the only one capable of arousing the mind, and posit practical dilemmas as the sole means of awaking thought to the need of further advance. Indeed, Comte emphasizes repeatedly that to insure progress it is essential that the mind be occupied with matters above the mere practical affairs of life. Thus he points out as one of the accomplishments of monotheism that it promoted intellectual development among the masses by "raising their ideas above the narrow circle of their material life and purifying their habitual feelings."[2]

Yet Comte holds that the mind has "the inevitable obligation to apply always its highest capacities to that work which, in each epoch, is required by the greatest needs of humanity."[3] Our next problem, then, is to consider the efforts of the intellect toward social betterment. The doctrine of fetichism was not so effective socially as later doctrines because, until the very end of its period, there was no priesthood to make application of the doctrine to social conditions. Yet the doctrine had some social value in that it furnished a system of common opinions, so necessary for the solution of social problems; since only after the establishment of a speculative foundation could social development take place.[4]

[1] *Cf. Cours,* Vol. V, p. 45.

[2] *Ibid.,* p. 458.

[3] *Ibid.,* pp. 453-4.

[4] Comte's conviction of just this is, as we have noted, the *raison d'être* of the Positive Philosophy.

But in order that the doctrine should serve as a social force, a class was needed to direct its application, for the theological philosophy was of such indefinite character that its social application needed direction, lest the religious ideas become a source of disunion. The polytheistic period witnessed an important development in social organization by virtue of the establishment of the priestly caste. Yet the régime was of only passing value, for it seemed to establish the reign of mind and established only a reign of fear. The priesthood, knowing more of the external world than the populace, kept the people in subjection by working on their superstitious fears so that the populace was subdued as if by conquerors. A reign of intelligence, however, would have been hostile to the true progress of society; for, "although mind must spontaneously tend more and more to the supreme direction of human affairs, it can never attain it because of the extreme imperfection of our organism." [1] Mind was 'born to modify and not to command.' To make more clear the inaptitude of reason for any but a consultative office, Comte says: "Speculative considerations are, or ought to be, too abstract and too indirect and too far away for the mind which is truly contemplative, to be fit for the usual government where special, immediate, and actual operations are dealt with chiefly." [2] Indeed, "philosophers are subject to a particular kind of mental narrowness, neglecting all the others, even in the cases where a sane decision ought directly to depend on wise mutual deliberation." [3] That is, most philosophers become absorbed in their own abstract problems and are incapable of assisting in deliberations on concrete matters.[4] A reign of mind would consequently be dangerous.

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[1] *Cours,* Vol. V, p. 239.

[2] *Ibid.,* p. 313.

[3] *Ibid.*

[4] The same idea, that philosophers are engaged with unreal problems, is current today. Thus it is said that apparently the philosophers were going to turn to more real problems under the lead of thinkers like Bacon and Descartes; "but, in spite of the ferment, it turned out that many of the older problems were but translated from Latin into the vernacular or into the new terminology furnished by science." (Dewey and others, *Creative Intelligence,* New York, 1917, pp. 3-4.) The conservatism of philosophy is attributed to its association with academic teaching. Thus "scholastic philosophy persisted in universities after men's thought outside the walls of colleges had moved in other directions." (*Creative Intelligence,* p. 4.) Consequently, "philosophical discussion is likely to be a dressing out of antithetical traditions, where criti-

Comte regards mind, then, as the faculty of abstract reasoning. But its highest function is to act in a deliberative capacity in regard to the needs of humanity. In order to function at all, however, it needs obstacles to keep it awake.[1] Such a mind is obviously unfitted to rule; hence the Greeks were wrong in believing it capable of domination. Consequently, "the great political problem (of monotheism) consisted in completely discarding the dangerous dreams of the Greek philosophers on the sovereignty of intellect, giving, nevertheless, a just satisfaction to this irresistible, spontaneous desire of social ascendancy, so energetically manifested by the speculative activity during the course of the centuries."[2] That is, because the speculative activity demanded some field of operation and yet could not become dominant in the political field, it was necessary to find some way of satisfying it as much as possible. This was accomplished in the Middle Ages by making a division between spiritual and temporal power. The spiritual power had as its realm education and the temporal power, action. Because of the theological philosophy, however, the division was not perfect.

The metaphysical hypothesis was the means of bridging the gap between the theological and the positive periods and thus was merely a transitory stage. Though a transitional stage, it was an essential phase of development, for it had to prepare for the new system by doing away with the old. The metaphysical stage, moreover, gave a concrete form to the evils of anarchy, prevalent during its reign, and thus stimulated the development of the elements of the new system. This was most important for,

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cism of one view is thought to afford proof of the truth of its opposite. . . . Direct preoccupation with contemporary difficulties is left to literature and politics." (*Creative Intelligence,* p. 4.) In other words, according to this view, philosophers, for the most part, are concerned with problems which have nothing to do with real life, whereas the true problems are those which have to do with contemporary difficulties. Comte, however, admits that some true philosophers never lose sight of the concept of the whole. But these would not try to rule. (*Cf. Cours,* Vol. V, p. 313.)

[1] Such a view is analogous to the doctrine of the instrumentalists, who posit the necessity of a problem in order to arouse consciousness.

[2] *Cours,* Vol. V, pp. 321-2.

" without such preliminary destruction, the human spirit could not even raise itself adequately to the general conception of how to construct such a system, (since) the weakness of our intellect and the brevity of human life hem in our imagination . . . to a most narrow dependence on the environment in which we actually live." [1] That is, our intellect is so weak and the individual life so short that it is impossible for us to conceive of a state wholly different from that which we experience. Evidence of this is seen in the fact that the most chimerical Utopias unconsciously reflect always faithfully the contemporary social state. Only through the demolition of the old could public reason envisage the new conception clearly enough to help with its realization. Such is the justification of the critical doctrine. But the doctrine has drawbacks because its " general spirit consists in making normal and permanent what was necessarily exceptional and transitory." [2] The most important principle of the doctrine is the dogma of free inquiry. This principle had been introduced by monotheism into the very heart of theology because in monotheism the beliefs were not so dogmatically fixed as in polytheism. The state of philosophical liberty thus procured by monotheism seemed by Comte to stand in the way of intellectual reorganization. He felt that adequate reorganization could be effected only when " most of the people give up the right of individual inquiry on subjects so superior to their qualifications." [3]

Throughout the metaphysical stage, however, the positive spirit had been developing. At length man came to regard all phenomena as subject to natural law. To express clearly the principles of this stage of experience and to show their application to social phenomena and relations are the great objects Comte has in view. We may now proceed to characterize briefly the Positive Philosophy, indicating its method and doctrine. Comte tells us that the true spirit of the Positive Philosophy can be understood only by viewing ' the hierarchical succession of the six

[1] *Op cit.*, Vol. IV, p. 37.

[2] *Ibid.*, p. 45.

[3] *Ibid.*, p. 56.

essential elements which compose the vast whole.'[1] These six fundamental sciences are: Mathematics, astronomy, physics, chemistry, biology, and sociology. And only by seeing the method and the doctrine of the Positive Philosophy exhibited successively in the various fundamental sciences can we understand the essence of the philosophy. Before following through the various modifications of the method and doctrine, however, we may pause to characterize the spirit of Comte's philosophy as an introductory step to its further explication.

In general, the study of man and of the external world are the two branches of philosophy. According to Comte, primitive philosophy took as its starting point the conception of man and subordinated to this conception that of the world, interpreting nature anthropomorphically. On the other hand, the Positive Philosophy starts with the study of the external world and subordinates to that the study of man. This direct study of the external world is alone capable of developing the notion of laws of nature — a conception which is 'the indispensable basis of all Positive Philosophy.' This conception of natural law made evident to man that he could not exercise arbitrary control over phenomena, but that any ability to modify phenomena could result only from knowledge of natural laws. Although the primitive and positive philosophies thus represent antithetical methods of approach to philosophical problems, yet "the true philosophy should inevitably tend to conciliate in their activity these two antagonistic methods."[2]

As to scientific method, the theological-metaphysical philosophy exhibited the preponderance of imagination over observation; whereas the positive spirit is characterized by the permanent subordination of imagination to observation. It should be noted, however, that observation must be combined with reasoning in such a way as to avoid the dangers of empiricism and rationalism. It is true, Comte indicates, that facts furnish the necessary point of departure for any positive theory. In fact, "all propositions which are not finally reducible to the simple enumeration of a

[1] *Op. cit.*, Vol. VI, p. 645.

[2] *Ibid.*, Vol. III, p. 270.

fact, particular or general, can not offer any real and intelligible meaning." [1] Yet a mere accumulation of facts is irrational, is not science but mere erudition; true science is composed of laws and not of facts. Consequently the positive spirit tends always to increase as much as possible the rational domain at the expense of the experimental. Science involves the subsumption of facts under laws. But progress is made when the elementary work of induction gives place to deduction, when acquired knowledge enables one to dispense, in part, with observation in that it fosters the exercise of prevision in the further establishment of laws.

As to doctrine, the positive spirit exhibits the "constant and irresistible tendency of rendering relative all those ideas which were . . . absolute first." [2] As a consequence of such a doctrine, all investigation into the nature of beings, their first and final causes, is prohibited; the laws of phenomena are alone sought. Such is the standpoint of relativity, which supposes that observation can disclose only the phenomenal aspect of reality so that reality will never be fully revealed. The hypotheses based on observation are consequently not formulations of reality. Yet they are not less stable than such hypotheses would be; for each new notion to which observation gives rise assumes its place in the ever expanding system of laws of which the Positive Philosophy is constituted. Besides this aspect of relativity, the true nature of the Positive Philosophy is also revealed when it is seen that positive speculations are a development of popular reason. Indeed, "the true philosophical spirit consists in the simple methodical extension of common good sense to all subjects accessible to human reason." [3] That is, Positive Philosophy is just a systematization of the wisdom of common sense. It is interesting to note that fundamentally the same view of the relation of philosophy to common sense is maintained by Hegel, who endorses 'healthy reason,' or 'common sense,' or 'immediate knowledge,' as representing a stage of truth of which account must be taken by a more philosophical point

[1] *Op. cit.*, Vol. VI, p. 703.

[2] *Ibid.*, Vol. IV, p. 297.

[3] *Ibid.*, Vol. VI, p. 706.

of view. "To seek to confute these utterances of immediate knowledge is the last thing philosophers would think of. They may rather find occasion for self-gratulation when these ancient doctrines, expressing as they do the general tenor of philosophical teaching, do, even in this unphilosophical fashion, become to some extent universal convictions of the age." [1]

From this brief characterization of the Positive Philosophy, we turn to indicate the successive development that the positive method and the positive doctrine exhibited during the rise of the positive spirit through the six fundamental sciences. The source of the positive method is mathematics. But mathematics does not manifest each of the different, general processes which compose the positive method. This lack is due to the extreme simplicity of the subject. The art of observation is very little developed in mathematics, since there argumentation is substituted for observation, in many cases. Consequently it remains for astronomy to direct the development of the spirit of observation, which is the simplest and most general of the four essential modes of investigation.[2] Moreover, astronomy gives the human reason the first sense of the meaning of natural law, for it is in astronomy that one first understands what is meant by the explanation of phenomena by similarity and succession. Physics develops the method of experimentation where we can employ either natural or artificially arranged circumstances to aid in the investigation of given phenomena. Chemistry develops the art of nomenclature and uses the method of investigation developed by physics. In passing from inert nature to living nature, the positive method is elevated to a new 'elaboration.' In the inorganic sciences, analysis predominates, but in the organic sciences synthesis obtains. The comparative method is consequently developed in biology. The method developed in sociology is the historical method. Sociology, however, not only fosters the development of a new method but it exhibits the development of all methods; it is chiefly in the study of social phenomena that

[1] Hegel, *Logic*, tr. by Wallace, Oxford, 1874, section 64.

[2] The four essential modes of investigation, according to Comte, are: observation, experimentation, comparison, and the historical method.

the true fundamental notion of method can result. This is due to the fact that sociology furnishes a comprehensive conception of the sciences.

Such are the phases of the evolution of the positive method, an evolution " which raises the scientific spirit, properly speaking, to the philosophical spirit." [1] The last science, sociology, constitutes, Comte shows, both logically and scientifically, the universal bond of connection among all positive speculation for it exhibits the relative point of view and furnishes the sense of the invariability of natural law because of its extension to all phenomena. Moreover, it yields a direct study of the subject and hence is the only really universal point of view.

The whole range of the sciences thus becomes subject to one point of view, without interfering with the independence of the various branches of the sciences. Furthermore, through sociology, the antagonism is solved between conceptions relative to man and those relative to the external world. Thus the method finds its most complete development in sociology, which subsumes under itself all former points of view.

As to the destination of the method, the theoretical office of the Positive Philosophy, as it concerns the individual, is to connect and extend his real knowledge. In its development, the Positive Philosophy exhibits logical coherence so that the test of the reality of each new conception is its coherence with the rest of the system. The theoretical office of the Positive Philosophy, as it concerns the race, is to furnish a logical basis for human association. It harmonizes the collective as it does the individual mind by its logical coherence. As the test of the truth of a new conception in the case of the individual mind is its coherence with other conceptions, so society, by the acceptance or rejection of a new notion, pronounces on its validity. That is, the unanimous acceptance of a new idea by society testifies to its reality. Consequently, all men should be regarded as collaborators in the discovery of truth.

We turn now from a consideration of the positive method

[1] *Cours*, Vol. VI, p. 783.

to an examination of the doctrine of the Positive Philosophy, for Comte says conceptions relative to method and doctrine are inseparable. We propose merely to indicate the nature and connection of the abstract studies which go to make up the system of knowledge which the Positive Philosophy embodies — a system which illustrates the fact that all our real knowledge is commensurable with our needs. Thus we should seek to know only those phenomena that influence humanity, and the laws which the examination of the evolution of humanity exhibit. However, although knowledge is destined ultimately to meet our needs, the sciences had first to expand by divorcing theory from practice; otherwise their expansion would have been seriously impaired.

With these introductory remarks, we turn to a brief consideration of the doctrine of the Positive Philosophy. In the first place, mathematics furnishes the fundamental feeling for logical laws, without which it would be impossible to conceive of physical laws. Numerical speculations exhibit the most general ideas of order, whereas mechanics, the most perfected branch of mathematics, develops the notion of the law of progress. The second science in the hierarchical succession, astronomy, exhibits the character of the universal medium. It is chiefly from astronomy that humanity derives the sense of the invariability of the natural order, a sense that Comte believes stimulates regularity in conduct. Physics and chemistry add further to our knowledge of inorganic existence, completing our knowledge of the influence of the general medium on the organic. These sciences serve also as a transition to the organic sciences. Chemistry, especially, exhibits the susceptibility to modification of the phenomena which it studies. Although the inorganic sciences furnish systematic ideas of order and harmony, such ideas are more completely manifested in biology where there is more complexity of phenomena. Sociology exhibits the extension of the results of biological study to the collective organism. Sociology, moreover, represents the universal standpoint from which all the conceptions developed in the various sciences are shown as fundamentaly unified. Such being the nature of the positive doctrine, the positive state will exhibit, when finally constituted, the following characteristics: first, it

will be one of entire intellectual consistency; second, our intelligence will give over the search for ultimate causes and confine itself to the study of laws of phenomena with the view to ameliorating our existence; third, the expansion of our speculations will be fostered by the liberty that the nature and destination of real theories leaves to our intellect. The attempts will no longer be made to reduce all phenomena to one order of laws but it will be seen that a most satisfactory harmony exists because of common subjection to the fundamental method, a uniform tendency to the same destination and subordination to the same evolution.

We have been following Comte's demonstration of the 'law of the three stages' in his philosophy of history and turn now to an estimate of that law. The law, in its general aspect, is not very different from similar determinations of progress to which the German Idealists gave expression. Thus Fichte speaks of the five epochs into which he divides *Erdenleben* as reducible to three: the epoch of the dominion of blind reasoning — *blinden Vernunftsherrschaft;* the transitional epoch, which he characterizes as the time when criticism has broken down the old restraints and the new are not yet built up, so that there is intellectual licentiousness; and, finally, the epoch of the dominion of reason aware of itself — *sehenden Vernunftsherrschaft.* In general, the German Idealists hold that thought passes from the common sense point of view, the stage of immediacy where one accepts the given just as it shows itself to be on the surface, through the scientific point of view, where one's earlier reflections appear valueless, and one seeks beyond the immediately given for the underlying principle, to the philosophical point of view where all is seen in its organic relations. Comte also has the merit to see that mind in its development has passed beyond the common sense point of view and beyond the negative stage. But he does not adequately envisage the stage that it finally reaches. As will become evident in the following chapter, mind remains for Comte at the abstract, scientific point of view. Mind does not, in Hegel's phrase, attain to the standing of "spirit that knows itself as spirit." Comte does not perceive that mind's very awareness of relativity implies that it has already passed beyond that limitation and reached

a point of view that transcends the oppositions of the scientific categories.

It is important to note, moreover, that before Comte can condemn other modes of explaining the facts of experience he must show that "in bringing phenomena under the dominion of law, we have given an ultimate explanation of experience, or at least the only explanation that is possible for us with our limited capacities." [1] Indeed, "unless it is shown that there is no other problem to be solved but that which the special sciences set before us, we are simply starting from an unverified hypothesis." [2] That is, Comte's fundamental law is simply an hypothesis requiring to be substantiated like any other hypothesis.

Further reflection will show that the law of the three stages is not sufficiently supported by the facts of experience. On the one hand, the law does not take into account all the facts revealing the nature of mind, since Comte excludes whole races from his consideration in demonstrating the law. Yet such arbitrary exclusion is not permissible from the point of view of Comte's presupposition that the essence of things can not be known. That is, unless Comte assumes that he has arrived at a more fundamental insight into the nature of mind than is expressible in laws formulating relations of similarity and succession that mind exhibits, he can not formulate a law of mind. He can not state a law applicable to the functioning of minds that have not come under his observation. If one can know nothing of the essence of mind, one is limited simply to formulations of empirical observations on the nature of its functioning. One can state a law for mind only when one knows something of its essence. In short, by his assumption concerning the nature of the Positive Philosophy, Comte is limited to the postulation of a law of the development of observed minds. He can not, therefore, arbitrarily exclude facts that may reveal something further concerning the nature of mind.

Moreover, the law embraces suppositions as well as facts. Thus Comte begins with prehistoric times and does not limit him-

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[1] J. Watson, *Comte, Mill and Spencer*, 1895, p. 31.

[2] *Ibid.*

self to what experience reveals. In dealing with this stage, he is drawing conclusions concerning a period about which there is little scientific knowledge. Any statements made about mind at that period must be based on a conception of mind that purports to grasp mind's essence. Yet Comte does not admit knowledge of the essence of things, so that he should limit himself to postulations based on facts. Hegel guards against the mistake of including the mythological stage in his philosophy of history. He adopts the view that "the only consistent and worthy method which philosophical investigation can adopt, is to take up History where Rationality begins to manifest itself in the actual conduct of the World's affairs."[1] Comte himself admits difficulties in apprehending the nature of the first period; he refers to 'the first intellectual infancy which we can now so little comprehend.' Yet he does not realize that, in a scientific philosophy of history, such a period should be left unexamined. His law should be based simply on facts and not, in part, on suppositions.

Not only does Comte exclude necessary facts and introduce suppositions in demonstrating his law, but he wrongly interprets facts of historical experience. Thus the erroneousness of the view that characterizes all Greek philosophy, as well as all other philosophy up to modern times, as at the theological stage, can be shown in the light of historical facts. For example, at the time when Minerva and the other gods were regarded as deities, they were also considered as types; thus Minerva was considered as the type of wisdom. Consequently, the Greek people were at the point of view of 'theology' and 'metaphysics' at the same time.[2] That Comte is unaware of the facts of Greek history is quite evident. The first philosophers were physicists and it was only later that theological questions were taken up — contrary to Comte's opinion of the matter. A further example of Comte's lack of historical knowledge is shown in the fact that he refers to *nature* as the end term of the metaphysical system and

[1] Hegel, *Philosophy of History*, tr. from the 3d German edition by J. Sibree, London, 1894, pp. 61-2.

[2] *Cf.* M. Ferraz, *Histoire de la philosophie en France au XIX^e siècle*, Paris, 1882, Vol. III, p. 360.

yet the great metaphysicians of the past have sought for something outside of nature which is the principle or origin of it.

It should be noted further that Comte is not always consistent in his view of theology and metaphysics and that, in his criticisms, he seems to waver between his different interpretations. At times he speaks as if the error of theology was in interpreting phenomena as the expressions of divine wills and of metaphysics as a repetition of this error in a more irrational form.[1] According to this view, the mistake is simply that the conception is confused and experience will rectify it. At other times, he speaks as if the error had its source in an attempt to determine the real nature of things when we can know only phenomena.

Furthermore, Comte himself lapses into metaphysics in demonstrating his law, for he seeks to show why mind passes through these stages in its development.[2] Yet, in doing so, he is trying to penetrate beyond the given; he is seeking causes. In his demonstration of the law, he should be content with showing *that* the mind develops in a certain way. The question of *why* it does so has no place in a positive inquiry for experience does not exhibit the reason for the mind's so developing.

Finally, not only does the law express what was a commonplace in German philosophy before Comte's time, not only is it an *a priori* assumption, unsupported by the facts of history, but Comte fails to grasp clearly and to develop the fact that each stage preserves the truth of that which has preceded it. Thus he speaks of "three kinds of philosophy, or general systems of conceptions of all phenomena, which are mutually exclusive."[3] From this and other passages, it becomes evident that Comte fails to hold consistently to the view expressed elsewhere by him which represents each age as giving a more adequate expression of the truth than the age before, while it preserves the previous insight. Consequently, however much of suggestion there may be in his 'law of the three stages,' his formulation of it cannot be regarded as affording an adequate basis for a philosophy of experience.

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[1] *Cf. Cours,* I, p. 4; and II, pp. 446-7.

[2] *Système,* Vol. IV, *Appendice général,* p. 138.

[3] *Cours,* Vol. I. p. 3.

CHAPTER II.

THE RELATIVITY OF KNOWLEDGE.

We have seen that the human mind, at last abandoning the search for knowledge of the efficient causes of phenomena because it recognizes the impossibility of attaining such knowledge, limits its ambition to the discovery, by the combined use of reason and observation, of the laws of phenomena.[1] Through experience, man gradually learned the limits of his faculties and came to see all great ultimate problems as insoluble by the human mind. Consequently man at length confines his operations to the discovery of actual relations. Such a view as this of Comte's was, as we have seen,[2] at one with that of the eighteenth century empiricists. Kant, also, asserts that our knowledge is only relative. "Things as objects of our senses existing outside us are given, but we know nothing of what they may be in themselves, knowing only . . . the representations which they cause in us by affecting our senses."[3] Thus Comte agreed with those views which magnified the importance of the scientific method and denied knowledge except of the phenomenal.

It is important to recognize at the outset that relativity of knowledge means for Comte that we can know only phenomena. But the doctrine also implies that our knowledge is relative to our needs: "there exists in all respects a natural agreement between our real knowledge and our needs."[4] This second aspect of Comte's

[1] *Cf. op. cit.*, p. 4.

[2] *Cf.* Introduction.

[3] *Prologomena*, tr. Mahaffy and Bernard, London, 1889, p. 42.

[4] *Cours*, VI, p. 787.

conception was, in a general way, common to the philosophers of the eighteenth century. Moreover, the first aspect under which Comte regards knowledge is intimately connected with the second in that the knowledge of the laws of phenomena alone enables us to foresee the future and arrange phenomena in such a way as to secure our advantage. Nevertheless the two views, the phenomenalistic and the utilitarian conception of knowledge, form distinct, though closely related, elements in Comte's thought. These conceptions of knowledge were not taken over by Comte uncritically. The first aspect of his theory of the relativity of knowledge was the outgrowth of his interest in and acquaintance with the sciences. Furthermore, he came logically to that view through his discovery of the mind's development and through his examination of the development of scientific concepts. We have previously noted the conclusion to which the law of the three stages led Comte; and it is to the same conception of knowledge that he is brought by his philosophy of the sciences. It is accordingly necessary to turn to a consideration of the results arrived at in the philosophy of the sciences in order to gain a more adequate notion of his theory of the relativity of knowledge in its first aspect.

First, it is important to note that the classification of the sciences is complementary to the law of the three stages, since all sciences are not at the positive stage. Physics and chemistry, for example, show traces of the metaphysical spirit, and the moral sciences, up to the present, are still less advanced. In the classification Comte includes only the theoretical and abstract sciences, *i.e.*, only those sciences which have as their object the knowledge of laws. Such a classification is needed since there is, in our organism, a need of arranging facts in an order which we can conceive with ease. If we could not satisfy it by positive conceptions, we would inevitably fall back into theological and metaphysical explanations.[1] It is from the very nature of phenomena that Comte seeks the principle that will express the filiation of the different sciences. He feels certain that his attempt will not meet with failure since, through the discovery of the law of the three

[1] *Cf. op. cit.*, Vol. I, p. 64.

stages, sociology has been founded, and as a result of this new standpoint, a homogeneity of human knowledge, such as was not possible before, has been attained. All the fundamental sciences may henceforth be considered as equally positive, having given up the pursuit of the absolute for the knowledge of laws. Observation has shown that "the order (of phenomena) is determined by the degree of simplicity, or, what amounts to the same thing, by the degree of generality of phenomena, from which results their successive dependence, and consequently the ease, more or less great, of their study." [1] Such is the principle according to which it is now possible to classify all the sciences. In accordance with this fundamental principle, we can construct 'the encyclopædic ladder' of the sciences. Thus, mathematics is the true fundamental basis of all the natural sciences, and is followed by five other sciences: astronomy, physics, chemistry, physiology, and finally social physics.

The principle of classification does not state, however, the actual historical order in which the fundamental sciences have come into existence for different parts of each science have developed simultaneously and the different sciences have been perfected at the same time. The various sciences have influenced each other and all have been very closely connected with the general development of human society.

The significance of the principle of classification, then, is that, "in spite of the real and continued simultaneity of the development of the different sciences, those which are classed as anterior are, in short, older and more advanced than those presented as posterior." [2] Such being the meaning of the principle, the fallacy is obvious of Mr. Spencer's objection to the classification: that "it is *not* true that the historical succession of the divisions of mathematics has corresponded with the order of decreasing generality. It is *not* true that abstract mathematics was evolved antecedently to, and independently of, concrete mathematics. It is *not* true that of the subdivisions of abstract mathe-

[1] *Op. cit.*, p. 87.

[2] *Ibid.*, p. 84.

matics the more general came before the more special." [1] Mr. Spencer overlooks the fact that Comte has tried to make clear: the fact that he was not thinking of the historical development of the sciences in enumerating his law. As we have noted, he refers to the reciprocal influence that the sciences have had on each other and also to the interaction of the various parts of each science.

The significance of the classification of the sciences is that the principle expresses exactly the coördination which exists among the different branches of natural philosophy.[2] The former constructors of encyclopædic scales did not see this. They presented as distinct the different sciences which the human mind, in its progress, has cultivated separately; whereas since social physics established the homogeneity of the positive doctrine, it has become evident that the different sciences are not separate but are all branches of the same trunk; [3] the divisions which we fix are all artificial, since the subject of all our researches is the one order of nature, the purpose of division being merely for the sake of separating out the difficulties that we may solve them more adequately. Thus the principle shows the relation of each science to the whole positive system. Again, it shows the development of natural philosophy and is verified by the history of the sciences. Especially important is such a classification because we could not understand without it the history of the development of the human mind through the three stages. Not until we see that the more complex sciences can reach the positive stage only after the more abstract sciences have advanced to it, can we see how the theological or metaphysical state of certain theories can coincide with the positive theories. Coincidences of this sort can take place because the sciences which deal with the more abstract phenomena pass more quickly to the positive stage than those which deal with the more complex phenomena. Further-

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[1] H. Spencer, *Essays, Scientific, Political, and Speculative*, New York, 1891, Vol. II, p. 20.

[2] *Cf. Cours*, Vol. I, pp. 98-9.

[3] *Cf. ibid.*, p. 24.

more, the classification indicates the relative perfection of the different sciences, the more abstract being less dependent on others and more precise in themselves. Consequently the organic phenomena are less exact than the inorganic. Acquaintance with this fact helps one to see the limits to which our knowledge of a given science can go, so that we are not led afield in that science by false hopes.[1] In a word, "the ladder of the fundamental sciences represents, in Comte's mind, the methodical ascent of the positive spirit toward universality and unity."[2]

Thus Comte gains unity in his system, although it is not a unity attained by presenting all phenomena as having an identical origin. With his presuppositions, it might at first seem that the unity which Comte would most naturally seek would be a unity obtained by bringing all phenomena under one general law. But he considers such a hope chimerical because of our limited knowledge. What he does is to show by his principle of classification the filiation of the different branches of our knowledge — branches which study phenomena in various ways and have as their aim the subsuming of phenomena under laws. These branches are shown at length as coördinate to the whole and not as distinct and isolated.

Our task is to consider the nature of the sciences thus affiliated, in so far as they make clearer Comte's theory of the relativity of knowledge. From noting what Comte says concerning the nature and method of mathematics, we can best understand the true nature of that knowledge which he believes attainable for us and which is for him real and positive knowledge. Mathematics is of such a nature that he believes the name *mathematics* — signifying science in general — expresses its true nature. Consequently, through mathematics alone can we understand the true nature of science; for here alone we find out with precision the general method that the human spirit employs constantly in all its positive researches. Only in mathematics can a question be solved in so complete a manner and deduction present so 'rigor-

[1] *Cf. op. cit.*, p. 102.

[2] L. Lévy-Bruhl, *The Philosophy of Comte*, tr. by K. Beaumont-Klein, New York, 1903, p. 57.

ous a severity.'[1] In mathematics, our understanding exhibits the greatest proof of its power, since the ideas there considered are of the highest possible degree of abstraction in the positive order. Mathematics, then, is the first and most perfect of all the fundamental sciences — most perfect by virtue of the fact that "the ideas with which it is concerned are the most universal and the most abstract, and the most simple that we can conceive."[2] This means that mathematics enables us to deduce from the least number of immediate data the greatest possible train of results. Such is indeed the real use both in speculation and in action of the laws which we discover among natural phenomena: *i.e.*, that they serve as a basis for further deduction. Mathematics, then, embodies the perfection of science in itself by virtue of the extreme simplicity and generality of the ideas which it considers. It exemplifies true science in that it enables us to coördinate our knowledge with great precision.

Mathematics is, furthermore, 'necessarily and rigorously universal,'[3] since all inquiries may be reduced to the question of number. Consequently, Kant was wrong, Comte believes, in dividing human ideas into the categories of quantity and quality. Indeed Descartes proved that all ideas of quality are reducible to ideas of quantity. It is true, however, that, though mathematics has this attribute of universality, limits seem to exist with regard to its application to all phenomena. But this apparent limitation is due to our weak intelligence rather than to limits inherent in the science itself. It follows that, although every question may be considered to be capable of reduction to a question of number, we can not effect such transition, except in the case of the simplest and most general phenomena. Consequently, the more difficult sciences must remain in a preliminary state until we can reduce them also to mathematical treatment. By virtue, then, not only of the simplicity and generality of mathematics but also of its universality, we conclude that the Positive Philosophy owes to

[1] *Cf. Cours*, Vol. I, p. 132.

[2] *Ibid.*, p. 145.

[3] *Cf. ibid.*, p. 148.

mathematics its origin and its method, although each science modifies that method by the peculiarity of its phenomena.

To make clearer the combined method of observation and reasoning that is used in mathematics, we should see how it works out in the most superior division of mathematics — geometry, which is founded on observation. For the ancients, geometry was limited to the consideration of the most simple forms that nature furnishes. But, since Descartes's discovery in mathematics, we can include, in investigations, all imaginable forms as well as all constructible forms. Consequently the attention is not directed to different forms but to 'general questions.' Thus, in the case of the concept of space which was suggested by observation, we have come to dissociate that concept from body by thinking of the impression that a body would leave in a fluid where it was placed. From this impression, space can be envisaged as separate from the bodies which manifest it. The establishing of this abstraction is the first step in the rational study of geometry. In becoming thus abstract, geometrical speculations assume a character manifesting more simplicity and generality.

This consideration of the nature and method of mathematical philosophy indicates the character of the knowledge which Comte thinks attainable by us. It is knowledge originating in observation but comprised of laws which exhibit the characteristics of abstractness, generality, simplicity, and universality. Truly such knowledge may aptly be considered as only of the phenomenal, as not penetrating into the real essence of things.

Having now characterized the nature and method of mathematical philosophy, we may note its application to the study of different orders of natural phenomena. First, as to astronomy, this science may be defined as the science which has as its object "the discovery of the laws of geometrical and mechanical phenomena which the heavenly bodies present to us." [1] The mathematical character of astronomy is constituted by the extreme simplicity of the phenomena to be studied and by the great difficulty of their observation. Moreover the use of abstract mathe-

[1] *Op. cit.*, Vol. II, p. 13.

matics is absolutely indispensable to it on account of the necessity of deducing from a small number of direct measures quantities which are not, in themselves, directly observable. Because astronomical researches are simple and the laws discovered are important, astronomy is placed at the head of the natural sciences. It is the only science that has been entirely purged of all metaphysical or theological considerations. Consequently it furnishes a model for the other sciences.

In its method, astronomy furnishes a good example of the union of observation and reasoning in science. Those who conceive of science as consisting in the simple accumulation of facts have only to carefully consider astronomy to realize the superficiality and narrowness of their thought. It is the continual combination and elaboration of observations that characterize the science, even in its most imperfect state. Such being its real nature, astronomy did not really originate when the priests of the Egyptians and of the Chaldeans had made a series of empirical observations of the sky, but only when the first Greek philosophers had commenced to relate some geometrical laws to the general phenomena of diurnal movement. The true end of astronomical researches is always to predict with certainty the effective state of the sky in the more or less distant future, and the establishment of laws of phenomena offers evidently the only means of arriving at that end. Without such laws the accumulation of observation could be, in itself, of no utility. The collecting of data from observation, then, is only a preliminary step in the development of a science; the true science seeks to establish relations between observations. Moreover, the highest perfection of a science is reached, according to Comte, when its laws have been reduced to a single law. That perfection has been reached by astronomy, if astronomy be considered as restricted to the solar system,[1] since the development of the theory of gravitation. Such perfection is chimerical in all the other sciences because their phenomena are

[1] Later, Comte limits astronomical study to a consideration of the earth and of other celestial bodies only in so far as they exert an influence on the earth. Thus "in place of a vague study of the stars. . . . it (astronomy) should limit itself to a knowledge of the other stars only in their relation to the human planet. Only in this way does astronomy have a true unity." (*Système,* Vol. I, p. 508.)

more complex, but it should be the aim of each science to approach as near such perfection as possible.

As the most scientific of the sciences, astronomy has done more than any other science to overthrow the notion of final causes.[1] The knowledge of the movement of the earth alone has destroyed the foundation of this doctrine which fosters the idea of the universe as subordinate to our globe, and thus to man, since man was believed to have dominion over the world. Moreover, since Newton's time, regular order has been considered as established in our world and even in the entire universe by the mutual gravitation of its parts, hence theology has been deprived of its principal office of showing how order is maintained in the universe.[2] Thus astronomy shows phenomena to be subject to invariable relations and not dependent on any wills.

In this examination of the method and nature of astronomy, we have gained further enlightenment as to the nature of true knowledge as Comte conceives it. In his examination of astronomy, Comte has shown that the human mind, in restricting its researches, has been able gradually to introduce more precision and rationality into those investigations than is obtainable in any other branch of our knowledge. All the numerous phenomena that it considers have been subsumed under one general law. Furthermore, the possibility of foreseeing events has attained as much certitude and extent as could be desired. The precision and exactness of astronomical knowledge is mathematical precision and exactness. Thus the study of astronomy makes clear the abstract character of the knowledge that we can acquire. It also shows very clearly the relativity of that knowledge, since the laws are not absolute. Thus the law of gravitation would not necessarily apply to the whole universe, Comte thinks. In fact such extension would indicate failure to understand the relative nature of our knowledge. Moreover, he thinks it very possible that, if our actual observations could attain much greater precision than the present ones, we would find the present law

[1] *Cf. Cours*, Vol. II, pp. 36-7.

[2] *Cf. ibid.*, p. 38.

untenable. Although the day may come, then, when we must construct another law of gravitation, it still remains true that the law is sufficient for our actual needs. Furthermore, in spite of the relativity of our positive knowledge, our theories, by virtue of their subordination to observed facts, present the fundamental character of real stability. Thus, in his desire to do away with absolute notions, Comte gives only a relative character to the most universal laws. He also restricts the demands to be made for verification of laws. Thus, in the case of the law of gravitation, he thinks that we should not require verification to be pushed to ultimate limits. As long as the law has been established in accord with a reasonable amount of data, and is sufficient to our needs, we must not require more.[1]

Physics is the next science to which Comte applies the general precepts with which the analysis of the less complicated sciences have furnished him. He applies these precepts with the hope of giving some positivity to physics. His special task, then, is to determine the object of physics. In general that object is, with the coöperation of chemistry, to discover the laws of the inorganic world. In order, however, to arrive at a more specific description of the object of physics, Comte indicates the two classes of research which must be excluded from physical investigation, if such investigation is to become positive. In the first place, we must not inquire into the nature of bodies; our concern is merely with properties. Moreover, it is a question whether a body is anything apart from its properties. To the scholastic subtility of the metaphysical spirit is due the inclination to consider bodies independent of their phenomena. Again, we must avoid the error of referring phenomena to the action of agents. Pushed to its logical conclusion, this reference of phenomena to agents might lead to the indication of one agent as responsible for all observable phenomena. And we can not demonstrate the falsity of such an hypothesis. Yet such hypotheses would introduce confusion into our studies, since our concern is only with the knowledge of laws of phenomena and not with their

[1] This conception of law will call for examination and criticism when we come to an estimate of this phase of the theory.

mode of production. Consequently, the object of physics is the "study of laws which regulate the general properties of bodies, ordinarily regarded in the mass, and always placed in circumstances which admit of the composition of their molecules remaining intact and generally in their state of aggregation." [1] It should be added, since all science should aim at prevision, that the end of physical theories is to foresee as exactly as possible all phenomena which will be exhibited by a body placed in any given set of circumstances, excluding all those which could alter its nature.[2]

So much for the object of physics. The principal means for attaining that object are experimentation and the application of mathematical analysis. Experimentation is most widely developed in physics because the extent to which experimental methods may be employed is subject to less restriction than in the more complicated sciences. Thus, in biology, it is necessary to retain in the experiment something of the normal state of the object under investigation, but, in physics, full use may be made of artificial as well as of normal means to promote the experiment. Physics, furthermore, is susceptible to a greater extent than the more complicated sciences of mathematical analysis. This is because of its fixity and simplicity. The more complex questions of physics, however, do not admit of mathematical treatment. Comte's view with regard to the means that must be employed if physics is to attain its aim gives further indication of the abstractness of the knowledge that goes to make up physics as a positive science. It is not to be the concrete type of knowledge acquired by sinking oneself in the object and letting the object manifest itself in some systematic form, but it is abstract knowledge gained by standing outside of the object and observing it in an artificial way, making the object exhibit modes of activity under circumstances that the observer imposes on it, rather than under circumstances that naturally grow out of the situation. Or, if mathematics is applied, the result is some abstract mathematical

[1] *Cours*, Vol. II, p. 401.

[2] *Cf. ibid.*, pp. 401-2.

formula. In general, the result is not knowledge of the real, concrete nature of the object, but only of laws relating to the general properties of the object, laws which may help us to predict how the object will act under a given set of circumstances.

In the case of chemistry, it suffices to state Comte's view as to the imperfection of that science in his day and the aim that it should try to attain in order to become a true science. Chemistry, Comte thinks, is "so rich in details that it is imperfectly constituted as a fundamental science."[1] It is a better coördination of the subject-matter that is needed. To indicate what this coordination should be, Comte says that the essence of true chemical philosophy is contained in the proper system of classification. Such classification has two essential conditions: first, chemical studies must be fused into one body of homogeneous doctrine, and, second, all combinations should be reduced to dualistic concepts.[2] To accomplish the first, the distinction between organic and inorganic chemistry must be obliterated. To do this, the questions of organic chemistry may be divided between physiology and chemistry. Then the chemical questions will be of a homogeneous variety. To fulfill the second condition, we must introduce a dualistic hypothesis. The law of dualism assumes that chemical combinations are of a compound order. We can not completely establish this hypothesis, yet it is a helpful assumption on which to proceed.[3] Moreover, it is an assumption that has been verified in certain cases. These two conditions, so fundamental to that classification which constitutes chemical philosophy, show the abstractness of the knowledge that will make up chemistry: chemistry is artificially reduced to a homogeneous doctrine and then an unverifiable hypothesis is introduced to enable chemistry to accomplish its aim.

That aim is to ascertain the laws of the composition and decomposition of phenomena. More specifically, the aim may be stated as follows: "Given the characteristic properties of sub-

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[1] *Op. cit.*, Vol. III, p. 266.

[2] *Cf. ibid.*, pp. 266-7.

[3] *Cf. ibid.*, pp. 115-16.

stances, simple or compound, placed in chemical relation in well-defined circumstances, to determine exactly in the case of each in what their action will consist and what will be the principal properties of the new products." [1] Comte believes that, if such solutions were obtained, the application of chemistry to the study of vital phenomena, to the natural history of our globe, and to industrial operations would be rationally organized. Furthermore, Comte states that, if this method were continually applied, all data would be finally reducible to the knowledge of the essential properties of simple bodies which would lead to knowledge of the various principles and finally to that of the most remote combinations. The elements must then be made material for direct study. If these are once known, all other chemical problems, should admit of rational solution in accordance with a small number of invariable laws. The attainment of this aim would constitute of chemistry a true science. Such a view of the aim of chemistry shows the abstract kind of knowledge that is eventually desired — knowledge merely of the laws of the phenomena of composition and decomposition which result from the molecular action of substances on each other.

In considering biology, which is the most imperfect of all the sciences so far constituted, because of the complexity of the phenomena which it considers, Comte points out not only the true nature of biology but shows its scientific originality. It is important, he thinks, to establish this latter point because inorganic philosophy has continually tried to transform biology into a simple appendage of its scientific domain. The other extreme must be avoided, however; that is, biology must not be considered in isolation from the study of inert nature; this is the mistake of the old method of philosophizing. The subordination of physiology to the knowledge of the external world constitutes its rational positivity. The subject of biology is the study of vital laws. Consequently, in order to gain a precise idea of the end of biology, the notion of life must be analyzed. This analysis yields the conclusion that " the fundamental condition of life is

[1] *Op. cit.*, p. 20.

evidently characterized by the harmony between the living being and the corresponding environment (*milieu*)." [1] Such is the true nature of life, such, then, is 'the elementary basis of true biological philosophy.' But, while the object of biology is, in the last analysis, an exact knowledge of man — though it must not be forgotten that man in reality can be studied only in the social state — it is the exclusive study of the individual that biology investigates. Its broader object, however, has to do with organic life. That is, biology has, as its object, the connecting of the anatomical and the physiological points of view, *i.e.*, the static and the dynamic points of view. Biology aims at ascertaining the general laws of organic existence. "Given the organism or organic modification, to find the function or act, and reciprocally." [2] Such a definition of the object of the proper researches indicates the field which the science embraces. Biology is seeking not only the laws of the unique organism in its functioning but also those of all known and even all possible organisms, in order to establish harmony between the anatomic and the physiological points of view. Here again the abstractness of what constitutes real knowledge, according to Comte, is made manifest when it is recognized that the end of the biological science is to discover some common factor in the functioning of organisms in order to formulate that into a law; the aim is not to understand the organism by acquiring concrete knowledge of it.

Our survey of the aim and nature of the fundamental sciences has been made in order to give more concreteness to our statement of Comte's idea of the kind of knowledge alone attainable by us. We conclude this survey by a consideration of the object and nature of social physics, the new science that Comte seeks to establish. Comte indicates at length the state of anarchy that prevails with regard to social ideas, thus making evident the need for a new philosophy. He further indicates his conviction that

[1] *Op. cit.*, p. 289.

[2] *Ibid.*, p. 304.

the Positive Philosophy is just what is needed. There are two reasons for this conviction. The first is that the prevailing philosophies do not take account of the complementary character of order and progress. The theological school supports order and the anarchical school supports progress. The two concepts are held to be antithetical. Yet, as a matter of fact, no real order can be established nor last if it is not fully compatible with progress and no great progress can be accomplished if it does not finally tend to the consolidation of order.[1] It is just this blending of the two points of view that the Positive Philosophy accomplishes. Furthermore, the success of the Positive Philosophy in the other sciences seems to assure its success here. Thus it seems reasonable to believe that the Positive Philosophy will be able to reorganize ideas in such a way that the complementary character of order and progress will be understood. The second reason for believing that Positive Philosophy will answer the present need is the fact that it will introduce homogeneity into the desultory politics of the day. The aim of the program of social reorganization seems to Comte to be " to construct a political doctrine rationally enough conceived in order that, in all its active development, it can always be the full consequence of its own principles." [2] The Positive Philosophy fulfills this aim; it is such that its applications will exhibit logical coherence.

This character of logical coherence will gain for the positive social doctrine an inevitable ascendancy, Comte is convinced. It will not only impart rationality and homogeneity to contemporary politics, but will coördinate the present with the past. The conception of the present as uniform with the past and evolving out of the past is a distinct advance over the views maintained by the theological and metaphysical systems of thought. The theological school, unable to envisage the prevailing philosophy as a logical outgrowth of past thought, believes that the existing social condition is a kind of chronic mania. The metaphysical school, on the other hand, blindly condemns all times anterior to the epoch

[1] *Cf. op. cit.*, Vol. IV, p. 10.

[2] *Ibid.*, p. 20.

in which it has held sway. It is the exclusive property of the Positive Philosophy to recognize that each stage of development has evolved out of a former stage, comprehending the truth of that former stage but carrying it on a higher level.

This insight of Comte into the developmental character of truth, into the fact that the knowledge gained at a particular stage, although inadequate in the light of newer developments, must yet be regarded as an aspect of truth, is not only a distinct advance over the position of certain of his contemporaries but it is an advance over the conception of those writers of the present day who are demanding an 'about-face' in philosophy. Comte claims for the positive principle not only that it will show that human development has been a continuous process, that all social ideas form a whole, but that it will exhibit the homogeneity of natural philosophy with social philosophy, thus presenting all human knowledge as a scientific hierarchy.[1]

So much for the need and the opportuneness of the Positive Philosophy. The general spirit of this philosophy leads to a recognition that social phenomena, like all other phenomena, are subject to natural law, consequently that man can modify phenomena only if he has a knowledge of those natural laws and acts in accordance with that knowledge. It recognizes, accordingly, that social phenomena are susceptible of prevision. The study of social phenomena has two aspects: the static and the dynamic. A statement of the object of these two aspects will indicate further the spirit of social science. The object of the static study of social phenomena is the formulating of "the mutual actions and reactions which the different parts of the social system exercise continually on each other."[2] All study of the social elements, apart from the consideration of the whole, is regarded as irrational. Thus the organic sciences differ, in this respect, from the inorganic for, in the latter, scientific solidarity is so little marked that investigations are practically limited to elements, which are so much better known than the whole. For example,

[1] *Cf. op. cit.*, p. 181.

[2] *Ibid.*, p. 324.

in astronomy we know the solar system but not the universe. In the organic sciences, on the other hand, the whole is more accessible to us than the parts. The thought of universal solidarity Comte designates the ' master thought ' of the static study of phenomena. Moreover, in the static study of social phenomena, Comte warns us that our business is essentially to contemplate order that we may perfect it and not create it. The latter would be impossible for us to accomplish. In the dynamic study of phenomena, the object is " to discover the constant laws which regulate the continuity . . . of human development." [1] The ' master thought,' then, of the dynamic study of social phenomena is the conception of development.[2] From this consideration of the object of dynamic study, together with that of static study, we may sum up the true spirit proper to the new science as an attempt to see social phenomena in their relations. Positive social science, then, aims at seeing the phenomena it contemplates in its place in the coexisting and developing aspect of things.

To social science, so characterized, Comte subordinates all other fundamental sciences: " all scientific speculations whatever, in so far as they are human labors, must be necessarily subordinated to the true theory of human development." [3] If this theory could be so perfected that the number of deductions would be limitless, Comte claims that the different sciences would be seen, in an *a priori* way, as unique facts of this science. He says, however, that this can never be done, but that the supposition shows that the social point of view is the universal point of view. One function of social statics will be to perfect the investigation of the relations which unite phenomena. A function of social dynamics will be to aid in showing scientific conceptions in their historical connections. This latter is important, for no science can be fully understood except in the light of its history. The historical method, which sociology develops, is more or less applicable to all orders of scientific speculation. This becomes evident when

[1] *Op. cit.*, p. 366.

[2] The conception of perfectibility is a corollary of the concept of development. Comte admits continuous amelioration but considers such development subject to the fundamental limits which science can ultimately indicate.

[3] *Ibid.*, p. 520.

we see that each discovery is to take its place in the evolution of human knowledge and to be regarded as subject to the method of that evolution.

Since such is the nature of sociology, it becomes apparent that the knowledge of which sociology admits is more concrete than the knowledge which the inorganic sciences yield, since the laws at which sociology aims are subject to a conception of the whole. Yet the fact must not be overlooked that these laws after all are only laws which formulate observed relations of coexistence and succession. Comte recognizes the abstractness which such investigations yield. He says: "The theoretical spirit can raise itself to a general point of view . . . only by placing itself in a continuous state of abstraction which seizes what the different states have of semblance and avoids their characteristic diversities and which, for that very reason, is always more or less opposed to reality properly speaking." [1] That is, the theoretical spirit rises to a universal point of view, but it is still that of an abstract universal which does not include the differences. It is a point of view which, in seeking the common element in all phenomena of a given set of objects under investigation and attempting to express that element in terms of a law, loses sight of all the elements of individuality. Moreover, not even all kinds of relations are sought, but only relations of similitude and succession. The object of scientific research, then, is to arrive at abstractions.

The abstractness of the knowledge which is the goal of the speculative sciences is indicated not only by the fact that the concern of science is only with relations of similitude and succession, but also by the fact that the perfection of the science consists in arriving at as comprehensive laws as possible. Comte even suggests as a possible goal of the sciences one general law under which to subsume all phenomena but discards such an aim as unattainable because of the complexity of phenomena and the weakness of our intellect. The perfection of a science is also measured, according to Comte's notion, by its power of prevision.

In connection with this ideal of science — *i.e.*, to know in

[1] *Op. cit.*, Vol. VI, p. 751.

order to foresee — we should consider another element in Comte's doctrine: the view that observation should give place as much as possible to deduction. The task of the scientist is that of building up a logical order. These two conceptions, taken together, show a glimpse into a more fundamental notion of law than Comte usually expresses. This notion would suggest that experience must be comprehensible, must show logical coherence. It implies a wholeness of experience of which mere abstract laws of similitude and succession furnish no adequate account. It implies a glimpse into the nature of things; for, unless we can grasp more than the phenomenal aspect of things, we can never hope to predict the future of the object under consideration. This conception, in short, suggests a more concrete view than Comte usually succeeds in setting forth consistently.

Comte, in taking as his ideal of knowledge that which the abstract sciences yield, is at one with other thinkers who maintain that cognition can never penetrate to the core of reality, that it stands apart from the object that it contemplates and can know that object in merely an external way. In all these systems, the conclusions of cognition are necessarily regarded as abstractions from the given data of experience. This view does not recognize that in arriving at knowledge of the scientific sort, one sinks oneself in the object and lets the object progressively reveal itself, but rather assumes that, from an external point of view, one grasps isolated aspects of the object. Consequently, as Comte admits, one never really knows the object when one remains at the scientific standpoint.[1] So Kant believes that the understanding can never grasp anything but the phenomenal; reality forever remains hid to it. The knowledge that the understanding does grasp can be subsumed under the scientific categories. Bergson, also, asserts that science and logic can not penetrate the 'husk of reality.' Science apprehends only what has been 'crystallized,' what has been 'robbed of its vitality.' He asks, "Must we give up fathoming the depths of life? Must we keep to that mechan-

[1] Comte does not always imply that there is an unknowable reality back of phenomena. We have already noted where he makes such implications. At other times he speaks as if the phenomenal were all. Thus he asks if there is anything in bodies except their properties. We shall dwell on this point more at length in another chapter.

istic idea of it which the understanding will always give us — an idea necessarily artificial and symbolical?" [1] Hegel maintains that the mechanical categories can not explain even "the phenomena of light, heat, magnetism, and electricity. . . . Still less satisfactory is it to transfer these categories and apply them in the field of organic nature; at least if it be our aim to understand the specific features of that field, such as, the growth and nourishment of animals." [2] Furthermore, Hegel says, "What is concretely actual is not something spatial such as is treated of in mathematics. With unrealities like the things mathematics takes account of, neither sensuous perception nor philosophy has anything to do. In an unreal element of that sort we find, then, only unreal truth; fixed lifeless propositions. We can call a halt at any one of them; the next begins of itself *de novo,* without the first having led up to the one that follows, and without any necessary connection having in this way arisen from the nature of the subject-matter itself." [3] Thus Hegel entirely agrees with Comte that the kind of knowledge attained at the scientific standpoint is a very abstract kind of knowledge.

On the one hand, then, Comte believes that we can know only phenomena. This knowledge is formulated into laws which are expressions of relations of similarity and succession. On the other hand, he holds that knowledge is relative to the organism. We subsume the given of experience under subjective categories. Were the organism different, our world might be differently apprehended. Thus knowledge seems to have, at one and the same time, the quality of mere objectivity and abstractness and of subjectivity. Comte says, "So all our real knowledge is necessarily relative, on the one hand, to the medium, in so far as it is capable of acting on us, and, on the other hand, to the organism, in so far as it is susceptible of that action." [4] Such a view suggests Diderot's *Lettre sur les Aveugles.* In the contemplation of

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[1] *L'évolution Creatrice,* sixième édition, Paris, 1910, p. IV.

[2] *Logic,* tr. by Wallace, Oxford, 1874, §195.

[3] *Phenomenology of Mind,* tr. by Baillie, 1910, Vol. I, pp. 41-2.

[4] *Cours,* Vol. VI, p. 725.

phenomena, then, thoughts arise which we formulate into laws and which are, on this view, our thoughts, after all, and so still subjective, as with Kant.

Along with this tendency to make knowledge depend on the organism there goes the tendency to assert that, even though we may not know reality, our knowledge is commensurate with our needs. Indeed, it is Comte's merit to perceive that the positive sciences must have their results humanized and unified and kept from abstraction by relating them to man and to the service of man. Science has, as its ultimate aim, the enabling of man to know in order that he may foresee. It had its origin in the needs of man. But it had to separate itself from practical application in order to advance. Comte says: "Whatever are the immense services rendered to industry in our day by scientific theory, although, according to the energetic expression of Bacon, power is necessarily proportionate to knowledge, we must not forget that the sciences have, before all, a more immediate and moral destination, that of satisfying the fundamental craving which our understanding has to know laws of phenomena."[1] But, although we find isolated statements of this sort, we must recall that the whole purport of the Positive Philosophy is to establish a solid basis for social reorganization. "Ideas govern and throw into chaos the world; or, in other words, all social mechanism rests on opinion."[2] Consequently, Comte believes that, by arriving at a completely positive philosophy, and thus bringing knowledge into one body of homogeneous doctrine, the disorder due to heterogeneity of doctrine will be overcome and true social order established. Thus, while he shows the need of keeping science and its applications separate in order that science may expand, the ultimate reason for this expansion is utilitarian. The value of true theories is their practical results.[3] Man's study of nature must furnish him with the rational basis of his action upon nature. It is only through knowledge of the laws of phenomena that we

[1] *Op. cit.*, Vol. I, pp. 63-64.

[2] *Ibid.*, p. 48.

[3] *Cf. Système*, Vol. III, pp. 22-25.

can set them to modify each other for our advantage. Moreover, our direct power over everything is weak and disproportionate to our needs. Hence we can effect something great only through that knowledge whereby we can set one agent to work on another. It has been noted that public reason was the point of departure for philosophical speculation and Comte adds that it should set the goal for those speculations by directing them toward our needs.[1]

The knowledge that we have been able to acquire has not only satisfied our practical needs but it has done away with superstitious fears. For example, the action of astronomical science on our intelligence is important, for "it has dispersed absurd prejudices and superstitious terrors due to ignorance of celestial laws."[2] Again, the knowledge of the double motion of the planet which we inhabit was an intellectual revolution.[3] This knowledge overthrew childish illusions. Having quelled our fears, it gives now an understanding of how to direct one's actions wisely. Man came to a true sense of the fact that it was his business to acquaint himself with laws that he might modify the phenomena that were modifiable. Such a view is in accord with the theory that holds that knowledge should be 'operative' and not 'otiose'. "It must become operative and experimental."[4]

The modern pragmatic view, however, tends to over-emphasize the operative side of knowledge. This becomes more evident if we contrast the treatment of the subject by the Pragmatists with Comte's statements in regard to the relation of the theoretical and the practical. Comte has very carefully shown that knowledge must proceed for a long time on a purely speculative basis. He has emphasized the necessity of careful, rigorous, scientific training before one begins to apply that knowledge. Probably many thinkers who call themselves Pragmatists would admit all this, would agree that of course one must know

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[1] *Cf. Cours,* Vol. VI, p. 708.

[2] *Op. cit.,* Vol. II, p. 35.

[3] *Cf. ibid.,* p. 171.

[4] Dewey, *Reconstruction in Philosophy,* New York, 1920, p. 121.

the laws of nature before trying to transform nature. But the emphasis of their writings induces the feeling that the all-important thing is to attain practical results and previous speculative training is an unnecessary hindrance. They do not, like Comte, insist on knowing nature first, nor do they clearly recognize that nature is not clay for us to mold but an order for us to understand, an order that is not completely malleable to our wills. Certain pragmatic utterances give the idea that nature is merely a storehouse for us to use. Thus Dewey speaks of "our present feeling that associates infinity with boundless power, with capacity for expansion that knows no end, with the delight in a process that has no external limit." [1] Again, "that nature can be known through the application of mechanical formulæ is the prime condition of turning it to human account. Tools, machines are means to be utilized. Only when nature is regarded as mechanical, is systematic invention and construction of machines relevant to nature's activities. Nature is subdued to human purpose because it is no longer the slave of metaphysical and theological purpose." [2] In general point of view and direction, the doctrine expressed here does harmonize with Comte's view, as is apparent. But such statements, when thus unsupported by other considerations emphasizing also the need of theoretical knowledge of nature fail to convey so adequately as does Comte the necessity of understanding nature before making a tool of it.

Up to this point we have been attempting to set forth the different meanings that the doctrine of relativity of knowledge has for Comte. We have noted that relativity of knowledge means, first, that we can know only phenomena, consequently ultimate causes are forever hidden from us.[3] In the second place.

[1] *Op. cit.*, p. 66.

[2] *Ibid.*, pp. 70-1.

[3] By 'causes' Comte means hypostatizations which are either primitive deities or abstract entities. In either case, the cause is a thing, an entity, a personified abstraction, existing beyond our experience. It is Kant's *ding-an-sich*, an unknowable entity. Thus Comte sees in past philosophies the attempt to 'construe' experience, to see how it is 'made.' Even today, there are physicists who, while agreeing that science

relativity of knowledge means that knowledge is relative to the organism. Given another organism, one might have different knowledge. Finally, our knowledge is relative to our needs. That is, the instrumental view of knowledge is presented here. The next task will be to estimate Comte's theory of knowledge.

First as to the idea of law — the formulation of which is the immediate end of our scientific investigations, Comte's insistence that philosophy must seek for laws rather than causes is a healthy reaction against the tendency to try to discern 'how experience is made.' Comte's demonstration that the objective order has regularity and uniformity in itself is a signal advance over the conception that regards phenomena as subject to quasi-human wills. But, on the other hand, Comte does not proceed far enough in developing his conception of law. His laws are formulations of external relations only. But the universe is internally organized as well. It is a complete system of inter-related parts whose relations may not only be expressed in mathematical formulæ but also in laws which take account of the internal dependence of each part on all the rest. This more comprehensive view of the relatedness of the universe Comte fails to grasp, and hence his theory takes account merely of its mechanistic aspect.

Of Comte's doctrine of the limitation of knowledge to that which is merely relative, of his exaltation of the scientific categories to the position of ultimate philosophical categories, it may be said that such is a procedure coercing "the universe of life and persons into the formulas applicable to *things*." [1] Moreover, there is nothing to show that phenomena and their laws are the only accessible objects of human thought, except the law that Comte himself has set up.[2] To say that the human mind can not go beyond the phenomenal point of view, that logic is co-terminus

is devoted to the study of law, adopt hypotheses as 'logical artifices' and yet tend to existentialize the subject of the hypothesis. Interpreting the research for causes in this way, Comte rightfully repudiates it as 'inane.' (*Cf. Catéchisme*, p. 83.) But Comte regards as the only alternative to such a vain research the seeking of laws of similarity and succession and thus assumes a too abstract investigation as the only possible type of investigation, as the only way of gaining knowledge of what is experienced. In interdicting knowledge of reality to us, it is as if Comte himself interprets reality in existential terms, placing it out beyond our capacities for research.

[1] J. Martineau, *Essays on Philosophy and Theology*, Boston, 1866, p. 4.

[2] *Cf. ibid.*, p. 27.

with the standpoint of the physical sciences, is to accept as final for knowledge a point of view that is abstract. At times, Comte seems to consider the given data of experience as something existing apart from and external to the knowing mind, in only external relation to that mind. The mind recognizes its own limits, beyond which it can not penetrate. But "if I know that my knowledge is limited, I must also know something of what is beyond the limit."[1] Furthermore, it is a contradiction to say that I know nothing but phenomena, if phenomena are manifestations of reality, for I still must know reality, even though imperfectly.[2] Again, to say that knowledge is of mere particulars is a contradiction in terms; we do not know a particular as a bare existence, we know particulars as united; we thus know a certain universal aspect of the object.[3] The laws of phenomena, in other words, are more than mere re-affirmations of phenomena. In fact, a law is contrasted with phenomena "as permanent with changing, as unity with multiplicity, and yet it is one with them, as the principle by reference to which alone they are lifted above mere appearances, or illusions of the moment."[4]

To recapitulate these points, in the first place one can not say that one knows merely phenomena unless one also knows at least that there is something beyond the phenomenal. Comte constantly implies such a 'something beyond,' so that there is at least assumed a knowledge of its 'thereness.' Consequently, Comte can not consistently contend that we know only phenomena. As a matter of fact, he does at times imply an approach to knowledge of reality but he says that it is only an approximation. One is compelled here to recognize a conception of reality that is as much an entity as any of the metaphysical entities that it is Comte's merit to try to exclude from philosophy. That is, in assuming that reality ever remains hidden from us, that we can at best only approximate a knowledge of it, the implication is that there is an

[1] Watson, *Comte, Mill, and Spencer*, 1895, p. 36.

[2] *Cf. op. cit.*, pp. 35-6.

[3] *Cf. ibid.*, p. 40.

[4] E. Caird, *Hegel*, 1883, p. 170.

existential reality placed beyond our poor powers of comprehension. Thus reality comes to be regarded as an entity projected out beyond the reach of our knowledge. Reality, so posited, becomes a metaphysical entity, a thing which has no place in a system that undertakes to limit knowledge to ascertaining laws of similarity and succession. Again, in knowing relations, we know something permanent, something universal, something beyond the mere *given* in experience; we know at least a part of that reality which Comte regards as unknowable. To attempt to remain at the phenomenal standpoint, at the standpoint of the mere given, goes against the whole tradition of philosophy which has ever attempted to understand the data of experience in the light of deeper insight into its meaning. Even the knowledge that Comte admits is not opposed to reality, but is one aspect of reality.

We have shown that Comte conceives of knowledge not only as belonging to the phenomenal alone, but also as relative to the organism. Thus knowledge has a purely subjective quality. It is the individual's way of apprehending reality; but the thoughts, after all, are our thoughts and so still subjective. Comte's difficulty seems to be that he sees, on the one hand, the need of facts and, on the other hand, the need of hypotheses to apprehend those facts, without seeing the necessary relation of the two. In other words, a fact can not be apprehended as such; it must always come as, in a sense, subsumed under a point of view, as already related; it must come in its context. But Comte, like Kant, never quite recognizes that the hypotheses, the categories which are the mind's way of apprehending experience, are also immanent principles in experience. When this is grasped, it is possible to perceive that the facts, which are the data of experience, have within themselves their own principles of organization, and that these are of such a nature that mind is competent to apprehend them. The mind and the objective order are then complementary to each other and not externally related, as Comte would imply. To assume, as he does, that given a different organism we would apprehend experience differently, is to assume a noumenal world not complementary to mind as it is constituted. It is assuming a 'beyond knowledge' which is just as much a

metaphysical entity as any 'first cause.' His theory that knowledge is relative to the organism is unsatisfactory because it implies a subjective interpretation of experience and, as a consequence, a noumenal world.

Such a subjective standpoint is further implied in Comte's theory that our knowledge is relative to our needs. The knowledge of the external order, which knowledge he was at first at such pains to urge upon us, is seen at last in only its instrumental aspect.[1] Mill refers to this doctrine in the following way: for Comte "all exercise of thought should be abstained from, which has not some beneficial tendency, some actual utility to mankind."[2] Mill believes that there is some truth in such a view. His objection to Comte's theory does not then apply to its general direction, but to its too narrow conception of the range and purpose of investigation. That is, M. Comte most unequivocally condemns as 'idle' some investigations that have yielded practical results. Thus the inquiry into the internal constitution of the sun has yielded practical results. Mill holds, contrary to Comte's opinion, that investigation into the facts of the universe should be allowed, since no one knows what knowledge may be eventually useful.

A more general criticism of the view might well be offered, however. It seems quite in harmony with Comte's view of knowledge as phenomenal that he should make utility its highest aim. But, in making 'contemplative' knowledge subordinate to 'operative' knowledge, Comte is emphasizing one side of experience to the exclusion of another equally important side. True, 'knowledge is power'; we must know in order to do. But there is something to be said for 'contemplative' knowledge apart from any ulterior aim. There is reason to think that the contemplative aspect of knowledge is just as important as the operative aspect. Hegel has aptly pointed out that classical studies have merit primarily, not for any utilitarian reason, but rather for the reason that they have no connection with everyday life. Thus they take one out of one's narrow

[1] *Cf. Système*, Vol. IV, *Appendice général*, p. 146.

[2] *Auguste Comte and Positivism*, Philadelphia, 1866, p. 172.

subjectivity, they give the key to a new and far-off world. And, moreover, they awaken the human mind to a true appreciation of the beauty, joy, and value of life. Comte's statement: "We weary of thought and even of action, we never weary of love," is a comment in itself on the narrow field that he gives to knowledge. That is, if knowledge must have for its ultimate end a practical end, then some other experience besides the knowledge experience is necessary to give life value. Thus Comte attempts to give life the richness with which knowledge that has a utilitarian end can never supply life. And he seeks to bring this about by instituting the worship of humanity, in which the feelings are given a chance to develop. In the worship, prayer to the object of adoration is the special means of developing the feelings. At the beginning of prayer an idealized memory image of the object of worship is called up. This kindles the warmth of the feelings toward that object. Then follows the prayer proper which is an 'effusion of gratitude and love.' The fervor of the prayer strengthens the feelings. Prayer not only develops feeling but, in prayer, man thinks and acts as well as loves.[1] Thus, in worship, man has a richer experience than he does in pursuing the abstract knowledge of the sciences.

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[1] *Cf. Catéchisme positiviste,* p. 170.

CHAPTER III.

THE NATURE OF MIND.

The conclusions of the preceding chapter with regard to the relativity of knowledge suggest the question as to Comte's conception of the nature of the mind that knows. If knowledge is always of the phenomenal, if mind can never penetrate to the essence of things, what is the nature of such a mind? Comte answers the question in two ways: first, by presenting a 'phrenological physiology,' and, second, by giving an account of the mind's functioning. He adopts the first method because he wishes to discover laws of psychical phenomena analogous to the laws of those phenomena with which the physical sciences deal. But he realizes also that the understanding is not given as such in sense experience. Since, then, the understanding is not an object of sense experience, Comte regards as futile attempts to show how mind is made up. He characterizes as 'puerile' such procedure as that of Condillac, who seeks to 'construe' mind by deriving activities denoted as will, memory, attention, judgment, imagination, and reason from simple sensation, thus attempting to exhibit mind 'in the making' rather than to understand it. Furthermore, Comte would not employ the method of introspection. The understanding can not be made an object of observation in the same way as the phenomena of the natural sciences. Consequently, Comte, like most of the Ideologues, makes the object of his study the physical substratum of sensation, that which is actually presented as existential, *i.e.*, the nervous system. To attempt to apply the scientific categories to distinctly mental processes is to existentialize those processes. It is to read off those processes as if they were analogous to phenomena of the natural sciences. Thus Comte sees clearly that a scientific account of

the mental life must be expressed in terms of the physiology of the nervous system.

Secondly, the fact that mind can be really understood only through its activity is an insight that it was Comte's merit to gain at a time when psychologists in France were, for the most part, given over entirely either to physiological psychology or to introspective analysis. The justification for physiological psychology may be thus stated: "It is because of the continuousness of life and mind, and because it is life that thus sets the first problems for mind, that the analysis of the biological functions affords the essential clue to the analysis of mentality at this stage."[1] Thus, in a preliminary way, this type of psychology may be suggestive in the study of mind. "But the development of mental life involves a transcendence of the ends set by the living body, and the creation of a scale of values that have no direct reference to thē well-being of the bodily life."[2] That is, the problems of mind at its 'fullest stretch' are very different from those at the psycho-physical level of experience. Mind, at its 'widest reach' has advanced beyond the comprehension, the *grasp,* as it were, of any existential treatment — such as that where the brain processes and structure are the object of investigation. This method of seeking to know mind yields no insight into its fundamental nature. Mind can not be confined within the static categories of the physical sciences, categories that delimit only abstract aspects of the object considered. In a treatment that follows the methods of the physical sciences meaning and value, in short, all that is significant about mind, is omitted. The stereotyped results of analysis in terms of general faculties, do not furnish a real clue to mind's nature. Thus "whenever and wherever the interest is in *human* relationships, the 'phenomenal' or 'natural science' categories are incapable of expressing what we want to know."[3] And it is in 'human relationships' that Comte's interest ultimately lies.

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[1] J. E. Creighton, "The Standpoint of Psychology," *The Philosophical Review,* Vol. XXIII, p. 170.

[2] *Ibid.*

[3] *Ibid.*, p. 162.

The method of introspective psychology does not succeed in exhibiting mind adequately; the method does not reveal mind's concrete nature. Such analysis yields merely "a cross-section of mind at a particular moment." [1] A series of such views fitted together can hardly be regarded as representing mind in a concrete way. Comte offers pertinent criticisms of the method of 'interior observation.' He believes it a profound absurdity to suppose that a man can observe himself think. The impossibility of accomplishing 'interior observation' is due to the fact that the observing and the observed organ are the same. Consequently, to make observation on oneself, one's intellect would have to pause from activity and yet it is activity that is to be observed. Unless the pause can be effected, no observation can take place and yet, if the pause is made, there is nothing to observe. Moreover, if such a method were possible, the study of the understanding would be very much limited, since only the pronouncements of an adult, healthy man would be accessible. Hence data concerning the influence of different ages or of pathological states could not be obtained as auxiliary helps to the understanding of mind. In short, neither this method nor that of physiological psychology adequately reveals the nature of mind.

But, if the purpose is to constitute such a science of mind as will be analogous to the physical sciences, a physiological psychology alone will answer that demand. This was Comte's aim and, therefore, his phrenological psychology has a *raison d'être*. It is a necessary preliminary to a description of the individual and social expressions of the mental life; to show mind in its static aspect seems to him essential before it is revealed in its dynamic aspect. Thus, to understand fully his conception of mind, it will be necessary to follow through his doctrine of the 'intellectual and moral faculties of man.'

Before coming to the direct consideration of those faculties, Comte makes some pertinent criticisms of conclusions arrived at by others as to the nature of mind. Psychologists, he writes, tend to isolate the science of mind from the other sciences, whereas

[1] *Op. cit.*

it can be understood only as a branch of the 'main trunk' of the sciences. More specifically, in so far as a study of the nervous system of man throws any light on the nature of mind, this study must be pursued in connection with investigations of the nervous systems of other species in the animal kingdom. In so far as mind is considered from a biological point of view, the results of the investigations of the substratum of consciousness in the lower forms of animal life aid in the understanding of the human mind.

A further error is that of the metaphysicians in failing to appreciate the relation between the affective and intellectual faculties. They have regarded the intellectual faculties as the predominating faculties. Hence they have either neglected the affective faculties or else that have subordinated these to the understanding. "Daily experience, on the contrary, shows . . . that the affections, the propensities, and the passions constitute the great springs of human life." [1] The misconception with regard to the relation of the affective and the intellectual faculties has led to man's being regarded falsely as essentially a reasoning being. There are, Comte thinks, two reasons for this view concerning the supremacy of the intellect. The first is that there has been thought to be a great difference between brutes and man. The other cause of this 'great aberration' is that metaphysicians are fond of conserving the purity of *le moi.* Comte offers the evidence of Positive Philosophy against the conception of the unity of *le moi.* He says that mind is a multiplicity and not a unity.[2] Consequently, he believes that 'the famous theory of *le moi*' is without scientific object, being destined to represent a purely fictitious state. Comte admits, however, a harmony of the different animal functions. It is this universal consensus of the organism that gives rise to the notion of *le moi.*

In general, concerning these 'aberrations' of metaphysicians, Comte concludes that "metaphysicians, always dominated by their vain tendency to unity in their nearly exclusive study of the under-

[1] *Cours,* Vol. III, pp. 778-9.

[2] *Cf. ibid.,* pp. 781-2.
Such a conclusion is natural when relationships are regarded as all external and not internal.

standing, have failed entirely in attaining a true notion of the intellectual faculties themselves, to which they have . . . subordinated the affective faculties." [1] As an illustration of this failure to arrive at an accurate conception of the intellectual faculties, Comte points to the scholastic faculties that have been set up as fundamental entities, as 'hypostases' of the manifestations of mind. Sensation and will are not entities but merely the different modes in which the functions manifest themselves.

By pointing out errors of other psychologists, Comte has made clear certain facts with regard to his own conception of mind. Thus mind can not be made a direct object of observation since the observing and the observed organ would then be the same. That is, as Kant would put it, the *I think* is always subject, never object. Again, psychology must not be considered as isolated from the other sciences, and especially it must not be considered as isolated from the study of animals. We learn much about the intellectual and affective faculties from animal psychology. Still further, contrary to the opinion of metaphysicians, the intellectual faculties do not dominate the affective faculties. The latter awaken the intellectual faculties and keep them stimulated.

Comte next proceeds to a discussion of Gall's doctrine, which he adopts with modifications. The two philosophical principles which serve as a basis for Gall's doctrine as a whole relate to the innateness of fundamental dispositions and the plurality of distinct and independent faculties. The validity of the first principle — the innateness of basic tendencies — is established by all cases of talents or pronounced character. The diversity of such cases, and also of most pathological cases, proves the second principle — the plurality of the faculties. These principles are further established by the study of animals. The physiological conception of the diversity of faculties corresponds, in the anatomical view, to the division of the brain into a certain number of partial organs. Though the intellectual and affective faculties are 'more contiguous' and 'mutually resembling' than in any other system,

[1] *Op. cit.*, p. 788.

yet they are distinct and independent of each other, just as the ganglia of the external senses are distinct and separate. It becomes evident, then, that the brain is not one organ, but an 'apparatus' of organs. Hence the object of phrenological psychology may be stated as follows: it consists in determining the situation in the brain of each disposition and, reciprocally, the functioning of each portion of the brain, so that harmony will be established between physiological analysis and anatomical analysis. A conclusion of this study is that the least developed and the most anterior part of the brain is appropriated by the most characteristic faculties of humanity. This view is substantiated by the fact that the affective faculties occupy the posterior and middle parts of the brain, whereas the intellectual faculties occupy the front portion of the brain. The latter faculties, then, occupy the part farthest removed from the origin. This fact is the scientific basis for the assertion of the predominance of the affective over the intellectual faculties. Comte indicates that the difference between Gall and his predecessors is not that the latter did not separate the intellectual and the affective faculties, but that they assigned the intellectual faculties alone to the brain, regarding it as a single organ. They distributed the affective faculties among the principal organs relative to the vegetive life, — such organs as the heart and the liver. Gall subdivided the faculties into twenty-seven and thereby, Comte believes, multiplied them too much. But Gall was valuable in that he gave impulsion to the study of phrenological psychology and pointed the direction that it should take. Comte feels that Gall has done the science of phrenology an inestimable service by establishing the two principles on which it rests, even though he did not work out the details accurately.

Having estimated Gall's theory, Comte proceeds to point the way to improvement. He thinks that physiological analyses should be subjected to anatomical determinations. Consequently, for a time, phrenology must analyze the cerebral system without any consideration of the functions. Next, phrenology must submit the various faculties to physiological analysis, discarding every anatomical idea. The unsatisfactory position of phrenology in

this respect led Gall to set up twenty-seven faculties. The danger is that the number will be increased so much that we shall have as many faculties and organs as the psychologists construed entities. Comte thinks that, in settling the number of faculties, it would be helpful to add to the study of man that of society. In such an investigation there can be instituted an estimate of striking individual cases. For example, it could be estimated what 'compass and variety of functions' would be needed to constitute a mathematical genius. In general, then, phrenological analysis must be reconstructed in the anatomical order and then in the physiological order, and finally the two must be harmonized. In carrying on their work, Comte suggests that the phrenologists seek assistance from pathological and comparative analysis.

This consideration of the principal points in the discussion of phrenological physiology in the *Cours* shows that Comte endorses Gall's work, in the main, but criticizes his multiplying of faculties and his insufficient anatomical study of the brain. In the *Système,* Comte's theory of phrenological psychology has been considerably modified. He here introduces the 'subjective method.' In other words, he subordinates anatomical study to the study of mental functions. The reason for this is that Comte believes the agent must be inferred from the functioning, a position to which his sociological study has led him. He, therefore, from this later point of view, is inclined to look on Gall's system as a failure, although Gall had the merit of proclaiming the preponderance of the heart over the intellect when human attributes were being reduced to mere intelligence. Gall had the further merit of dispelling the conception of mental unity, as he showed mind to be a multiplicity. Again, his doctrine that all the higher functions were connected with the cerebral apparatus was valuable. Gall lacked, however, the social preparation necessary to a true scientific theory of mind. Instead of determining the functions by the organs, Comte believes that the determination of the cerebral organs is subject to and dependent on that of the intellectual and moral functions. Consequently, the biological problem can not be handled successfully prior to the study of sociology. The reason is that "since the nature and working of

the faculties and propensities is at bottom the same with the individual as with the species, it is only in the latter instance that they are sufficiently distinct and developed to be characterized."[1] Observation of the individual merely verifies laws revealed by social evolution. Real conclusive corroboration is furnished, however, by the study of animals where the innate dispositions are sufficiently isolated from acquired modifications. The study of animals will further guard against an 'exaggerated multiplication' of organs and against a 'vicious unity.' The subjective method of inquiry is limited, then, to the determination of the number and locality of the cerebral organs by studying their functions.

A second fundamental thought that Comte advances here is one already emphasized in the *Cours, i.e.,* that the heart is preponderant over the intellect. He points to the affective region as the source of the spontaneity and unity of the mental life. Besides the biological proof of the preponderance of the affective region, Comte adds as further evidence the statement that progress is the evolution of order. This fact involves the directive action of the affections over speculations and actions. Furthermore, Comte, in the *Cours,* regarded the division into functions as showing the preponderance of the heart over the intellect. In the *Système,* he works out carefully the number of different kinds of functions; he estimates that there are five intellectual, three social, seven personal, and three active functions. Comte regards such a theory of brain as making clear the fundamental problem of human nature; the problem of how to make the few altruistic tendencies prevail over the more numerous egotistic ones. And that problem is made graphically clear by the detailed working out of the division and number of functions.

It is desirable again to emphasize the fact that Comte has the merit to recognize that the concrete nature of mind is truly revealed only in its functioning.[2] Thus, in his discussion of the

[1] *Système,* Vol. I, p. 672.

[2] That is, "the study of the positive philosophy, in considering the results of the activity of our intellectual faculties, furnishes us with the only truly rational means of making evident the logical laws of the human mind." (*Cf. Cours,* Vol. I, p. 32.)

different sciences and, especially, in his sociology, he exhibits the development of mind through its religion, science, philosophy, language, art, and industry. In chapters one and two, we have already presented the salient points of this development. We may now, therefore, bring together various important statements made concerning the nature of the human mind. The understanding is, for Comte, the faculty of abstract cognition.[1] The understanding is regarded by him as feeble, lacking initiative in itself.[2] He even says that the mind needs obstacles in order to function. The intellect, however, is not a *tabula rasa,* it does react; it has innate dispositions.[3] The office of the mind is to understand the external order.[4] Indeed, Comte thinks that *l'esprit* has been always occupied with knowing or modifying the universal order, even when it was forced to penetrate to causes. The intellect gives laws to nature and yet, reciprocally, nature determines those laws. Mind's function is not to dominate but to be consultative. It is thus the instrumental aspect of mind that is primarily emphasized for, in the last analysis, its function is to show, through its understanding of the objective order, how the needs of humanity are to be satisfied.

While the intellect perceives as much as is necessary for practical wisdom, it is not in touch with the real nature of things; it grasps only the abstract aspect of the objective order. Hence it needs some directing influence and this influence is furnished by the heart. The affections posit the problems of *l'esprit.* It is not, however, because the heart is more in commerce with the real that it can thus direct the intellect. The heart apprehends primarily merely the subjective life, the wishes and purposes of the individual. It, in turn, has to be modified by the knowledge of the objective order with which the intellect supplies it. In other words, feeling must be rationalized in order to exercise a suitable directive influence over *l'esprit.* Such, then, is the dominant element in human affairs; not subjective feeling but rationalized feeling.

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[1] *Cf. Cours,* Vol. I, p. 132.
[2] *Cf. ibid.,* Vol. IV, p. 648.
[3] *Cf. Système,* Vol. III, p. 19.
[4] *Cf. ibid.,* Vol. I, pp. 19-20.

Moreover, the individual mind is to be subordinated to the mind of the race; for "man, properly speaking, is at bottom but a pure abstraction, there is nothing real but humanity."[1] Indeed, "it is only by abstraction . . . that we can study . . . the development of the human spirit without that of society since these two, although distinct, do not develop independently. They exercise on each other, on the contrary, a continual influence, indispensable to the two."[2] These statements all go to indicate a view of intelligence that exhibits it as a faculty of abstract cognition, a faculty not fitted to grasp the concrete nature of things. Its power is measured by the degree of abstraction of which it is capable; it has no initiative in itself. Its function is to understand the world in order that we may ultimately subordinate it, as far as possible, to our needs. Furthermore, the individual mind is subordinated to the mind of the race; it is only intelligible as a part of the whole.

With Comte's theory of mind before us, we must now seek to estimate it. First, as to his phrenological psychology, we noted at the beginning of the chapter that brain physiology can furnish us only with an existential science of mind, a science of mind that is on the same plane as the physical sciences. Such a method, however, reveals the nature of mind in merely a preliminary way. Furthermore, as to Comte's specific treatment of the subject, we find certain inadequacies. Thus, in working out his phrenological psychology, Comte does not adhere strictly to observed facts. The positivist, he tells us, must subject imagination to observation but, in developing this phase of his psychology, especially in its later treatment, Comte uses conjecture. The study of the anatomical organs, which one would think most fit subjects for observation is to be subjected to the study of the moral and intellectual functions. The number of organs is to be determined by reference to the number of functions. Thus the determination of the number of organs becomes merely conjectural. Moreover, since the

[1] *Cours,* Vol. VI, p. 692.
[2] *Système,* Vol. IV, *Appendice général,* p. 143.

anatomical study is finally regarded by Comte as of no aid in the study of the intellectual functions, such investigation would seem to satisfy merely a vain curiosity. It is quite evident that the determination of the exact number of organs can have no direct bearing on the means to be employed in alleviating the condition of humanity. The conjectural nature of this study is further borne out by the way in which Comte exhibits the fallacies in Gall's work. Comte gives no proof of the inaccuracy of that work by advancing the testimony of facts but simply asserts that Gall has multiplied too much the number of organs. Again, Comte's statements on animal psychology are conjectures rather than the results of exhaustive observation. He makes many positive assertions with regard to the faculties of animals on points concerning which authorities today are not at all in accord. Thus, in general, we find much that is *a priori* in Comte's theory, whereas we would expect only deductions from fact.

Moreover, such a psychological study, unless precaution is used, tends to existentialize mind. If the intellectual functions can be given precise location and enumerated, it necessarily follows that they are regarded as existent entities. In fact, we find this existentializing tendency influencing what seem at first real insights into the nature of mind. For example, Comte would not have the study of mind separated from the study of the external world; the science of mind must not be divorced from the other sciences. But Comte fails to grasp the full significance of the dependence of psychology on the other sciences. He does not realize that mind must not be regarded as dissevered from objective reality, as an existence distinct from the objective order, as an entity that can know that order in merely an external way. Mind, rather, is complementary to the external order. Consequently, it is of the very nature of mind to know that order intimately. When, however, mind is regarded as a thing, or as composed of atomic bits having localization, its true nature is not grasped, and it is regarded as a *real* set over against other reals with which it has no organic relation.

This tendency to make of mind an existence, leads Comte, furthermore, to misconceive the relation of the individual mind to

other minds. He rightly regards man as a mere abstraction when isolated from humanity. The individual can be understood only in the light of the whole. Had Comte followed out the implications of this notion, he might well have advanced to a more concrete conception of mind, a view of mind that is capable of exhibiting the individual spirit as organically related to other minds and thus comprehending their real nature. Just as it is of the very nature of mind to know the objective order, so it is of the very nature of mind to know other minds, apart from which it is a ' mere abstraction.' Moreover, not only is individual mind comprehended only as an organic part of the universal mind, and, still further, of reality, but universal reason has need of individual minds through which to express itself. The whole can be understood only in the light of the parts, which are organic to it. In fact, the whole is, in a sense, its parts. ' Humanity ' is real only by virtue of the individual elements which it takes up into itself. The universal mind comprehends the differences of the particular minds. It is what it is only by virtue of those minds.

In the more concrete representation of the nature of mind, Comte attempts to exhibit that nature through its functioning. Mind is at work unifying phenomena. Yet, for Comte, this unifying is a mere linking. Mind grasps but the external aspects of things; it sees no relations but those of similarity and succession. It never comprehends the internal relations; it never penetrates to the essence of things. The unity it imposes on the objective order is a mere continuity. *L'esprit* itself, we are told, is not a unity but a multiplicity. But, on his own presuppositions, there should be for Comte no problem of what the mind is in itself. And, furthermore, his arguments against the theory of *le moi* could much more consistently have been replaced by the statement that the question of the nature of mind in itself is not a valid subject for consideration. The question of whether the mind is a unity or a multiplicity should not enter into a positivist's discussion of the nature of mind. Mind as it manifests itself in its functioning and not mind as it is *per se* is his problem. Voltaire's conclusion " that we ought to employ this

intelligence whose nature is unknown in perfecting the sciences . . . as watch-makers use the springs in their watches, without knowing the nature of a spring,"[1] is much more in accord with the principles of Positivism. Comte's fallacy here may be attributed to his ultimate postulation of mind as an existence.

The same erroneous conception also leads to a false separation of heart and intellect. It is Comte's merit to see that abstract cognition and abstract feeling are each inadequate to apprehend reality. Feeling must be rationalized in order to perform its function. And reason must listen to the dictates of feeling in regard to the questions with which it is to deal. Comte thus feels that he has ended the dualism between the two. But, in reality, feeling and intellect remain distinct throughout his system. Not only are they held apart in respect to localization in the brain, but they are also separated in functioning; one is considered as dominating the other. In very fact, however, the two are but one. Reason has a feeling aspect, and there is no such thing as pure abstract reason. The dictates of the heart are essentially the dictates of the reason, unless capricious, subjective dictates are meant. To know a person well implies more than scientific knowledge of his mental and physical nature. It implies a sympathy with him, a community with him, a sharing of his joys and sorrows. It implies a feeling of 'solidarity' with him. In a sense, he is not recognized as an other, as a distinct, atomic individual. He is regarded as an *alter ego*. Again, to know a principle, it is not "enough to have principles . . . only in the head: they must also be in the heart, in the feeling."[2] Thus one who knows a given principle also feels that principle very deeply. This emotional accompaniment of knowledge has been figuratively expressed in the following manner: "And the stars of night beat with emotion, and tingled and shot out in fire the strong pain of pent knowledge." One who really knows a principle is perhaps ready to die to promulgate it. It might, consequently, be added that the principle must also be exhibited in action. One

[1] *Oeuvres*, Paris, 1826, Vol. XXIV, *Dictionnaire philosophique*, p. 221.

[2] Hegel, *Philosophy of Mind*, tr. by Wallace, Oxford, 1894, §400.

who thoroughly knows a principle is expected not only to be willing to die to maintain it but he is expected to live that principle. In this sense, it may be said that 'knowledge is virtue.' Knowledge is the exhibiting in the life of that which is known. In short, then, the heart and the intellect are not two 'distincts' which may be regarded as existing in different sections of the brain. Reason, 'at its fullest stretch,' is feeling. The two are one.

In conclusion, this examination of Comte's theory of mind has shown mind under two aspects: the static and the dynamic. Mind, under the former aspect, is considered from the biological point of view as made up of intellectual functions localized in the brain and dominated by the affective functions. This abstract, static view tends to influence too much the dynamic theory of mind, in which mind is exhibited as it expresses itself in institutions, language, and religion. That is, the positing of mind as an entity still influences the conception of mind considered as activity. Thus Comte does not grasp the full significance of notions that he has the merit to suggest. He does not see that, as the science of mind is not independent of other sciences, so mind does not exist apart from the objective order. Furthermore, he does not see that, as man is an abstraction apart from humanity, the individual mind is organically related to other minds. Finally he does not understand that, since feeling must be rationalized and reason must be modified by feeling, the two are not locally and functionally distinct but are an unexistentialized unity.

But Comte's implications have led to, or at least influenced, fruitful developments in the psychological field. Thus the empirical and descriptive method of psychology has been regarded as "a direct result of positivist doctrines." [1] The behavioristic tendency and the social mind tendency have both received impetus from Comte's work. Animal psychology finds in him an exponent. Pathological investigations have received encouragement from him. In short, many present day tendencies in psychology may claim stimulation from Comte.

[1] Villa, *Contemporary psychology*, tr. by Manacorda, 1903, p. 390.

CHAPTER IV.

THE UNITY OF EXPERIENCE.

A. — *The Nature and Function of the Objective Order.*

Over against mind is the objective order to which mind is subject. The objective order is that which science reveals — an order with which we have dealt at length in considering Comte's theory of knowledge. The purpose of the present chapter, then, is mainly to bring together certain cogent statements made by Comte concerning the external order so as to make more explicit and more definite doctrines to which reference has already been made. In the second chapter, we have seen that Comte, in his theory of knowledge, maintains the view that we know only relations of similarity and succession, and that our thought is unable to penetrate beyond these aspects of the phenomenal world. Thus reality is a *ding-an-sich,* forever hidden to us. Sometimes, however, Comte's implications concerning certain statements involve aspects of the nature of that ultimate reality. But usually his interest is rather directed to exhibiting the function of that order. The divergence in direction and emphasis of these points of view will become clearer as we proceed. When the nature of the objective order is considered we see that it is an inter-related order, wholly independent of our manipulation.[1] It exists as a real outside us and existent in its own right. Comte thus has the merit of recognizing that 'the system of nature exists and forms a prius in some sense.' The system exists without us as something to be known, comprehended, understood. At first "this order was . . . appreciated only under the geometrical-mechani-

[1] *Cf. Système,* Vol. I, p. 27.

cal aspect."[1] In physics, inert nature is studied in a more intimate way. Finally, in the study of society, we arrive at the most concrete way of viewing phenomena. When this standpoint is reached, all the other sciences are viewed from the perspective which it affords. Thus "our most noble moral attributes become attached gradually to the least material phenomena."[2] As in the study of the most abstract sciences, the investigation is always of similarity and succession. The objective order, then, is a continuity of external relations.

Beyond the manifestations of these relations of similarity and succession, which make up the objective order, lies the essence of things, into which we can never penetrate.[3] Comte, then postulates a noumenal world, and, in certain passages, he even attempts to outline some general conception of the nature of this world. It seems to be a world made up of reals, of entities, of bare existencies, just as is the world of the common man. Thus, for example, in referring to geometry and rational mechanics, Comte writes: "Their phenomena are of such abstract nature . . . that we need to see combinations of figures in order that their reality may become sufficiently manifest."[4] In other words, Comte wishes the mathematical phenomena exhibited concretely in sensuous bodies so that the reality of the phenomena may be made plain. Besides the categories of succession and similarity, then, Comte introduces another category, that of existence. There are also other statements that indicate the positing of ultimate reality under the category of being. Thus Comte says that a science of mind needs a scientific object, something with which it can deal mechanically. Consequently, his science of mind takes the form of phrenological psychology, because on this basis it is possible to deal with something existential. Again, Comte refers to "the nascent conviction of our understanding as to the inflexible preponderance of materiality,"[5] at the fetichist stage. Thus his

[1] *Catéchisme positiviste*, p. 88.

[2] *Ibid*, p. 93.

[3] *Cf. Cours*, Vol. IV, p. 298.

[4] *Ibid.*, Vol. II, pp. 25-6.

[5] *Système*, Vol. III, p. 100.

implications of ultimate reality, though never worked out, remain at the naïve point of view of popular thought. Comte conceives of that reality under the category of existence. Reality is made up of isolated objects situated out in the exterior world beyond the penetration of our thought.

But Comte only now and then attempts even indirectly to give hints as to the nature of what lies behind the veil of phenomena. It is not a problem in which he is interested. Not the ultimate nature of the objective order but its function, is the problem which Comte seeks to solve. He believes that "nature can not be truly known to us except as regards simple phenomena and never as regards composite existencies." [1] And it is what these phenomena are instrumental in bringing about in terms of life and experience, that concerns Comte. He dwells for the most part, then, on the office of the objective order. The function of the objective order is to impress on the mind the regularity and harmony that characterizes its own nature. Furthermore, the natural order has a regulative influence, not only on the speculative life, but it modifies also the affective and the active life. It introduces the harmony of its own invariability into our nature. To understand better the influence of the external order, we may imagine that its influence should cease. The result would be that "our intellectual faculties would waste themselves in extravagances and then sink into incurable torpor. Our noble feelings could not control the others and our actions would end in incoherent agitation." [2] In other words, if the restraint which is exercised by the perception of law in the external world were removed, the internal life would lose its regularity and order. That uniformity is, in a sense, a reflection of the regularity and order of the external world. Thus Comte says: "Our principal theoretical merit consists in perfecting as much as possible this natural subordination of man to the world so that our brain becomes a faithful mirror of the external order." [3] Indeed, in a sense, it is true that to be sane we must contemplate and under-

[1] *Op. cit.*, p. 149.
[2] *Ibid.*, Vol. I, p. 27.
[3] *Catéchisme positiviste*, pp. 42-43.

stand the objective order. Its very exhibition of law and order reacts in a healthy way on us. The world is not an *Anstoss* set up for the purpose merely of developing the ego. The world is not 'ready malleable to our hand,' but something to which we must adjust ourselves. It exists in its own right and has value in itself, as Schelling endeavored to show in his *durchbruch in das freie offene Feld objectiver Wissenschaft.* The subordination of man to the world is a necessary subordination, as Comte states.

An estimation of Comte's views concerning the objective order must begin by recognizing the merit in the notion that the objective order exercises a regulative influence on mind. But the objective order in itself, as conceived by Comte, is too unreal, too abstract, since it comprises only relations of similarity and succession. Comte has erroneously made the assumption that all phenomena are of the same kind.[1] For him all phenomena are to be taken on the plane of mathematico-physical science. It follows, then, according to his view, that all may be subsumed under laws merely expressing coexistence and succession. But such a view fails to take account of more concrete relations; "the categories of naturalism are not adequate to furnish expression to the kind of functional relationship that experience presupposes."[2]

Though Comte usually maintains that ultimate reality is unknowable, the notion of reality that he sometimes adopts remains practically at the point of view of the plain man. In these passages, he seems to regard reality under the aspect only of existence. But that a thing has existence, has being, is, as Hegel points out, the least thing that can be said about it. Comte comes very near passing to a more concrete point of view in insisting, as he does, that the merely given is not the essence of the thing. Laws are the expressions of aspects of reality more fundamental than the merely given. Yet Comte never seems to realize that laws express genuine phases of reality. His failure to grasp this truth seems to be due to the fact that he does not recognize that, in a

[1] *Cf.* H. Sommer, *Die Positive Philosophie Auguste Comte's,* Berlin S. W., 1885, p. 6.

[2] J. E. Creighton, "The Copernican Revolution," *The Philosophical Review,* Vol. XXII, p. 145.

sense, all is law. He sees, in the midst of diversity, common elements which may be formulated into laws. He thus posits an abstract order, expressing only one aspect of the true nature of reality.

He rightly sees that the 'objective order is joined on for us to know'; and emphasizes the fact that we must live in subordination to that order. But he does not see what this signifies. It is of course true that 'to live in accordance with the laws of the universe' we must know those laws. But the aims of human knowledge are not limited to just those laws that enable us to 'get along.' Rather, "the aim of knowledge is to divest the objective world that stands opposed to us of its strangeness, and, as the phrase is, to find ourselves at home in it." [1] Such knowledge of reality requires a more concrete method of procedure than Comte ever suggests. His method is to stand outside the object and abstract from it certain aspects of practical importance which are formulated into laws. Yet this is not the full measure of the mind's capacity. In order to reach concrete knowledge, it is necessary to adopt a different method, that of sinking oneself in the objective order. The objective order must be allowed progressively to reveal itself so that one may come to know it more intimately. Thus all experience is, from one point of view, an empathic experience, and involves, as a part of the process, a coming home to oneself. That is, one must "trace the objective world back to the notion, — to our innermost self." [2] Through such a method of procedure, one comes to see that "reason is the conscious certainty of being all reality." [3] Further, not only is the rational real but 'what is real is rational.' Consequently, the idea and reality are not opposed, as Comte assumes, but are one in the sense of being necessarily complementary.

Comte's assumption is due to the fact that he accepts the scientific interpretation of the given as ultimate. Nevertheless, at the scientific standpoint, the concrete nature of objects necessarily remains unknown. Indeed, "this divorce between idea

[1] Hegel, *Logic*, tr. by Wallace, Oxford, 1874, §194.
[2] *Ibid.*
[3] *Phenomology of Mind*, tr. by Baillie, 1910, Vol. I, p. 224.

and reality is a favorite device of the analytic understanding" [1] which looks upon its own abstractions as something true and real. But the correct way of viewing the relation of the idea and reality, of mind and the objective order, is to see that "Mind has for its *presupposition* Nature, of which it is the truth, and for that reason its *absolute prius*. In this, its truth, Nature is vanished." [2] In other words, nature is not opposed to mind, but the two are complementary. Nature has, as an essential attribute, the susceptibility of being known. And mind is, by its very nature, capable of knowing reality. This fact Comte never apprehends. Consequently reality remains for him unknown. Or, if he implies knowledge of it, reality is merely an existent, transcendent entity.

Furthermore, Comte is ultimately dominated by his utilitarian aim. Thus he believes that an abstract knowledge of the objective order is sufficient for the demands of human life. He says: "Abstract laws alone can direct our activity, which is concerned always with properties and not substances." [3] Indeed Comte thinks that "concrete contemplation, which is suitable only to æsthetic meditation, could never suffice either for our theoretical or for our practical needs." [4] It becomes evident that this one-sided, abstract aim of knowledge is such as to enable us to arrive at only a very inadequate interpretation of reality. Moreover, the objective order as known comes to have no *raison d'être* in itself. It exists to discipline mind. Thus, whereas at times Comte represents the objective order as having value in its own right, he considers, when influenced by his utilitarian aim, that the known order has no further significance than to regulate the mind and to suggest practical modifications.

B — *The Subjective Synthesis.*

We have seen that the objective order is made up of phenomena manifesting relations of similarity and succession. The

[1] Hegel, *Logic*, tr. by Wallace, Oxford, 1874, §6.

[2] Hegel, *Philosophy of Mind*, *tr.* by Wallace, Oxford, 1894, section 381.

[3] *Système*, Vol. III, p. 149.

[4] *Ibid.*, p. 151.

question arises as to how the unity of this external order is to be expressed. Since law is the object of positive investigations and since certain fundamental laws have been found that are applicable to all phenomena whatever,[1] it would seem *prima facie* that ultimately some law could be found under which all phenomena might be subsumed. From the very first, however, Comte sees the impossibility of reducing the formulæ of all relations to a single law. And this fact becomes increasingly evident to him as his thought progresses.[2] It seemed to him more and more evident that the human mind is unable to discover any objective principle of synthesis in nature. It follows, then, that the only synthesis of the sciences that is reliable is a synthesis that states their relation to the development of the human mind and its purposes. In other words the ultimate synthesis is subjective: Comte seeks to set no ' order of nature ' over against the order of human experience.

In the *Cours,* Comte is at pains to show that the preponderance of the social point of view will not affect the independence of the different sciences. Furthermore, he here emphasizes the fact that the sciences are to be developed unhampered by utilitarian considerations. When once the *Philosophie positive* has been constituted, however, and the *Politique positive* begins to absorb Comte's attention, concern for the theoretical expansion of the sciences is no longer felt and practical considerations come to the fore. Hence he makes more emphatic the need for relating all investigations to human purpose, *i.e.,* the need for a subjective synthesis.

The principle from which the subjective synthesis results is that of the subordination of the intellect to the heart. Reason, however, must enlighten feeling; for " true love always demands light on the real means of attaining the end it pursues; thus the reign of true feeling ought to be as habitually favorable to sound reason as to wise action." [3] But feeling posits the problems that intellect is to solve. Moreover, the affections must dominate

[1] *Cf. Cours,* Vol. VI, p. 797.
[2] *Cf. ibid.,* p. 845.
[3] *Système,* Vol. 1, p. 20.

action. It is only through the supremacy of feeling over reason and action that unity can be attained in the life of the individual. So, too, in the life of society, feeling must predominate. Not, however, feeling *per se* but rationalized social sympathy is the regulating factor. In short, the center of the final systematization is sympathetic feeling, since it dominates all aspects of life, and relates all to humanity.

In order to comprehend the significance of the subjective synthesis, in order to understand the meaning of the fact that the laws of external phenomena 'admit only of a purely relative, human, in a word, subjective unity,' we must note its action in modifying our knowledge of the external world. Whereas the different branches of the study of the world or that of man reveal to us an increasing multitude of different laws which are irreducible to a more fundamental law, the 'dogma of humanity' furnishes the only possible unity for our conceptions. It is the 'unique bond' we need. Thus, though our subjective constructions are subordinate to the objective order, our interpretation of the exterior order is, in the last analysis, in terms of its relation to humanity. True, we must know that order, in part at least, because it is the *milieu* of humanity. But man should seek to know only so much of the order as will help him to orientate himself and to promote the good of society. Speculative absorption is proper only to the infancy of the individual.[1] This period passed, his speculations must have a distinctly utilitarian aim. The study of science, after the preparatory period, should be limited to what is required for the systematic treatment of the succeeding science, in order to rise — or return — as soon as possible to the ultimate science of morals.[2]

Moreover, where knowledge is lacking, man may introduce hypotheses, when they will be useful. In constructing these hypotheses, he must always keep in view the practical aim they are to serve. Thus "every synthesis requires that we estimate the external order with reference to our own destiny, unless we em-

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[1] *Cf. op. cit.*, Vol. IV, p. 192.

[2] *Cf. ibid.*, p. 194.

bark in search of the Absolute." [1] That is, we are to read off the external order from the point of view of our own purposes. There is, consequently, a distinct limit to what we should learn of that order. While, then, "the true theoretical genius consists in binding as much as possible any phenomena and all beings, the practical genius completes this general result, since our artificial perfections end always in consolidating and developing the natural connections (between phenomena)." [2] Further, what we can not know concerning the external order, we can excogitate in order to systematize the objective order.

In the construction of the objective order, Comte would avoid the danger of emphasizing too much the work of the mind. He believes that the followers of Kant have done that. He would also avoid the error of mere *savants*. These men exaggerate the independence of the natural order. Comte says that "sound philosophy . . . represents all real laws as constructed by us with materials drawn from without. Objectively their exactitude can never be more than approximate. But, as they are destined for our needs alone, they become sufficient approximations, while they are instituted in accordance with practical exigencies." [3] Thus we build up an artificial order. This order, nevertheless, reposes on the natural order which we do not change. Our attempt must not be to make the artificial order as near like the natural order as possible, since too exclusive study of the external order is idle. We should seek to know that order only in so far as knowledge of it conduces to supplying our needs. In short, then, it may be said that "our fundamental construction of the universal order results from a necessary concourse between the inward and the outward. The real laws, that is, general facts are never more than hypotheses sufficiently limited by observation. If harmony did not exist without us, our minds would be entirely incapable of conceiving it. But in no case is it as verified as we suppose." [4] Indeed, Comte refers to the purely relative nature

[1] *Op. cit.*, Vol. III, p. 95.
[2] *Catéchisme positiviste*, p. 93.
[3] *Système*, Vol. II, p. 32.
[4] *Ibid.*, p. 33.

of the external order. He seems to feel it a perfectly reasonable assumption that the external order can become so irregular that it escapes brains superior to ours. Besides stating that the objective order, as we systematize it, is in part, a purely subjective construction of the mind, Comte suggests certain measures that may be adopted in this construction. We may omit taking account of certain phenomena. We may also introduce imaginery phenomena. We may even fall back on the fictitious synthesis, where necessary. That is, we may interpret phenomena anthropomorphically. This, then, is Comte's method of " keeping human existence in one reality which knows neither a splitting into this side and the other, nor an empirical and an ideal world." [1]

It is thus toward the conception of Humanity that all positive aspects converge. We must now make more explicit Comte's notion of Humanity. " Humanity's peculiar character consists in being necessarily composed of separate elements which are bound together by mutual love." [2] Humanity, or the *Grand-Etre,* " is the whole of beings past, future, and present who coöperate willingly to perfect the universal order. Every gregarious animal race tends naturally toward such coöperation. But collective unity can be realized on each planet only with the preponderant race." [3] The word *whole* indicates that Humanity does not comprehend all men. It includes only those promoting the common good. More explicitly, at first all are children of Humanity. But all do not become its servants. Some remain parasites, even after they have been educated in the right way. They are therefore rejected from Humanity. This is because mere ' digesting machines ' are no real part of Humanity. To make up for those rejected, the animals that lend noble aid to man may be added to the *Grand-Etre.* Moreover, the social existence of man consists not only in solidarity, as this definition of the *Grand-Etre* would thus far imply. It consists also in continuity with those who have gone before and with those who will come after. Indeed

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[1] Eucken, " Zur Wurdigung Comte's und des Positivismus," Eduard Zeller, *Philosophische Aufsätze,* Leipzig, 1887, p. 57.

[2] *Système,* Vol. 1, p. 329.

[3] *Ibid,* Vol. IV, p. 30; *Cf.* also *Catéchisme positiviste,* p. 68.

the living are necessarily governed more and more by the dead. Such is the fundamental law of human order. To make this law clearer, two forms of existence must be distinguished: the objective and the subjective. These two forms of existence are the portion of every servant of Humanity. The objective existence lasts only for a time, but is conscious; it is the span of temporal life. The subjective existence is unconscious but is permanent. In this second existence, the body does not exist but only the moral and intellectual functions, which go to make up the soul. It is thus that Humanity is made up.

As to the status of the individual, Comte is much more ready to give him his due in his later works than in the *Cours.* Thus, in the *Cours,* Comte emphasizes the fact that 'man is a mere abstraction, there is nothing real but humanity.' But in the *Catéchisme,* he says, "Although Humanity as a whole must constitute the principal moving force of every operation, physical, intellectual, or moral, the Great Being can never act except through individual agents." [1] He further says that, while few are indispensable to Humanity, every noble human being has a part in promoting the evolution of Humanity. Again, in the *Système,* Comte says that the individual need not be sacrificed, simply subordinated to society. In fact, the individual must be preserved.

In this consideration of the subjective synthesis, we have seen that its fundamental principle is the necessity of the subordination of the intellect to the heart. Furthermore, there is found no objective principle in accord with which to synthesize the natural order as exhibited in the sciences. The ultimate synthesis is subjective. The nucleus of the systematization is the concept of Humanity. We turn now to estimate this theory. In the first place, the synthesizing of the sciences from the human point of view reintroduces anthropomorphization — the fundamental error of the theological synthesis.[2] It is, in a sense, a more vicious

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[1] *Catéchisme positiviste,* p. 35.

[2] Note the following comment on this point. "Son of an agitated century aspiring only for quiet, he redescends (from the theoretical plane) to the large and commodious plateau of the old anthropomorphization. All for man and by man, this maxim is engraved most deeply in his brain." (E. De Roberty. *Auguste Comte et Herbert Spencer,* Paris, 1895, pp. 66-7.)

anthropomorphizing tendency, however. Previously, man interpreted phenomena as best he could. Human action was the only kind of action intimately known to him, hence he instinctively posited all phenomena as manifestations of such action. When man has developed beyond this naïve point of view, when he has learned to regard the natural order as existing in its own right, there seems no justification for his synthesizing knowledge with respect to his needs. There seems no justification for his building up an artificial order in accord with his purposes. If the aim of the positivist is to 'see things as they are,' such a mythologizing of the external order as the subjective synthesis implies has no place in his system.

Moreover, it seems evident that it is Comte's inadequate conception of mind which forces him to limit the standpoint of philosophy to a subjective synthesis. Mind can not penetrate to the essence of things; consequently, it must systematize knowledge as best it can and this 'best' is, for Comte, a subjective synthesis. But a subjective synthesis from the very nature of the case cannot be finally satisfactory. The results of scientific investigation, so systematized, are not taken fully and in their own right. Only as much of the objective order is taken into account as suffices to raise the mind above mere whimsical caprice, and to furnish to the intellect an instrumental basis from which it may produce modifications in the external order. The rest of objectivity remains separate and unknown, a metaphysical entity. Such a synthesis does not, however, do justice to either the objective or the subjective aspects of reality. A true synthesis must preserve the two with all their differences. Thus "the true science of philosophy consists in maintaining and developing the concrete standpoint of experience, and this can be done only by holding together, without obscuring, its subjective and objective aspects." [1] In a sense, Comte preserves the objective order in the synthesis. But it is not the order as a whole that is held together in the subjective systematization. The objective order, modified by the subjective point of view, is an artificial

[1] J. E. Creighton, "The Determination of the Real," *The Philosophical Review*, Vol. XXI, p. 311.

order. It is built up with materials from reality; yet the construction is subject to the moral life. Moreover, the objective order, in the form in which it is preserved, is a means and not an end in itself. It exists, not in its own right, but as a regulative influence.

The question suggests itself as to whether such a synthesis corresponds to what experience shows to take place. Does one abstract a portion from reality and consider all the rest of reality as separate from man's life? The very phrasing of any statement to this effect shows that the rest of reality is always implied. The order constructed is rightly called artificial. But back of this conscious construction is presupposed that deeper, more fundamental unity of mind and the objective world, a unity which is the presupposition of all experience. A question as to the possibility of knowing all of reality leads to the further question as to whether any of reality is knowable. Furthermore, how could Comte be assured that there are materials drawn from reality in the subjective synthesis, unless the mind has some commerce with reality? But if, on the other hand, it is once admitted that mind is in its very nature always in touch with reality, the doctrine of the subjective synthesis is seen not to be final or adequate. To circumscribe the limits of mind is thereafter to make assumptions not borne out by experience. As has been said, "no one is aware that anything is a limit or a defect, until he is at the same time above and beyond it." [1] It becomes evident that Comte does not comprehend the implications of his presuppositions. Had he realized their significance, he would have understood that the subjective synthesis is, after all, an objective synthesis. The two are held apart only by abstraction. Man, as an integral part of the objective order, has no purposes and aims distinct from explication of the Idea in the world order. Thus he can not carve out a portion from reality and restrict himself to an understanding and a modification of that. One part of reality implies all the rest. And, further, reality exists in its own right, not to be manipulated, but to be understood and appreciated.

[1] Hegel, *Logic*, tr. by Wallace, Oxford, 1874, §60.