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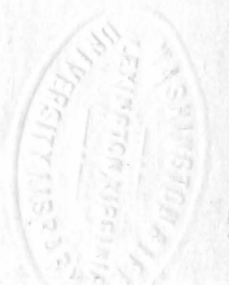
EUROPEAN HISTORY HONORS THESIS

BY

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"The Idea of Progress and the French Enlightenment"

Lord Acton in his essay "The Heralds of the Revolution" declared that it was the combination of the American example with the influence of the French enlightenment that caused the French Revolution. Granting that generalizations such as the above are misleading, it does serve as a point with which to open this study, for underlying both of the causes as well as the effect mentioned above is the concept of "progress". Today, we tend to take for granted such a concept, for it has permeated our thinking to such an extent that it, consciously or unconsciously, motivates much of our actions, but in the eighteenth century it was a new belief - really a new faith, which threatened to supersede Christianity. In this paper we will study the Idea of Progress in eighteenth century France, its most outstanding home, chiefly by reference to five representative writers, but also by outlining the views of other important figures.

Before we get into our subject, however, I believe that there are certain preliminary observations which should be made. One of the first points which we should consider is the importance of ideas as such. Are ideas the prime or sole motivating force of human behavior as Lord Acton implies, or do economic or material conditions occupy the driver's seat as Marx believes? Perhaps the best way to get out of the above controversy without getting involved is to take the safe middle position as Crane Brinton does. He states: "Indeed my basic position is that for the understanding of human behavior in society the whole controversy as to whether ideas cause men to act or whether material conditions (appetites, interests, 'drives' or in Marxian terms, the 'means of production' and the consequent 'class struggle') cause men to act is at bottom pointless and unprofitable. ... No historian of ideas need debate whether ideas or interests move men in their relations in society, nor which comes first. Without both gasoline and spark, no working motor; without both ideas and interests (or appetites, or drives, or material factors) no live, working

human society, and no human history."⁽²⁾

With that dispute successfully side-tracked, we must next consider the type of idea which we will discuss in this paper. Dr. Bury distinguishes two kinds of ideas: ideas such as toleration, equality, and socialism which are accepted because they are good or useful, and ideas such as Fate, Providence, and immortality which are accepted because they are judged true.⁽³⁾ (Personally, I wonder if any ideas are accepted that are not judged true - if ideas such as toleration, equality, and socialism are not accepted because they represent the true or natural conditions.) At any rate the distinction does serve to point up one of the fundamental characteristics of the Idea of Progress; it must be accepted because it is true and not because it is useful. Undoubtedly, as an untrue but accepted idea, it could exert a useful or beneficial influence, but to be defined as the Idea of Progress, it must only be accepted because it represents a true condition in the world or universe. There are today, and have been for quite a while, ideas on progress or ideas of progress, but we are considering a capitalized concept, and, as such, it has a specific definition of which one condition is that it be true. But the definition is much more than just this. We can all see change or movement in history, and with even conservative criteria we can see progress in certain fields from the time of the Neanderthal man to the present. Also, with only a mild faith we can predict that the future will bring more progress in at least certain fields. However, even though this relatively subdued idea of progress is surprisingly new in human history, the Idea of Progress involves far more. As Dr. Bury describes it - and for the purposes of this paper, his definition will be accepted, although I realize that there are scholars who would quarrel with it - "involves a synthesis of the past and a prophecy of the future"; it "regards men as slowly advancing....in a definite and desirable direction, and infers that this progress will continue indefinitely", resulting in a "condition of general happiness", which is the necessary outcome of the psychical and social nature of man."⁽⁴⁾ This definition means first that the progress is uniform, not that

there could not be unfortunate occurrences which had good results, or even that there can not be historic "ups and downs", but that the evil can not outweigh the good it produces; for example the second world war could not be justified solely in terms of the technological advances it inspired. Also, the rate of progress must be uniform, for example the middle ages must be considered as having contributed as much relatively, as the Greco-Roman period. In some manner, it must consider the primitive peoples and account for the "cultural lag" as well as their future progress; it must not limit itself to Western civilization. Also, the progress must not be dependent upon either chance or God, for then the future progress becomes uncertain; man must create his own future. The word "must" is important, for there is an element of determinism in this view. Progress has occurred, is occurring, and will occur - no individual, no chance circumstance, no Deity can obstruct this. How this determinism is resolved with the free will implied in making man the creator of progress I do not know. This implication is not satisfactorily treated by the writers I have studied. There is one last important point in this definition. The progress must occur within man as well as his environment and it must "asymptotically" approach "general happiness" or man's perfection. It does not mean the attaining of a "status-quo", a heaven on earth, but a constant progress toward it. Perhaps, the best way to close this discussion is to give Dr. Bury's negative description of the idea. He says: "sporadic observations - such as man's gradual rise from primitive and savage conditions to a certain level of civilization by a series of inventions, or the possibility of some future additions to his knowledge of nature - which were inevitable at a certain stage of human reflection, do not amount to an anticipation of the idea. The value of such observations was determined, and must be estimated, by the whole context of ideas in which they occurred. It is from its bearings on the future that Progress deserves its value, its interest, and its power."⁽⁵⁾

Obviously, such a concept as the one described above belongs in the realm of ^{the philosophy} history. It involves certain standards of value by which we can evaluate the past and present in terms of the future. Before we can really understand these standards, however, we must, as Dr. Bury implies, understand the "context of ideas in which they occurred". But this involves a knowledge of the development of this concept, which I will now briefly sketch.

In the earliest primitive societies the tribal memory did not extend more than several generations in the past, nor did they project themselves in the future or even have a real consciousness of the possible existence of a culture or life different than their own. With the development of the greater civilizations and crude forms of writing - three or four thousand years B.C. - the historical memory becomes longer. Both writing and more settled conditions are chiefly responsible for this. The people became aware of the existence of good times and of bad times in their past, but, apparently, this only resulted in their going through periods of confidence and of depression. In the latter periods they began to idealize the past and speak nostalgically of a Golden Age. Within the last thousand years before Christ, however, this develops into a cyclical view of history. It appears in the writings of ancient Babylonia, Egypt, India, and China, generally as the Great Year or some derivative, the re-birth of history every 36000 of our years. (This figure is surprisingly constant.)

In Greece the picture is not radically different. Their history did not go back far, nor were their achievements of such a nature that they would radically alter their life. They recognized that men had progressed, but also felt that they had degenerated from a Golden Age. Most of them believed in the cyclical theory in which there was a period of stability ("Golden Age"), and then a period of decay, rectified by the Creator. For them, change was not desirable. Their belief in "Moirai" also hindered any concept of progress. It was a very mysterious power which regulated the universe according to a definite pattern, and not even the gods could

alter it. It was best for man to simply cultivate his own garden. This same attitude was transferred to the Romans. Seneca and Epicurus are occasionally cited as having recognized progress, and they did, but it was only a very limited kind, and referred only to the past; this recognition was not really new with them.

The Middle Ages is of a very different nature, but the Christian eschatology and the unity and stability emphasized by the theologians and scholastics prevented the development of an Idea of Progress as effectively as Moira had earlier. The Doctrine of Original Sin, the acceptance of God's intervention in the world, and the view of history as a movement to secure the happiness of a few in another world, were also not compatible with the development of this idea. However, the cyclical theory was generally abandoned, for Christianity did view history as a unique phenomenon. Also, it, for the first time, attempted to give meaning to the entire course of human events - there was a future goal toward which the past and the future aimed. Moreover, in this period, the consideration of mankind as one unit crystalized; this "ecumenical" idea had first appeared embryologically in the empire of Alexander, became implicit in the Roman Empire, and explicit in the medieval period thanks to the general acceptance of the Christian view that all men are in one brotherhood, - the sons of the same God. The only significant figure for our purposes is Roger Bacon, who preached the inter-relationship of knowledge and the value of the experimental method, but his acceptance of the Christian view, notably the second coming of Christ and all of its implications, prevented him from formulating any real idea of progress.

The early Renaissance in its break with the aesthetic spirit of the Middle Ages and its return to the pagan spirit of antiquity restored men's confidence in themselves, especially in their reason and life on the earth. But they had not broken with authority - merely exchanged one type for another, and the idea of Progress needed more freedom for man than was here given. Machiavelli, for example, believed that there were maximum points of growth and decline between which all states oscillate.

He also believed that human nature is essentially the same, and that what good changes occur must be brought about from above - both counter^{to} the Idea of Progress. A few men like Copernicus, Vesalius, and Bruno did attack the classical authority, but the influence of their work was not immediately felt. It was, however, during this period that the humanism developed which was to be so significant in the eighteenth century. In summation, the early Renaissance had freed art, literature, and the natural man, leaving the next period to formulate the corresponding philosophic thought which was to lead to the Idea of Progress.

Joan Bodin, the French historian, rejected the concept of the Golden Age and subsequent degeneration. He divides history into three periods in which climate and geography are the distinctive features. He believes that nature's influence has been constant and that through the rises and falls of the states, there has been a gradual ascent. This theory would imply more progress, but he avoids talking about the future. While his work is somewhat marred by his astrological and theological references, he does make three significant points: (1) rejection of degeneration theory, (2) assertion that his age was equal and in some respects superior to the ancients, and (3) recognition of the common interests of all peoples. Louis le Roy, the French translator of Plato and Aristotle re-enforces the contributions of Bodin except that his cyclical theory would have implied the degeneration of his own civilization, if he had not allowed for divine intervention. Le Roy is also notable because he emphasized the cultural or human aspects of history more than had been the custom.

Francis Bacon is important because he drew up a definite plan for a "Great Renovation" of knowledge. He was very conscious of the need to break with the past and start anew; he felt that the more man avoided the errors of the past, the more he would improve - the cycle did not have to occur. The chief means that men would use to avoid past errors was natural experimentation. While this belief was commonly held, he was the first to move natural experimentation outside of

science and define its purpose and value in terms of the improvement of man and his life. However, he did not have a far-sighted view of the future; he believed that he lived in the old age of the earth, and that within a short period nature could be sufficiently conquered. His analysis of the past is similar to Bodin; his chief contribution is the introduction of utility as a criterion in science.

The seventeenth century is of vital importance in the understanding of the next century because the enlightenment is really an application of seventeenth century philosophic and scientific theory to social problems. Momentarily, however, I would like to return to Copernicus. It is easy to both over-estimate and under-estimate the influence of this man's work. Unfortunately, there is no easy middle course to follow with him, so I am compelled to make a generalization, modified only by recognition now that it is open to challenge. When his destruction of the Ptolemaic system became accepted, it created at first a feeling of insecurity among a large number of people. Their central position in the scheme of things was gone; they were now lost in an immense space. While this did not destroy religion, it did shake its foundations and, more important, it opened Christian eschatology to serious questioning, for the entire view of history was oriented around the conviction, at least in the minds of the masses, that man was the center of the universe and God's plan. But the Copernican Revolution did make one positive contribution. It freed man from the all-encompassing hand of God. In practice, it worked along with the pagan spirit inherited from the rediscovery of the classics; in theory, it allowed the philosophers, scientists, and even, to some extent, the theologians to develop a more impressive picture of man's powers. The latter tendency was intensified when the accomplishments of men like Kepler and Galileo were recognized, until, by the beginning of the eighteenth century we can detect a real joy, a feeling of release. This is very noticeable in Fontenelle's Dialogue on the Plurality of the Worlds where the author defends the system against the fears of a young Marquise who is just being taught what it implies.

The next figure in one whose importance it is difficult to underestimate. D
Descartes represents the development of one of two trends which, according to Dr,
Frankel, are recognizable throughout the eighteenth century conceptions of progress.
He was primarily a mathematician and physicist who, thanks to a revelation in a dream,
attempted to apply reason or mathematical logic to all things. He perfected what
we call analytical geometry which apparently established a real relationship between
algebra and the realm of space, or the world. To best explain the significance of
his achievement, I will quote from Dr. J.H.Randall :⁽⁶⁾ "To Descartes thenceforth
space or extension became the fundamental reality in the world, motion the source
of all change, and mathematics the only relation between its parts. It is significant
that the Cartesian faith, so similar to that of the pioneers in astronomy and physics,
lacked any trace of the mystic Platonism that had marked all of them. He had made
of nature a machine and nothing but a machine; purposes and spiritual significance
had alike been banished. Descartes himself worked out the principles of optics
in detail; but his significance lies rather in his general conception. He had
reached the notion of seeking an explanation of all things in the world in purely
mechanical terms. Intoxicated by his vision and his success, he boasted, 'Give me
extension and motion, and I will construct the universe.' The whole working out of
mechanical physics in the next two centuries is but the development of his idea.
All energy is reduced to Kinetic energy, the energy of motion; all qualitative
differences in the world to quantitative differences of the size, shape, and
speed of motion of particles of matter. Living beings form no exception, life
becomes a mere matter of chemical changes, all animals are mere automata, even the
body of man is a purely physical machine. The world of the Middle Ages has been
explicitly and entirely rejected for the world of modern physics. Descartes in his
enthusiasm suggested mechanical explanations too simple and too little checked up
by observation; but Newton, in actually working out in detail the Mathematical
Principles of Natural Philosophy set the keystone in the arch of Cartesianism".

According to Dr. Bury modern history really begins in the seventeenth century with Descartes. Prior to him, statements concerning "progress" had really been just recognition that there had been advancement in the arts and sciences and a stated hope for future advances. With him the prerequisites for the Idea of Progress were fulfilled. Bacon and the Renaissance had shown the value of the secular life and the functional value of knowledge. Descartes and Bacon had freed science and philosophy from the authority of the ancients, and, most important, Descartes had put science on a solid foundation, thereby giving it some real assurance of progress. But he was acutely conscious of a need to break with the past in order to make a new start, even more so than Bacon, and this prevented him from seeing a continuity in history, so necessary for the Idea of Progress. One of the important influences which Dr. Frankel (7) attributes to Descartes is his attempt to justify his scientific method in terms of metaphysical principles. In this sense he was medieval, because he sought an overall unity, and he passed this feeling, if I can call it that, to the Enlightenment in the conviction that moral progress can be made by deducing an infallible moral science from other branches of knowledge. (In this connection, note Condorcet's remark that every moral error can be traced back to an error in physics. (8))

Actually, Descartes occupies a peculiar position in the Enlightenment in being both greatly praised and greatly censured by the same men. His dualism (thought and extension) was basically unacceptable to them because it did not allow the scientific method to be applied to mind, the essence of man, and, as already indicated, these "philosophes" were pre-eminently interested in social theories. But his championship of the use of systematic doubt (Doubt everything until you ascertain clear and evident first principles from which other knowledge is deduced.) awarded him ~~him~~ in their opinion the first position in the attack against authority or inherited belief. Also, their analytic method (that is, the breaking down of complex ideas into simple irreducible ones) is similar to his. They also adopted his mechanical idea of the universe by explaining all of nature in terms of a universal system of

mechanics. Moreover, in their shift from "rationalism" to "empiricism" they retained one vital pre-supposition - the origin of all ideas being sensations - which is analogous to Descartes' evident first principle. He also gave impetus to the belief that further knowledge could be readily grasped.

The next figure that I would like to discuss is Newton. According to Dr. E. A. Burt, (9) Newton made three very significant contributions. First he deeply influenced the thinking of the average intelligent man, notably by relating terrestrial gravitation with the centripetal movements of the heavens. This, more effectively than any other accomplishment, made men aware of the power within them. True, Newton was regarded as a genius, but he was a man. The importance of the awareness within men of their own ability was certainly significant in the development of the Idea of Progress. Second, Newton is technically important for having given precise definitions to a number of scientific terms. Third, Newton laid a "metaphysical groundwork for the mathematical march of mind". This, for our purpose is his most important contribution, and the one which links him to Descartes. The implication of his astronomical discovery was that the physical laws of the earth are valid throughout the solar system. The world becomes a "vast perpetual motion machine, and every event in it can be deduced mathematically from the fundamental principles of its mechanical action." (10) Newton's name became a "symbol which called up the picture of the scientific machine - universe, the last word in science, one of those uncriticized preconceptions which largely determined the social and political and religious as well as the strictly scientific thinking of the age. Newton was science, and science was the eighteenth century ideal." (11)

I have attempted to illustrate the Cartesian - Newtonian view, one in which science and the scientific method are part of a vast metaphysical system. This, as I have already indicated, is to Dr. Frankel one of two trends which affect eighteenth century conceptions of progress. Frankly, I believe that this authority over-emphasizes the importance of his thesis, but, nevertheless it is significant and at least

partly true. The man I would next like to consider is the man whom Frankel regards as the chief source of the alternate trend - Pascal. He separated the empirical sciences such as physics and chemistry from the "authoritative" sciences, such as history and theology, enabling him to discuss the experimental method without reference to metaphysics. We progress in these fields by criticizing inherited knowledge and experimentally accumulating new knowledge. He was at first a full-fledged Cartesianist, but his religious beliefs - he was a Jansenist - caused him to fear the intrusion of reason in such fields, and he made the above distinction. The difference between these two views is important. Pascal limited progress to science where a particular method provided the condition for continuous learning from experience if, and only if, they used the proper method. According to this view the growth of science, and thereby reason, is explained in terms of its method; if larger metaphysical principles were accepted, then the continuous growth of human reason became a condition for the growth of science rather than a result of its establishment. Science in the latter view is not a method of behavior but in some sense a manipulator of behavior. I am unable to make this distinction as clear as I would like because I am not really sure I understand the exact difference. However, even without fully understanding it, it is interesting to use as a point of departure in some of the later discussions. Except for the above distinction, I do not believe that Pascal is very important, for his real influence came in the nineteenth century when he was re-discovered by Chateaubriand.

Only one major seventeenth century writer remains for us to discuss and that is John Locke. To the "philosopher" Locke was the man who applied Newtonian experimental physics to the human mind and soul. He thus made the science of man continuous with the physical sciences and the human experience, or mind, central in the understanding of either science or nature. By importing the categories of physics into the study of man, he rejected the Cartesian dualism. However, like Descartes, he employed an anticadent view of the human mind to obtain his conclusions.

He actually re-enforced the Cartesian view that men might begin anew. Generally the eighteenth century "philosophes" adopted the Lockean sensationalism and inserted it into a Cartesian framework. Because this contribution of Locke is so important in the Enlightenment's Idea of Progress, I believe that it would be worth the time to examine it more closely. I shall be primarily relying upon F.S.C. Northrop's treatment of this subject.⁽¹²⁾

Locke started with the Newtonian science. According to this physics, nature is regarded as a system of physical objects located in a public, absolute space, objects which Locke termed "material substances", ultimately composed of atoms. The sensations which the observer has are not aspects of these substances, but appearances mysteriously associated with them. These are private substances in private space and time. We have now a three termed relationship of public substances, observer, and private or sensed qualities. Locke attempted to clarify this relationship by defining the observer as a mental substance which reacts to the material substances in space and time by being conscious of sensations in a private space or time. The significance is that in more precisely formulating the Newtonian physics he provided a theory for conscious man as well as physical nature. Thus a mental substance, the essential human being, becomes a blank consciousness, a "tabula rasa" upon which the external world acts. It can create the sensations, but only when acted upon; essentially it is a passive substance. Emotions, passions, even thoughts are the results of the effect ^{which} the external world, the world of material substances or Newtonian physics, has upon the blank tablet. To the eighteenth century, accepting this Lockean theory, if the effect of the external world, that is, man's environment, could be controlled, and they believed that it could be, then man could be made into whatever was desired. The importance of this concept in the development of the Idea of Progress can not be underestimated.

Condillac I will insert here because he is chiefly important in the technical development of Locke. He accepted the sensationalism and tried to

develop a more comprehensive picture for the activities of the mind. He appealed to language which he depicted as symbols or blocks enabling us to remember, analyze, or speculate. This emphasis upon communication will reappear later as a paramount part of the Idea of Progress. Certain other men should be mentioned in passing. The Cartesian theory of a mechanical world and invariable laws had excluded the idea of Providence which had earlier restricted the concept of progress so much. Bossuet is one important seventeenth figure who re-inserted it into the world scheme, but, significantly, his chief motive for doing so was to give an added foundation to morals and ethics, and not, pre-eminently for religious reasons. Malebranche developed the same theme, also asserting that this was the best possible world which could be constructed by the simple principles befitting a perfect Deity. Leibnitz also says that this is the best possible world which could exist in a perfect universe. These men point out that the theory of degeneration had been definitely abandoned as well as illustrate the feeling of complacency which was so characteristic of the seventeenth century.

One more item needs to be discussed before we reach the eighteenth century, and the above observation leads directly into it - the quarrel between the Ancients and the Moderns, which illustrates the revolt against the authority of the Renaissance and the classics. The question underlying the actual dispute was: is nature capable today of the power she manifested formerly? The Moderns, in supporting the permanence of nature's powers, gave the death blow to the theory of degeneration. Tassoni, in 1620 was the first to take up the cause of the Moderns, but because he looked upon the Middle Ages as a breach of continuity, there was no real idea of progress here, even if restricted to the past. Boisrobert was then inspired to deliver a polemic attack upon Homer before the Academie française in 1635. Saint Sorlin broadened the dispute by claiming that the Moderns were happier and more learned because of the larger foundation upon which they rested. The Age of Louis XIV was very conducive to this feeling of complacency, which Charles Perrault most noticeably reflects.

He, like the others, asserted the permanence of nature's powers and the increase of knowledge through time and experience, but he was more thorough and methodical than they had been. He was also similar to the others in viewing the medieval period as a breach of continuity. He believed that men are always the same in talent and brains, but because the arts and sciences depend upon accumulative knowledge, given equal talent, the latest product must be the best. His principal concern is with the past advance of knowledge, and not with either man's degree of happiness or with the future, although a view of the future can be deduced from his theory. George Haskell in 1627 attacked the theory of decay and extended the discussion to physical and mental qualities, but he was unable to get a real view of the future because he was handicapped by the Christian view of the end of the world. Joseph Glanvill in Plus Ultra (1668) considered mathematics and science, pointing out the tremendous advances which had taken place in those fields and the reason for hoping for continued advances. Sprat developed the same argument.

We have now reached the eighteenth century, but before we discuss the first major figure, Fontenelle, I would like to make a few general remarks about the Enlightenment and its members, using as my chief source, Dr. Becker's study.⁽¹³⁾ These "philosophes" were not really philosophers but men of letters, propogandists, attempting to destroy the old. Because of this they should be read with care, for many of their most striking statements are deliberate exaggerations intended to provoke thought in their audience. They were very disdainful of enthusiasm, but actually were its most eager supporters in their search for truth, liberty, justice, humanity, and so forth. The key to their view was "nature"; It was their Book of Revelations. Nature, instead of being some mysterious, awesome manifestation of the divine was "after all, just the common things that common men observed and handled every day, and natural law only the uniform way things behaved."⁽¹⁴⁾ Now its secrets were open to all. However, this resulted in their having an increased rather than lessened respect for nature; indeed, they appeared to diefy Nature and to make it their sole God. Locke, with his

"tabula rasa", had destroyed the doctrine of Original Sin and total depravity, thereby enabling men to believe - since men and mind were shaped by nature, which they were now hoping to control, - that man could be brought into harmony with the universal natural order. But soon it appeared to them that if reason or mind was shaped by nature, was not it already "natural", that is in harmony with the order that created it as it was. Since this picture was not satisfactory to them, implying as it did an acceptance of what were to them manifest injustices, they adopted a new pre-conception - that the completed picture or harmony was in the future and it was their job to work toward its fulfillment.

In replacing God with a mechanistic nature, they had deprived morality of its best support. Also, after diefying nature they found they did not know exactly what it was. What was "reasonable" or "natural" in terms of vast differences of opinion in a mechanistic world? The deduced principles from the invariable laws of nature did not come as easily as they had expected. Consequently, they back-tracked a little, leaving abstract reason in order to discover in history the "natural-man" from whom they could abstract the principles necessary to make value judgements. However, history did not show the "natural" as clearly as they had anticipated and they were forced to interpret the past in terms of their views.

The creed of the Enlightenment, as it developed, had four major points: (1) man is not naturally depraved; (2) the end of life is life itself; (3) man is capable, guided solely by the light of reason and experience, of perfecting the good life on the earth; (4) the first and essential condition of the good life on earth is the "freeing men's minds from the bonds of ignorance and superstition, and of their bodies from the arbitrary oppression of the constituted social authorities." How these four points became articulated, we shall see in the remainder of this paper.

Bernard Fontenelle (1657-1757) is one of the principal figures in the transitional period between the seventeenth and eighteenth century, what is sometimes

called the "Cartesian Period" because the principles associated with Descartes - supremacy of reason over authority, stability of nature's laws, rigorous standards of proof - were paramount. As Robert Shackleton said: "Reaching back to Montaigne and Charron, to Giordano Bruno and Campanella, to the 'libertins erudits' of the early seventeenth century, Fontenelle stretches forward also to Montesquieu, Voltaire, and D'Holbach, and illustrates the continuity of thought from the Renaissance to the Revolution."⁽¹⁵⁾

Fontenelle was one of the chief men responsible for realizing the implications of the literary quarrel between the Ancients and the Moderns and for raising it from the level of pedantry to that of Philosophy. In his Dialogues of the Dead (1683) progress is the subject of a discussion between Socrates and Montaigne in which the former takes the position that the later age should be better because nature remains the same and the later age has the advantage of the increased body of experience. Actually, very little in the way of a definite conclusion can be obtained from the essay, but five years later a more comprehensive essay on the subject was published by Fontenelle, Digression on the Ancients and the Moderns. He starts with the Cartesian assumption that nature's powers are constant. "The whole question of preeminence between the Ancients and Moderns is reduced to knowing if the trees of bygone days were larger than those of today. If they were, then Homer, Plato, and Demosthenes cannot be equalled in these last centuries: but if our trees are just as large, we can equal them."⁽¹⁶⁾ He answers this question by saying: "Nature possesses a kind of paste which is always the same, which she ceaselessly moulds and remoulds in a thousand different ways, and of which she forms men, animals, and plants; and certainly she did not form Plato, Demosthenes, or Homer of a finer or better kneaded clay than our philosophers, our orators, and our poets of today."⁽¹⁷⁾ "The centuries produce no natural difference between men. Even if they should produce a difference of some sort, it would be very easy to

efface, and, finally, it would be no more to their advantage than ours. We are all, then, perfectly equal, ancients and moderns, Greeks, Latins, and French."⁽¹⁸⁾

Having established the essential quality of all men, Fontenelle goes on to explain the apparent failure of this equality to show itself by the influence of other factors. "It is clearly evident that all differences, whatever they may be, must be the result of such extraneous circumstances as the times, the government, or the general state of affairs."⁽¹⁹⁾ For example, if no great man appeared in the centuries immediately following the fall of Rome, it was because the circumstances prevented him from asserting himself, not because the potentialities for greatness were not present in men during that time. "She, (Nature) produces in every century men fitted to become great men; but the times do not always permit them to exercise their talents."⁽²⁰⁾ He admits that climate might have an influence, but within Europe the climates are similar enough so that the difference would be negligible. Also, again falling back on the analogy of the trees, ideas are much easier to transplant than are plants so the effect of climate can be easily equalized.

Turning more specifically to the question of progress, he asserts that it is the means of experience, the accumulating of knowledge and experience which gives us our advantage. "We have benefited intellectually by these same discoveries which we see before us; we have inspirations borrowed from others in addition to those which we have ourselves; and if we outdo the first inventor, it is he himself who has helped us to outdo him: and so he always has his share in the glory of our work; and were he to withdraw what belongs to him, we should find our own share to be no greater than his."⁽²¹⁾ But we always profit from their mistakes as well as their positive contributions: "We are indebted to the ancients for having exhausted for us the greater part of the false ideas that could be conceived."⁽²²⁾ "And so, seeing that we are in a position to benefit by the discoveries of the ancients and by their mistakes even, it is not surprising that we surpass them. Merely to equal them would mean necessarily that we were of a nature vastly inferior to theirs."⁽²³⁾

This progress is not dependent upon individuals, they simply had the advantage of being first; what they did, the Moderns could have done if they had come first, and and would have done if the classics had not been re-discovered. However, Fontenelle makes the same distinction that Pascal had made earlier. Certain fields such as eloquence and poetry are not cumulative, the limited views and the imagination necessary for excellence may be obtained in a short period: "since eloquence and poetry are rather limited in scope, there must come a time when they are developed to their highest perfection; and I hold that for eloquence and for history that time was the century of Augustus."⁽²⁴⁾ But he goes on to say: "When we shall have found the ancients to have reached the point of perfection in anything, let us be content to say that they cannot be surpassed, but let us not say that they cannot be equalled."⁽²⁵⁾ But in science and learning, Fontenelle goes on to say, the later generations must inevitably surpass the ancients because these fields depend upon knowledge and correct reasoning and they have the accumulated knowledge of the past. He picks up the then famous comparison of Pascal between the world and a single man, but he makes a significant change at the end. "A good cultivated mind contains, so to speak, all the minds of preceding centuries; it is but a single identical mind which has been developing and improving itself all this time." but I am obliged to confess that this man in question will have no old age, he will always be equally capable of those things for which his youth was suited, and he will be ever more and more capable of those things which are suited to his prime, that is to say, to abandon the allegory, men will never degenerate, and there will be no end to the growth and development of human wisdom."⁽²⁶⁾ He later goes on to say: "There is every cause to believe that reason will be perfected, and that men will disabuse themselves gradually of the senseless prejudice for antiquity."⁽²⁷⁾ Here we have the first formulation of the concept of an indefinite future, but he never really developed it; as one writer put it: "he paid his respects to posterity, but he was in no mood to worship it."⁽²⁸⁾ Still, his remains the first really complete doctrine of progress. However, according to his view, men will always remain the same in their basic nature, and

this basic nature Fontenelle recognizes as having some faults. In one of his works he says that if we were on the moon and looked back at man: "Is it possible we should have an idea of so strange a composition, a creature of such foolish passions, and such wise reflections, allotted so small a span of life, and yet pursuing views of such extent: so learned in trifles, and so stupidly ignorant in matters of the greatest importance; so much concerned for liberty, and yet such great inclinations to servitude, so desirous of happiness, and yet so very incapable of obtaining it."⁽²⁹⁾

In summary then, Fontenelle was important for developing a complete concept of progress, but he limited it to the sciences and learning, with implications that man's reasoning might also improve. Those fields, such as the arts, which did not depend on accumulative knowledge would not necessarily progress. Man is specifically limited in his essential nature for all times, and this nature includes weaknesses or faults which, apparently, will not disappear in time. This is really just the first important step toward the Idea of Progress.

The importance of his Conversations on the Plurality of Worlds (1686) in the popularizing of sciences and especially the Copernican Revolution has already been mentioned. It is a short, amusing treatise placed in the form of conversations between the author and a young marquise in which he attempts to explain the basic theory and implications of Copernicus's discoveries. For our purposes, its main value lies in the few remarks the author makes which reveal his opinion of man, one of the most notable of which has already been quoted. ^{His} History of the Oracles (1687) applied the Cartesian principles to theology and indirectly discredited the early Church Fathers.

Pierre Boyle, like Fontenelle, was not an investigator but a popularizer of knowledge. He also took a pessimistic view of man, but, unlike Fontenelle, was untouched by the scientific advances. He is chiefly notable for his theological criticism which, by helping to free morality from theology and metaphysics, prepared the way for the Deistic concept.

The quarrel between the Ancients and the Moderns, to which Fontenelle had given new meaning, can be briefly summarized. In England Saint Evremond wrote on the dispute as did his more noteworthy friend Sir William Temple. The latter's untempered defense of the Ancients (1690) is important because it provoked Wotton to write his Reflexions. In this work he accepts Fontenelle's contention that nature's powers remain the same, but he maintains that the past might possibly have been superior in some fields because conditions were more suitable. Here is he delineating more clearly an implication of Fontenelle's argument. He makes a sharp distinction between the fields of art and knowledge, saying that progress in the first is uncertain, but in the second field he gives graphic illustrations of the tremendous advances which have been made. He was very cautious concerning the future, admitting only that progress may occur even if not in the next age.

The spirit of the seventeenth century and those early eighteenth century writers whom we have mentioned is characterized by satisfaction or complacency. The Age of Louis XIV was a glittering edifice that blinded men to its insecure foundation. Even the perceptive Voltaire considered this period one of the four greatest in human history, ranking with the Periclean, the Augustan, and the Italian Renaissance, and of the four, he felt that it came the closest to perfection.⁽³⁰⁾ But the result of the wars and the administrative decay following Louis XIV's death made men more aware of the insufficiencies and injustices of life around them. This coupled with their new found confidence in science and man's power, as well as the new philosophic theories made them into reformers. If the social evils were not innate in man or in the natural order, but due to ignorance or prejudice, then they could be removed.

One of the first of the new genre is the Abbe de Saint Pierre. His Plan for Perpetual Peace (1713) is his most famous work, but it is based upon the preservation of the status-quo. An abridgement (1727) pointed out the significance of his project upon the future. However, for our purpose his only important work is Observations on the Continuous Progress of Universal Reason (1737). He was the first,

in comparing mankind to a single man's life, to refer to the present age as the "infancy" and to speak of a really long future. He also maintained that besides the progress in the arts and sciences, speculative works on morality have advanced. Unfortunately, wars, superstitions, royal jealousies and the like have hindered practical moral progress. But recently the rate of progress has accelerated thanks to the expansion of sea commerce and the consequent increase in wealth, the increased study of mathematics and physics which frees men more from ancient authority, and the foundation of scientific Academies to promote and promulgate discoveries. He advocated the establishment of social science academies to serve the same purpose in these fields. These would have ~~increased~~ ^{released} the level of morality and general happiness from the plateau upon which they had been imprisoned. He is considered as representing one transition from the early Cartesianism, concerned with intellectual problems to the later "philosophes" and their concern with social problems.

Now the eighteenth century writers became concerned with history as we mentioned earlier. The belief in Reason meant to most of them that there were a few eternal and self-evident principles intelligible to any man at any time. To discover Reason required no special tools, only the "ability to abstract the essential from what was merely the special and habitual."⁽³¹⁾ By studying history these men hoped to uncover the essential, but history did not clearly reveal it; so they began to seek Reason in the unhistorical,, the essential nature hidden and distorted by custom and superstition. Thus they were forced to view progress, historically, according to Dr. Frankel, either with the paradox of Descartes (a new start initiated by a "revelation") or as a theory of automatic progress. Personally, I do not think these men were aware of the distinction Dr. Frankel points out.

Montesquieu was never really aware of the Idea of Progress, but he is significant in its development, for in his Spirit of the Laws, he proclaimed that political as well as physical phenomena are subject to general laws. However, his work was very unsystematic, and only the influence of geography and climate became readily apparent to his contemporaries.

Francois Marie Voltaire (1694 - 1778) to many epitomizes the Enlightenment. He was a practical moralist determined to refashion the world according to the dictates of reason. But he had one fatal flaw as a thinker, his mind was and discursive/tangential with the result that it is extremely difficult to precisely formulate his views on progress. His basic purpose is set forth by Hearnshaw:⁽³²⁾

"Assuming the uniformity of human nature as a base line, or least common denominator, it ought to be possible, he argues, by deductive reasoning, working on the common stock of qualities, potentialities, and powers which human nature possesses, to build up the elements of a natural order, universally valid - that is, to construct a philosophy embodying natural religion, natural law, and natural rights. Over against this natural order stands the actual world, with its legal codes, its established religions, and its political institutions - this so-called 'Empire of Custom'. The problem of the political philosopher is to relate these two worlds to each other, to draw the necessary inferences, and to bring the real world into harmony with the principles which reason has discovered in its perambulation of the natural order. This is precisely what Voltaire sets out to do."

Voltaire starts with the Lockean position; therefore, men are naturally equal: "Nothing can be clearer than that men, enjoying the faculties of their common nature are in a state of equality."⁽³³⁾ But "Every man is born with an eager inclination for power, wealth, and pleasure, and also with a great taste for indolence⁽³⁴⁾; therefore "It is impossible in our melancholy world to prevent men living in society from being divided into two classes, one of the rich who command, the other the poor who obey."⁽³⁵⁾

However, this pessimistic, even fatalistic picture is not the whole story, for he also adopts Locke's sensationalism and puts it in a deistic mechanical world frame. "There is no innate knowledge, for the same reason that there is no tree that bears leaves and fruit when it first starts above the earth. There is nothing innate, or fully developed in the first instance."⁽³⁶⁾ The character is formed of our ideas and our feelings. Now it is quite clear that we neither give ourselves feelings

nor ideas, therefore our character can not depend on ourselves. If it did so depend, everyone would be perfect. We cannot give our selves tastes or talents, why, then, should we give ourselves qualities. When we do not reflect we think we are masters of all: When we reflect we find that we are masters of nothing."⁽³⁷⁾ "Is it not that, being born neither good nor wicked, education, example, the government into which he is thrown - in short, occasion of every kind - determines him to virtue or vice."⁽³⁸⁾ "All the faculties in the world will never prevent a philosopher from perceiving that we commence by sensations, and that our memory is nothing but a continued sensation. A man born without his five senses would be destitute of all ideas supposing it possible for him to live."⁽³⁹⁾ In reference to the world scheme Voltaire says: "Either all is the consequence of the nature of things, or all is the effect of the eternal order of an absolute master, in both cases, we are only wheels in the machine of the world."⁽⁴⁰⁾ and "Where is the man who, when he looks into himself, perceives not that he is a puppet of Providence? I think - but can I give myself a thought."⁽⁴¹⁾ Moreover: "There is no evil for the Great Being; to him it is only the play of the great machine which incessantly moves by eternal laws."⁽⁴²⁾

This then leads Voltaire to certain other points: "Morality is uniform and invariable; it comes from God."⁽⁴³⁾ "The constitution of our souls, our principles of reason and morality, will ever be the same."⁽⁴⁴⁾ "The only thing required, then is to exercise our reason in discriminating the various shades of what is right and wrong."⁽⁴⁵⁾ Voltaire believes that the application of reason can lead to progress. History does not reveal a pretty picture: "I have now gone through the immense scene of revolutions that the world has experienced since the time of Charlemagne, and to what have they all tended? To desolation, and the loss of millions of lives! Every great event has been a capital misfortune. History has kept no account of times of peace and tranquillity; it relates only ravages and disasters."⁽⁴⁶⁾ But he goes on in the Essay on the Manners and Spirit of Nations to argue that war and religion (superstition) have been the cause of this desolation and "We may believe that reason and industry will always progress more and more; that the useful arts will be improved;

that of the evils which have afflicted men, prejudices, which are not their least scourge, will gradually disappear among all those who govern nations, and that philosophy, universally diffused, will give some consolation to human nature for the calamities which it will experience in all ages."⁽⁴⁷⁾ History for Voltaire has been, and always will be, the study of the struggle between reason and superstition. While it appeared that reason, the sole guide to Progress, was not winning, time was on its side, because, since knowledge was accumulated, and knowledge re-enforced reason, superstition would gradually decrease. However, it would never disappear, for Voltaire seems to believe, despite his acceptance of the "tabula rasa", that man has certain natural passions which, in conjunction with circumstances, will always produce undesirable results. The frequency of these occurrences, however, can be lessened proportionate to the application of reason. Thus his concept of Progress is moderate, tempered by a rather cynical picture of man.

His Essay was a direct challenge of Borsuet's theory of Providence. Voltaire talked about final causes, but in his mechanistic world they had no place. He was chiefly concerned with the causal connection of events in his analysis and not the general laws which Montesquieu promulgated, despite his emphasis upon the invariable laws which run the universe. Whenever an abstract or metaphysical subject came up, Voltaire's position would boil down to: "I don't know; I won't ever know; so let us be concerned with those things we can know about." This, perhaps, explains this paradox because, admitting there are general laws, man will never be able to know them directly; he can only approach them by applying his reason to a study of particular events and their causal relationships. His study of cause and effect leaves no real plan for free will "I grant that all events are produced one by another; if the past was pregnant with the present, the present is pregnant with the future; everything is begotten, but everything does not beget."⁽⁴⁸⁾ This is compatible with his Cartesian world view, but another part of his study is not. I have not read enough of the Essay to personally verify this, but according to both Bury and Frankel, Voltaire in his study of the causes of various historical events relied a good bit upon chance,

most probably because he is unable to tie certain phenomena up with its antecedents. At any rate, whatever the reason, Voltaire admits chance into the world and in so doing he obviously curtails the certainty of future progress. He states that progress is bound to occur, chance may divert it into devious channels, retarding or accelerating its rate, but never halt it; ^{still.} future progress appears an uncertain process.

A few more things need to be said concerning Voltaire's position. He was primarily a literary figure and an enthusiast, but no scholar of science. He emphasized reason, but reason was tied up with the arts and sciences for him. As a result he emphasized cultural conditions, of which the arts and sciences were the most vital part. His study was primarily an intellectual history; it was this emphasis which made the Age of Louis XIV so magnificent in his opinion. He also singled out the eighteenth century as one with a peculiar mission to perform, and the "philosophes" as the leaders of their age. He was helping to develop the feeling among the intellectuals that they were the élite, the leaders, a feeling which became a characteristic of this group.

Voltaire is not an easy man to understand because of his inconsistencies. Having a mechanistic world, as orderly and smoothly run as a watch, to which he compared it, he admitted change and progress as well as chance into it. Emphasizing reason as the guide to progress, he reduced ideas and mind, from which reason originates, to a blank tablet receiving impressions and man to a puppet of an impersonal Deity and mechanistic world. The picture he paints of the past is not pretty, nor is the picture he paints of man's part in it. Man, like nature, is always the same, essentially, but he will progress. There is little that you can do with Voltaire except to say that he emphasized the use of reason as a guide to progress, which will inevitably follow. However, he never seems to say that man's perfection is at the other end of the road, nor that, ultimately, man is the creator of this progress. He has simply taken another step toward the Idea of Progress.

D'Alembert echoed Voltaire's emphasis upon the cultural aspect of progress. Knowledge inevitably brings progress. Sensations are the origin of all knowledge.

He attempted, unsuccessfully, to resolve progress as it appears in history with progress as it should occur according to his Cartesian - Lockean metaphysical assumptions.

The next important figure we reach is Anne Robert Jacques Turgot (1727-1781) who was educated for the church and later became associated with the Physiocrats ^{was} and an outstanding government administrator and advisor. He also starts with the Cartesian - Lockean position, but admits more inequality among men. "The most sublime mental attainments are only, and can be only, founded upon our ideas of sensation, development and combined; The same senses, the same origins, the spectacle of the same universe, have everywhere given to men the same ideas, as the same needs and the same inclinations have everywhere taught them the same arts."⁽⁴⁹⁾ He then continues on to say: "Doubtless the human mind everywhere contains the germ of the same progress, but Nature, unequal in her benefits, has given to certain minds an abundance of talents which she has refused to others; circumstances develop these talents, or leave them buried in obscurity, and to the infinite variety of these circumstances is due the inequality in the progress of nations."⁽⁵⁰⁾ "Their minds or the power and character of their minds, have a real inequality, the causes of which will be always unknown to us."⁽⁵¹⁾ "Thus, inequality will arise, and increase, even among the most capable and most moral peoples It is not an evil, it is a blessing for mankind: where would society be if every man laboured only at his own little field."⁽⁵²⁾

However, the mind can be improved, as would be expected of one who starts with sensationalism: "I believe that Nature has sown in all hearts the seeds of all the virtues, that they require only to be developed; (note how this concept of sensationalism differs from the "tabula rasa" of Locke.) that education (but indeed only a skilful education) can render virtuous the most of men. I know that human progress cannot be rapid; man slowly trails himself along step by step..... Each generation will learn a little from the preceding one, and books will thus become the preceptors of nations."⁽⁵³⁾ As the above passage indicates, communication is

the key to human progress. "The multiform signs of language and of writing, by giving to men the means of insuring the possession of their ideas and of communicating them to others, have made of all the individual funds of knowledge a common treasure which one generation transmits to the next, along with an inheritance always increased by the discoveries of each age; thus the human race seen from its origin appears to the eye of a philosopher as one vast whole which itself, like each individual composing it, has had its infancy and its development."⁽⁵⁴⁾

Progress is much more certain than this quotation would indicate. The course of history is determined by the causal connection of events, as in Voltaire, but there is an overall pattern which dictates that everything contributes to progress. "Different causes of events take their rise in the different countries of the world, and all, by however many separate roads, concur at last to the same end - to advance the human mind."⁽⁵⁵⁾ "No mutation has been made which has not brought about some benefit, for none has been made without evolving experience, and without extending or improving, or at least preparing for man's education."⁽⁵⁶⁾ Even the passions, generally condemned in this rationalistic age, occupy an important position for "the passions of individuals have multiplied ideas, extended knowledge, advanced men's minds, in default of that Reason, whose day has not yet come, and which would have been less powerful had it reigned earlier."⁽⁵⁷⁾

Progress for Turgot thus becomes very impersonal and very deterministic. Everything is where it belongs in the scheme of things and everything contributes to its proper amount to progress. (He, unlike many of his contemporaries, emphasized the contributions of Christianity). Exactly how free the individual is in this world is never made clear. Certainly, knowledge being the product of environment and the environment being pre-ordered in a causal chain, he would appear to have no freedom, but Turgot does not go this far. As indicated in the first quotations, man does not start as a complete blank tablet. He appears to want environment to influence men, but not determine him; however, whatever he does, progress follows inevitably. There are

several other very interesting points in Turgot's philosophy. He maintains that progress increases its rate of acceleration with each step forward. He also anticipates Auguste Comte's three divisions of man's history: (1) spiritual or theological, (2) abstract or metaphysical, and (3) mechanistic or "positivistic".

His study of history did not reveal progress advancing as he conceived of it; so he too interjected chance. For him chance affected the observations of the empirical sciences creating "error", which has hindered progress by lingering long after its contribution had been made. However, the new scientific method greatly reduced the opportunities for chance errors, and any way these errors could never obstruct progress, but only divert it. Basically, it is Voltaire's argument, but he incorporated it into his philosophy in such a manner that the insecurity of progress was not readily apparent.

Actually, his work is not complete; we have only his notes on the Universal History that he planned as well as two Sarbonne discourses delivered in 1750 and, while these give us a good sketch of his theory, the details were never written down. We can notice, though, the trend away from God which just became apparent in Voltaire and is consummated in Holbach. He is not too precise on the future developments, but, concerning man, he leaves far more room for moral development than did Voltaire, who emphasized the permanence of their natures as well as their equality. Also, Turgot's picture of man is not as black as Voltaire's, although he too recognized many imperfections. In giving men's faults a definite and positive position in his deterministic philosophy, he implied that they would disappear as they became unnecessary, but he never went so far as to predict that man would be perfect or his life completely happy. This is implied in his theory, but I believe that he was fearful of making such an extreme assertion, if not doubtful of its validity. We have already raised the question of man's part in the creation of progress and decided that, despite the implications of his philosophy, Turgot was not prepared to accept complete determinism, at least as far as man himself is concerned. But nowhere can I find any definite statements on this subject.

He does seem to emphasize moral and psychological causes more than physical causes, which are limited to influencing the above, but I am not sure if we are safe in relating this to some free will. In summary, we can say that there are some questions left unanswered in his philosophy, but the outlines are clear enough to indicate that we have moved one step farther along from Voltaire's position to that of Holboch and, indirectly, Condorcet.

Before we come to Holboch, however, there is one other writer that we should consider. Helvetus did not write specifically on progress, but his major concern was to show the implications that the scientific advance had for human happiness.

In so doing he laid the ground-work for the utilitarianism of Chastellieux and others. His De l'esprit (1758) sought to prove that morality can be made into a science. Education and environment are the causes of moral and intellectual inequalities, and these can be both calculated and controlled. He represents Condillac's emphasis upon thought being composed entirely of elements already given - sensations. With a new education and environment there would be no limits to human improvement. He accepted the Cartesian view of the universe in which all the parts are in harmony; thus, he believed that people could remain true to their nature - seek the greatest pleasure and avoid pain - and all would be in perfect harmony. All that was necessary was to condition people to calculate the pleasure - pain proportion accurately. He was the first to emphasize the fact that all peoples - even the savages - could be indefinitely improved.

Paul Heinrich Dietrick Holboch (1723 - 1789) in his first work, Christianisme dévoilé, (1767) presented a very critical picture of religion and its influences upon man. His second book, Le Système de la nature (1770) was a naturalistic or materialistic theory of the universe which attracted very few followers. His most important and influential work, Le Système Social, (1773) is the one which most concerns us. He too starts with sensationalism. "Toutes nos idées viennent des sens."⁽⁵⁸⁾
 "Nous n'appartons en naissant pas plus les idées de vice et vertu, que celles de ce cercle ou de triangle: nos sentimens pour le bien et le mal ne peuvent être innés ou

antérieurs a l'expérience; ils ne sont fondés que sur la manière dont nous sommes affectés par les effets; ce qui nous sur la maniere dont nous sommes affectes par les effets; ce qui nous met à portée de juger des causes, et d'éprouver pour elles les sentimens de l'amour ou de la haine. Les hommes apportent en naissant despositions propres à saisir les vérités morales avec plus ou moins de facilité de même qu'ils apportent des têtes organisées de maniere à saisir avec plus ou moins promptitude, les vérités physiques ou géométriques.⁽⁵⁹⁾ Holbach admits a large number of factors into the development of man: "Il devient au être utile ou nuisible, soit pour lui-même soit pour ses citoyens, suivant que les circonstances le tournent vers le bien ou vers le mal, c'est à dire, suivant que le fond qu'il a reçu de la nature est bien ou mal cultivé par l'éducation qu'on lui donne, par les exemples qu'il voit, par les discours qu'il entend, par les personnes qu'il fréquente, par les idées qu'il se fait ou qu'on lui inspire, par les habitudes qu'il contracte; et sur-tout par le gouvernement qui règle sa conduite."⁽⁶⁾ Holbach seems to believe, in keeping with most of his contemporaries, that the necessary changes in environment, education, and so forth, are most likely to come from above, initiated by a benevolent or enlightened authority. Education is the most important single factor in the development of man: " C'est dans l'éducation que nous devons chercher la source principale des vices et des vertus des hommes."⁽⁶¹⁾ Religion is the most detrimental influence: "L'esprit religieux fut et fera toujours incompatible avec la modération, la douceur, la justice, et l'humanité."⁽⁶²⁾

He accepts the utilitarianism of Helvetius with its accompanying emphasis upon reason as the guide for discovering one's true interests: "La raison est le connoissance du bonheur véritable, et des moyens capables de le procurer. Cultiver au developper la raison d'un homme, c'est lui faire connoître ce qu'il doit pratiquer ou éviter pour se rendre heureux."⁽⁶³⁾ "La vertu n'est que l'utilité des hommes réunis en société."⁽⁶⁴⁾ "En un mot, sous quelque point de vue qu'on envisage les choses, c'est toujours notre utilité, notre intérêt, le désir de nous rendre heureux, qui nous fait aimer ou hair les objets."⁽⁶⁵⁾ "Oui, je le répète, it est en ce monde

des plaisirs ^{VARIEES} ~~verites~~ pour l'homme, il est fait pour le bonheur; il ferait bien plus heureux, s'il étoit plus raisonnable; il ferait raisonnable, s'il l'on prenait soin de cultiver sa raison." (66)

But man is not the creator of his progress, for it is a materialistic, deterministic world that Holbach has conceived. "Tout dans le monde n'est qu'un enchainement immense de causes et d'effets lies." (67) "Man is ^{NOTHING} not more than a passive instrument in the hands of necessity." (68) There is no God for Holbach except nature, but progress is assured: "He who meditates on the things of this world sees them subject to a Nature, which, through unforeseen causes and hidden relations, draws concord from discord, happiness even from unhappiness Let us hope for everything from time and the progress of enlightenment. By dint of falling the child learns to support himself, to walk, to avoid dangers: by suffering from his errors, man becomes wiser and succeeds in curing himself of them." (69) This passage also illustrates his view of history, which is similar to that of Turgot and Helvetius; all three saw in the past a "history of errors", but one from which benefit is inevitably derived. The future that Holbach conceived was not a utopia; man would never be perfect or his life completely devoid of unhappiness: "Tantot jouir et tantot souffrir, voila ce qui constitue le bien-etre." (70) "There is one statement which he made which reminds me very much of Montagne's skepticism in respect to man: "La morale ressemble à une fille aimable, dont tout le monde admire la beauté, mais que personne ne veut épouser parce qu'elle n'apporte point de dot." (71)

Holbach, like Turgot, gives the passions a positive position: "Ainsi les passions sont essentielles à l'homme, inherentes à sa nature, necessaire à sa conservation et à son bien-etre, et ne peuvent être anéanties; un homme sans passions ou sans desir, cesserait d'être un homme." (72)

To fill out a few of the details of his view, Holbach accepted the Cartesian view of the universe, according to which all of nature is harmonious, and man, by following rational self-interest, can be brought into this harmony. Of course, the pattern dictates that man will gradually come into harmony. The particular cause is

that through experience man will inevitably become more rational, enabling him to make the appropriate deductions from the invariable laws of the universe - in ethics and politics, as well as in the physical sciences. A few quotations will illustrate these points. "Malgré cette perversité dont nous souffrons beaucoup sans doute, toute nous prouve que de jour en jour nos mœurs s'adoucissent, les esprits s'éclairent, ~~les esprits s'éclairent~~, la raison gagne du terrain."⁽⁷³⁾ "Ses devoirs feront connus, s'ils sont conformes à sa nature; alors les principes de la morale feront évidents et formeront un système capable d'être aussi rigoureusement démontré que l'arithmétique ou la géométrie. Cette science sera claire pour tout le monde."⁽⁷⁴⁾ "Consultons la nature, ne la combattons jamais."⁽⁷⁵⁾ "Chaque action dans la vie sociale sert à son instruction et lui fournit des faits dont l'assemblage sert à régler le système de sa propre conduite."⁽⁷⁶⁾ "les loix 'civils' ne sont donc que les loix naturelles appliquées aux besoins, aux circonstances, aux vues d'une société particulière ou d'une nation."⁽⁷⁷⁾

It might be well to pause here and briefly compare the philosophies of Voltaire, Turgot, and Holbach. All three start with sensationalism, although Turgot turns from the blank tablet slightly, interjecting both certain basic inequalities and the "seeds of virtue" in men. All three emphasize education and other external factors ^{such} as the conditions of man and the development of his character. All three look to reason as man's guide to future progress, but Turgot and Holbach look somewhat kindly upon the passionate in man. For all three the assumption of experience is vital for the development of reason and the progress of man. This accumulation they regard as inevitable. None of these men believe that man will ever reach perfection - there will always be misfortunes; but they can be gradually reduced. All three look upon history as a very unpleasant sight, but one in which the unpleasantness, especially for Turgot and Holbach - is an eventual cause of future happiness and progress. Voltaire, is as always, a little doubtful, but these are indications that, at least in a number of cases, he would agree to this interpretation. All

three move outside the sciences and into morals and ethics to predict progress. This is a trend which is least clear in Voltaire and most apparent in Holboch. In regard to the certainty of progress, all three are deterministic: again this a trend. Progress is least certain in Voltaire because of the interjection of chance; he tends to make men puppets in his Deistic machine, but also does not appear to go all the way to reject free will. The same thing is true of Turgot, but he emphasizes the determinism of progress more than Voltaire, although he too appears to stop short of a complete rejection of free will. With Holboch there is complete deterministic materialism. Certainly his determinism is incompatible with his being a reformer, but his doctrine is more of a moral than a natural philosophy. Clearly this is not a complete resume of their philosophies, but I merely wanted to point out what appeared to me to be certain trends noticeable in their writings as we move on into the eighteenth century.

Perhaps, passing mention should be made of the Economists or Physiocrats. As has been noted, Turgot is often regarded as an associate of theirs. They were in harmony with the men we have mentioned in that they too regarded earthly happiness as the end of society. (This was not as commonplace a belief at this time as my paper would indicate. For them, having accepted Locke's political theory, the protection of property and "laissez-faire" were the guiding principles which would lead to indefinite progress. (Although many of them, especially in France, emphasized land, this cannot be considered part of their basic philosophy.) They differed from these other "philosophes" we have considered in not regarding society as man-made and, hence, deducible from his nature. They also considered inequality natural; this, as has been noted, can be detected in Turgot.

The Chevalier de Chastellux published his On Public Felicity a year before Holbach's Le Systeme Social. His purpose was to examine each historical period and determine the degree of public happiness present. He accepted as his guiding principles the utilitarian enlightened self-interest and an omnipotent environment. In this respect he was in the same trend as Turgot and Holboch. He concluded that the

contemporary age was the happiest because of its intellectual enlightenment and because of the confluence of circumstances. He regarded his age as the historical turning point because it was well on the road to discovery of the universal fixed principles which guided the world and which would insure progress. All of the past, even the errors, had contributed some good, but the past could now be forgotten because it was no longer important. His three major premises were: (1) man always seeks improvement; (2) experience and accumulated knowledge make men wiser; and (3) the harmony of a beneficent nature.

This era is often called the "Age of Reason", and there is a large element of truth in the title. However, ~~however~~, this extreme rationalism precipitated a reaction which is perhaps best recognized in Jean Jacques Rousseau. We have already noted in both Turgot and Holbach a certain sympathy for the passions or emotions, but they were at best regarded as poor country cousins. Holbach and Castellux, possibly even Turgot, were influenced by Rousseau's writings, but generally speaking, the age was not ripe for this type of emphasis. We must wait until the excesses of the Revolution and the Napoleonic era, for which the nationalistic reformers were generally considered responsible, have been experienced before men will turn to Romanticism and emotionalism. Nevertheless Rousseau was not without influence in his own lifetime; his Discourses, the Social Contract, Emile, and the Confessions created quite a sensation and Novelle Heloise was very popular. Actually, he was not as hostile to the Idea of Progress as is often believed. He, like all the others, used generalizations for effect, and these have often been misconstrued. His Discourse on the Arts and Sciences basically maintained that the arts and sciences had not contributed to the development of morality - not that they could not. The separation between political power and enlightenment made the former despotic and the latter isolated and irresponsible. The "philosophes" had forgotten the source of morality - sentiment; reason alone could not create morality. In such a situation the development of civilization had been disastrous. He wanted to create conditions which would foster

the "natural" man. ("Natural" was used in two different senses by Rousseau, depending upon the context; one meaning was "primitive" or "first"; the other "complete" or "containing proper mixture of reason and sentiment".) Rousseau was often cited as having advocated a "theory of regress", but, as I have indicated, I do not believe that this is true. Both in the above Discourse and in the Discourse on Inequality he advocates a return to the natural state, the "Golden Age", but this does not have to be a regression. Let us say that man has over-emphasized or misused reason. Rousseau was too well-read, his Social Contract is too learned and his Confessions too filled with recriminations against illogical actions for one to believe that he wished to rely entirely upon the emotional. Emile then becomes a discourse upon how reason, allied with sentiment is to be properly cultivated; The Social Contract a political treatise attempting to show that the General Will is the most reasonable one.

If these suggestions were followed, then progress would ensue. However, at times he does go beyond the above description, which I have derived from Frankel and my own reading, and subordinated reason to emotion; I do not believe that this represents his studied view, but it is none the less apparent in his writings. To his contemporaries, I believe that Rousseau was chiefly noted for his attack upon reason and civilization with his accompanying stress of the emotional, and not for his more positive contribution to the Idea of Progress. His exact influence upon his own age is difficult to evaluate; perhaps, we had better limit ourselves to saying that he was read, and produced both a hostile reaction and a sympathetic following, which became very noticeable in the nineteenth century.

^{er}
Didot also reflects this fear of rationalism, although not so noticeably. ^{chil}

While he was a materialist, his philosophy was not a dogmatic one, as many of his fellow "philosophes" was; instead, his materialism was a reassertion of the principle that man must continually look to nature in all of its manifestations for answers and not to authorities, regardless of who they were. Of all of the "philosophes" he was the most opposed to system making, which all of them deplored, but most tended to indulge in. Consequently, his philosophy is not a whole, and Frankel

divides it into three categories which I shall use in my discussion. His "Primitivism" illustrated his fear that over-complexity in explanations is not only incorrect but also useless in respect to our needs. He did desire a progressive recognition of the natural law, but most of history he regards as a movement away from it, motivated by curiosity. His "Experimentalism" revealed his distrust of systematizing from the premise of Lockean sensationalism. He felt that nature should not be approached with the expectation that it was simple, harmonious, and so forth; he wished to divorce empiricism from antecedent metaphysical presuppositions. Progress for him is an experiment whose future is uncertain; there are no general rules to follow. His "Transformism" is derived from the above. Development follows no clearly defined path; there is continuity, for change originates in its antecedents, but he anticipates the possibility of mutations. He attacked Cartesian dualism, asking why some matter could not be alive, as mind is. For him the mind is a creative agent which can control as well as be controlled by external forces. His philosophy is a refreshing change from the determinism we have been discussing, but because of its unsystematic presentation, its influence was slight.

Before we move on to the man who most epitomizes the Idea of Progress, I would like to mention several men who are not generally known. Sebastien Mercier in 1770 published the first utopia which was projected into the future, 2440 A.D. It is not an appealing picture to us today, for it presents a benevolent tyranny which fails to allow for the human passions. Restif de la Bretonne in 1790 published a play The Year 2000 which is chiefly notable for its novel views on marriage customs. The Count de Volney published in 1789 his Ruins of Empires. He accepted sensationalism, utilitarianism, and the mechanistic world view in his theory of progress. The major portion of the book is devoted to showing how in the past man had failed to develop himself and follow the immutable laws of the universe. However, now that man had achieved his present stage of enlightenment, he can disregard the past, which has no further value, and concentrate on improving himself.

We have now reached the man with whom I will conclude this study of the

French Enlightenment's contribution to the Idea of Progress - Marie Jean Antoine Nicolas Caritat Condorcet (1743 - 1794). His Sketch for an Historical Picture of the Progress of the Human Mind (1795) is a memorial to the enthusiastic, and perhaps naive, optimism of the man who inspired the Revolution. Condorcet wrote this book while he was under the shadow of the guillotine, but he never lost faith in the principles which indirectly led to his own death. The two fundamental weaknesses of all of the men that we have studied are even more apparent in his work: the conviction that new social machinery could radically alter human nature and the tendency to detach man from his environment to analyze him (the "natural man"); but his book is none the less a very refreshing and entertaining piece of writing.

Condorcet began, as his predecessors had, with the sensationalist psychology: "we owe to him (Aristotle) the important truth, the first step in the science of the human mind, that even our most abstract, as it were our most purely intellectual, ideas have their origin in our sensations."⁽⁷⁸⁾ (He goes on to say that Aristotle had grasped this intuitively, and we had to wait until Locke had proven it before it became generally accepted.) Communication, which is the key to the accumulation of knowledge and experience, is very important: "The written language was the same as the spoken language; all that was necessary was to know how to recognize and reproduce these few signs, and this final step assured the progress of the human race forever."⁽⁷⁹⁾ The Book is divided into ten epochs, each distinguished in terms of its distinctive problems and solutions. These ten are respectively: the formation of primitive societies, the pastoral age, the agricultural age, the Greek period, the Roman period, the "dark ages", the period from the crusades to the invention of printing, the Renaissance, the period from Descartes to the French Republic, and the future. The purpose of this historical study and its results are set forth by Condorcet in the first pages of his book: "Such observations upon what man has been and what he is today, will instruct us about the means we should employ to make certain and rapid the future progress that his nature allows him still to hope for. Such is the aim of the work that I have undertaken, and its result will be to show

by appeal to reason and fact that nature has set no term to the perfection of human faculties; that the perfectibility of man is truly indefinite; and that the progress of this perfectibility from now onwards, independent of any power that might wish to halt it, has no other limit than the duration of the globe upon which nature has cast us. This progress will doubtless vary in speed, but will never be reversed as long as the general laws of this system produce neither a general cataclysm nor such changes as will deprive the human race of its present faculties and its present resources."⁽⁸⁰⁾ The above quotation contains the essence of Condorcet's philosophy. There are general rules which regulate the universe and which ordain that progress will continue. Man need only to continue to strive to bring himself into closer harmony with these laws. This progress which is guaranteed, is indefinite or unlimited. The last few lines which would appear to put a slight condition upon the progress, should be disregarded, for Condorcet was convinced that the general laws were immutable and could not alter the fact of progress. We, who have seen the development and potentialities of nuclear weapons, might put a stress upon these words which Condorcet never intended; they were inserted for emphasis - only an alteration of the laws of the universe, an impossible occurrence, could halt the flow of progress. It is true that the "operation of chance will upset the slow but regular march of nature, often retarding it; sometime accelerating it."⁽⁸¹⁾, but because it is the "regular march of nature", it cannot be stopped, only slowed down.

The historical picture is not pretty, but the march of progress can be detected in it, as Condorcet attempts to show in his first nine epochs, and now that man has realized that his future depends upon his recognition of the universal rules, and has discovered the means - the scientific method - to apply these rules to his life, progress will advance at a much faster rate. "The human race still revolts the philosopher who contemplates its history; but it no longer humiliates him, and now offers him hope for the future."⁽⁸²⁾ "Locke, finally, was the first man who dared to set a limit to the human understanding, or rather to determine the

nature of the truths that it came to know and of the objects it can comprehend. This method was soon adopted by all philosophers and, by applying it to the moral sciences, to politics, and to social economy, they were able to make almost as sure progress in these sciences as they had in the natural sciences. They were able to admit only proven truths, to separate these truths from whatever as yet remained doubtful and uncertain, and to ignore whatever is and always will be impossible to know..... It is this new step in philosophy that has for ever imposed a barrier between mankind and the errors of its infancy, a barrier that should save it from relapsing into the former errors under the influence of new prejudices, just as it should assure the eventual eradication of those that still survive unrecognized, and should make it certain that any that may take their place will exercise only a faint influence and enjoy only an ephemeral existence."⁽⁸³⁾ "Just as the mathematical and physical sciences tend to improve the arts that we use to satisfy our simplest needs, is it not also part of the necessary order of nature that ^{the} moral and political sciences should exercise a similar influence upon the motives that direct our feelings and our actions?"⁽⁸⁴⁾ "The strength and the limits of man's intelligence may remain unaltered, and yet the instruments that he uses will increase and improve, the language that fixes and determines his ideas will acquire greater breadth and precision, and the methods that lead genius to the discovery of truth increase at once the force and the speed of its operations."⁽⁸⁵⁾

Like his predecessors, including Rousseau, the environment has made man what he is; it is especially responsible for his evil traits: "Is there any vicious habit, any practice contrary to good faith, any crime, whose origin cannot be traced back to the legislation, the institutions, the prejudices of the country wherein this habit, this practice can be observed?"⁽⁸⁶⁾ (He seems to believe that man was born with a penchant for the good, although he talks in terms of a "tabula rasa".) Condorcet is hostile to religion as it has developed, especially Christianity, because ~~these~~ fosters superstition and adherence to authority. However, he is not a complete materialist; He praises Pietro della Vigna's The Three Imposters which indicated

that the three major religions (Islam, Judaism, and Christianity) are corruptions of "purer form of worship rendered by the races at the dawn of history to the universal soul of this world."⁽⁸⁷⁾ His philosophy appears most compatible with Deism, but he could be a pantheist. He does not appear to be a determinist in respect to man; while progress is assured, man has the free choice to accelerate or retard it.

While he has emphasized the necessity of progress in the past by pointing to the invariable laws which guarantee it, he turns to the scientific method, extended to morals, politics, and economics as the principle assurance of future progress. "Philosophy has nothing more to guess, no more hypothetical surmises to make, it is enough to assemble and order the facts, and to show the useful truths that can be deduced from their connections and from their totality."⁽⁸⁸⁾ "As each (science) advances, the method of expressing a large number of proofs in a more economical fashion and so of making their comprehension an easier matter, advance with it. So, in spite of the progress of science, not only do men of the same ability find themselves at the same age on a level with the existing state of science, but with every generation that which can be acquired in a certain time with a certain degree of intelligence and a certain amount of concentration will be permanently on the increase, and, as the elementary part of each science to which all men may attain grows and grows, it will more and more include all the knowledge necessary for each man to know for the conduct of the ordinary events of his life, and will support him in the free and independent exercise of his reason."⁽⁸⁹⁾ "The real advantages that should result from this progress, of which we can entertain a hope that it almost with a certainty, can have no other term than that of the absolute perfection of the human race."⁽⁹⁰⁾ He does not limit this progress to the West where the scientific method is most powerful; concerning the more "primitive" people he says: "The progress of these people is likely to be more rapid and certain than our own, because they can receive from us everything that we have had to find out for ourselves."⁽⁹¹⁾

He goes on to say that "No one has ever believed that the mind can gain

knowledge of all the facts of nature or attain the ultimate means of precision in the measurement, as in the analysis of the facts of nature, the relations between objects and all the combinations of ideas.... there will always be part of it, always indeed the larger part of it that will remain forever unknown."⁽⁹²⁾ Actually, the future for Condorcet is the diffusion of knowledge, increased scientific discoveries, cessation of war and equality (between men and sexes) also man's physical constitution and his life span may be improved upon.

In its main points Condorcet's philosophy is similar to that of his friend Turgot, but he is more of a prophet, more openly optimistic and more hostile to religion.

His chief significance is that he focused attention upon the Idea of Progress per se. It had mostly been unconsciously accepted by the revolutionaries, and in bringing it more definitely out in the open, he divorced it from these men, thereby saving it from the hostility and repudiation of the men of the early nineteenth century, who looked upon all that was associated with the "Philosophes", the inspirers of the twenty-five devastating years they had just endured, with great scorn.

We have now completed our study. Of the five men that we have discussed Condorcet, comes the closest to fulfilling the definition with which we started. He regards progress as a reality, continuing indefinitely and aiming at general happiness. The same is true of Turgot and Holbach, but I believe that Condorcet allows this progress to originate more in man than do the other two. Holbach is a complete determinist, and Turgot seems to waver between allowing man or the laws of nature to determine progress. Voltaire by interjecting chance made future progress not as certain as is necessary; he also made man a puppet in the hands of the laws of nature. However, I do not believe that he emphasized determinism as much as Holbach. Fontenelle was chiefly concerned with the literary dispute and treated man's progress as a sideline. In divorcing the arts and sciences, he made the future of the former doubtful; also he did not really speculate about man's future. In short, the "future" aspect of the Idea of Progress is not really apparent in his philosophy.

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