

# The Future Progress of the Human Mind

Marquis de Condorcet

*No more vivid picture of the Enlightenment's utopian vision exists than this selection from Marie Jean-Antoine-Nicholas de Caritat, marquis de Condorcet (1743-1794). It is the tenth and final stage of his Sketch for a Historical Picture of the Human Mind, written shortly before his death.*

If man can, with almost complete assurance, predict phenomena when he knows their laws, and if, even when he does not, he can still, with great expectation of success, forecast the future on the basis of his experience of the past, why, then, should it be regarded as a fantastic undertaking to sketch, with some pretence to truth, the future destiny of man on the basis of his history? The sole foundation for belief in the natural sciences is this idea, that the general laws directing the phenomena of the universe, known or unknown, are necessary and constant. Why should this principle be any less true for the development of the intellectual and moral faculties of man than for the other operations of nature? Since beliefs founded on past experience of like conditions provide the only rule of conduct for the wisest of men, why should the philosopher be forbidden to base his conjectures on these same foundations, so long as he does not attribute to them a certainty superior to that warranted by the number, the constancy, and the accuracy of his observations?

Our hopes for the future condition of the human race can be subsumed under three important heads: the abolition of inequality between nations, the progress of equality within each nation, and the true perfection of mankind. Will all nations one day attain that state of civilization which the most enlightened, the freest and the least burdened by prejudices, such as the French and the Anglo-Americans, have attained already? Will the vast gulf that separates these peoples from the slavery of nations under the rule of monarchs, from the barbarism of African tribes, from the ignorance of savages, little by little disappear?

Is there on the face of the earth a nation whose inhabitants have been debarred by nature herself from the enjoyment of freedom and the exercise of reason?

Are those differences which have hitherto been seen in every civilized country in respect of the enlightenment, the resources, and the wealth enjoyed by the different classes into which it is divided, is that inequality between men which was aggravated or perhaps produced by the earliest progress of society, are these part of civilization itself, or are they due to the present imperfections of the social art? Will they necessarily decrease and ultimately make way for a real

equality, the final end of the social art, in which even the effects of the natural differences between men will be mitigated and the only kind of inequality to persist will be that which is in the interests of all and which favors the progress of civilization, of education, and of industry, without entailing either poverty, humiliation, or dependence? In other words, will men approach a condition in which everyone will have the knowledge necessary to conduct himself in the ordinary affairs of life, according to the light of his own reason, to preserve his mind free from prejudice, to understand his rights and to exercise them in accordance with his conscience and his creed; in which everyone will become able, through the development of his faculties, to find the means of providing for his needs; and in which at last misery and folly will be the exception, and no longer the habitual lot of a section of society?

Is the human race to better itself, either by discoveries in the sciences and the arts, and so in the means to individual welfare and general prosperity; or by progress in the principles of conduct or practical morality; or by a true perfection of the intellectual, moral, or physical faculties of man, an improvement which may result from a perfection either of the instruments used to heighten the intensity of these faculties and to direct their use or of the natural constitution of man?

In answering these three questions we shall find in the experience of the past, in the observation of the progress that the sciences and civilization have already made, in the analysis of the progress of the human mind and of the development of its faculties, the strongest reasons for believing that nature has set no limit to the realization of our hopes.

If we glance at the state of the world today we see first of all that in Europe the principles of the French Constitution are already those of all enlightened men. We see them too widely propagated, too seriously professed, for priests and despots to prevent their gradual penetration even into the hovels of their slaves; there they will soon awaken in these slaves the remnants of their common sense and inspire them with that smoldering indignation which not even constant humiliation and fear can smother in the soul of the oppressed.

As we move from nation to nation, we can see in each what special obstacles impede this revolution and what attitudes of mind favor it. We can distinguish the nations where we may expect it to be introduced gently by the perhaps belated wisdom of their governments, and those nations where its violence intensified by their resistance must involve all alike in a swift and terrible convulsion.

Can we doubt that either common sense or the senseless discords of European nations will add to the effects of the slow but inexorable progress of their colonies, and will soon bring about the independence of the New World? And then will not the European population in these colonies, spreading rapidly over that enormous land, either civilize or peacefully remove the savage nations who still inhabit vast tracts of its land?

Survey the history of our settlements and commercial undertakings in Africa or

in Asia, and you will see how our trade monopolies, our treachery, our murderous contempt for men of another color or creed, the insolence of our usurpations, the intrigues or the exaggerated proselytic zeal of our priests, have destroyed the respect and goodwill that the superiority of our knowledge and the benefits of our commerce at first won for us in the eyes of the inhabitants. But doubtless the moment approaches when, no longer presenting ourselves as always either tyrants or corrupters, we shall become for them the beneficent instruments of their freedom.

The sugar industry, establishing itself throughout the immense continent of Africa, will destroy the shameful exploitation which has corrupted and depopulated that continent for the last two centuries.

Already in Great Britain, friends of humanity have set us an example; and if the Machiavellian government of that country has been restrained by public opinion from offering any opposition, what may we not expect of this same spirit, once the reform of a servile and venal constitution has led to a government worthy of a humane and generous nation? Will not France hasten to imitate such undertakings dictated by philanthropy and the true self-interest of Europe alike? Trading stations have been set up in the French islands, in Guiana and in some English possessions, and soon we shall see the downfall of the monopoly that the Dutch have sustained with so much treachery, persecution and crime. The nations of Europe will finally learn that monopolistic companies are nothing more than a tax imposed upon them in order to provide their governments with a new instrument of tyranny.

So the peoples of Europe, confining themselves to free trade, understanding their own rights too well to show contempt for those of other peoples, will respect this independence, which until now they have so insolently violated. Their settlements, no longer filled with government hirelings hastening, under the cloak of place or privilege, to amass treasure by brigandry and deceit, so as to be able to return to Europe and purchase titles and honor, will now be peopled with men of industrious habit, seeking in these propitious climates the wealth that eluded them at home. The love of freedom will retain them there, ambition will no longer recall them, and what have been no better than the counting houses of brigands will become colonies of citizens propagating throughout Africa and Asia the principles and the practice of liberty, knowledge and reason, that they have brought from Europe. We shall see the monks who brought only shameful superstition to these peoples, and aroused their antagonism by the threat of yet another tyranny, replaced by men occupied in propagating amongst them the truths that will promote their happiness and in teaching them about their interests and their rights. Zeal for the truth is also one of the passions, and it will turn its efforts to distant lands, once there are no longer at home any crass prejudices to combat, any shameful errors to dissipate....

The progress of these peoples 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, and in order to understand those simple truths and infallible methods

which we have acquired only after long error, all that they need to do is to follow the expositions and proofs that appear in our speeches and writings. If the progress of the Greeks was lost to later nations, this was because of the absence of any form of communication between the different peoples, and for this we must blame the tyrannical domination of the Romans. But when mutual needs have brought all men together, and the great powers have established equality among societies as well as among individuals and have raised respect for the independence of weak states and sympathy for ignorance and misery to the rank of political principles, when maxims that favor action and energy have ousted those which would compress the province of human faculties, will it then be possible to fear that there are still places in the world inaccessible to enlightenment, or that despotism in its pride can raise barriers against truth that are insurmountable for long?

The time will therefore come when the sun will shine only on free men who know no other master but their reason; when tyrants and slaves, priests and their stupid or hypocritical instruments, will exist only in works of history and on the stage; and when we shall think of them only to pity their victims and their dupes; to maintain ourselves in a state of vigilance by thinking on their excesses; and to learn how to recognize and so to destroy, by force of reason, the first seeds of tyranny and superstition, should they ever dare to reappear amongst us.

In looking at the history of societies we shall have had occasion to observe that there is often a great difference between the rights that the law allows its citizens and the rights that they actually enjoy, and, again, between the equality established by political codes and that which in fact exists amongst individuals: and we shall have noticed that these differences were one of the principal causes of the destruction of freedom in the ancient republics, of the storms that troubled them, and of the weakness that delivered them over to foreign tyrants.

These differences have three main causes: inequality in wealth; inequality in status between the man whose means of subsistence are hereditary and the man whose means are dependent on the length of his life, or, rather, on that part of his life in which he is capable of work; and, finally, inequality in education.

We therefore need to show that these three sorts of real inequality must constantly diminish without, however, disappearing altogether: for they are the result of natural and necessary causes, which it would be foolish and dangerous to wish to eradicate; and one could not even attempt to bring about the entire disappearance of their effects without introducing even more fecund sources of inequality, without striking more direct and more fatal blows at the rights of man.

It is easy to prove that wealth has a natural tendency to equality, and that any excessive disproportion could not exist, or at least would rapidly disappear, if civil laws did not provide artificial ways of perpetuating and uniting fortunes; if free trade and industry were allowed to remove the advantages that accrued

wealth derives from any restrictive law or fiscal privilege; if taxes on covenants, the restrictions placed on their free employment, their subjection to tiresome formalities, and the uncertainty and inevitable expense involved in implementing them did not hamper the activity of the poor man and swallow up his meager capital; if the administration of the country did not afford some men ways of making their fortune that were closed to other citizens; if prejudice and avarice, so common in old age, did not preside over the making of marriages; and if, in a society enjoying simpler manners and more sensible institutions, wealth ceased to be a means of satisfying vanity and ambition, and if the equally misguided notions of austerity, which condemn spending money in the cultivation of the more delicate pleasures, no longer insisted on the hoarding of all one's earnings.

Let us turn to the enlightened nations of Europe, and observe the size of their present populations in relation to the size of their territories. Let us consider, in agriculture and industry, the proportion that holds between labor and the means of subsistence, and we shall see that it would be impossible for those means to be kept at their present level, and consequently for the population to be kept at its present size, if a great number of individuals were not almost entirely dependent for the maintenance of themselves and their family either on their own labor or on the interest from capital invested so as to make their labor more productive. Now both these sources of income depend on the life and even on the health of the head of the family. They provide what is rather like a life annuity, save that it is more dependent on chance; and in consequence there is a very real difference between people living like this and those whose resources are not at all subject to the same risks, who live either on revenue from land, or on the interest on capital, which is almost independent of their own labor.

Here then is a necessary cause of inequality, of dependence and even of misery, which ceaselessly threatens the most numerous and most active class in our society.

We shall point out how it can be in great part eradicated by guaranteeing people in old age a means of livelihood produced partly by their own savings and partly by the savings of others who make the same outlay, but who die before they need to reap the reward; or, again, on the same principle of compensation, by securing for widows and orphans an income which is the same and costs the same for those families which suffer an early loss and for those which suffer it later; or again by providing all children with the capital necessary for the full use of their labor, available at the age when they start work and found a family, a capital which increases at the expense of those whom premature death prevents from reaching this age. It is to the application of the calculus to the probabilities of life and the investment of money that we owe the idea of these methods which have already been successful, although they have not been applied in a sufficiently comprehensive and exhaustive fashion to render them really useful, not merely to a few individuals, but to society as a whole, by making it possible to prevent those periodic disasters which strike at so many families and which are such a recurrent source of misery and suffering.

We shall point out that schemes of this nature, which can be organized in the name of the social authority and become one of its greatest benefits, can also be the work of private associations, which will be formed without any real risk, once the principles for the proper working of these schemes have been widely diffused and the mistakes which have been the undoing of a large number of these associations no longer hold terrors for us....

So we might say that a well-directed system of education rectifies natural inequality in ability instead of strengthening it, just as good laws remedy natural inequality in the means of subsistence, and just as in societies where laws have brought about this same equality, liberty, though subject to a regular constitution, will be more widespread, more complete, than in the total independence of savage life. Then the social art will have fulfilled its aim, that of assuring and extending to all men enjoyment of the common rights to which they are called by nature.

The real advantages that should result from this progress, of which we can entertain a hope that is almost a certainty, can have no other term than that of the absolute perfection of the human race; since, as the various kinds of equality come to work in its favor by producing ampler sources of supply, more extensive education, more complete liberty, so equality will be more real and will embrace everything which is really of importance for the happiness of human beings.

It is therefore only by examining the progress and the laws of this perfection that we shall be able to understand the extent or the limits of our hopes.

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, or in the analysis of the facts of nature, the relations between objects and all the possible combinations of ideas. Even the relations between magnitudes, the mere notion of quantity or extension, taken in its fullest comprehension, gives rise to a system so vast that it will never be mastered by the human mind in its entirety, that there will always be a part of it, always indeed the larger part of it, that will remain forever unknown. People have believed that man can never know more than a part of the objects that the nature of his intelligence allows him to understand, and that he must in the end arrive at a point where the number and complexity of the objects that he already knows have absorbed all his strength so that any further progress must be completely impossible.

But since, as the number of known facts increases, the human mind learns how to classify them and to subsume them under more general facts, and, at the same time, the instruments and methods employed in their observation and their exact measurement acquire a new precision; since, as more relations between various objects become known, man is able to reduce them to more general relations, to express them more simply, and to present them in such a way that it is possible to grasp a greater number of them with the same degree of intellectual ability and the same amount of application; since, as the mind learns to understand more complicated combinations of ideas, simpler formulae soon reduce their complexity; so truths that were discovered only by great effort, that

could at first only be understood by men capable of profound thought, are soon developed and proved by methods that are not beyond the reach of common intelligence. If the methods which have led to these new combinations of ideas are ever exhausted, if their application to hitherto unsolved questions should demand exertions greater than either the time or the capacity of the learned would permit, some method of a greater generality or simplicity will be found so that genius can continue undisturbed on its path. 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, unlike mechanics, where an increase of force means a decrease of speed, the methods that lead genius to the discovery of truth increase at once the force and the speed of its operations.

Therefore, since these developments are themselves the necessary consequences of progress in detailed knowledge, and since the need for new methods in fact only arises in circumstances that give rise to new methods, it is evident that, within the body of the sciences of observation, calculation and experiment, the actual number of truths may always increase, and that every part of this body may develop, and yet man's faculties be of the same strength, activity and extent.

If we apply these general reflections to the various sciences, we can find in each of them examples of progressive improvement that will remove any doubts about what we may expect for the future. We shall point out in particular the progress that is both likely and imminent in those sciences which prejudice regards as all but exhausted. We shall give examples of the manner and extent of the precision and unity which could accrue to the whole system of human knowledge as the result of a more general and philosophical application of the sciences of calculation to the various branches of knowledge. We shall show how favorable to our hopes would be a more universal system of education by giving a greater number of people the elementary knowledge which could awaken their interest in a particular branch of study, and by providing conditions favorable to their progress in it; and how these hopes would be further raised if more men possessed the means to devote themselves to these studies, for at present even in the most enlightened countries scarcely one in fifty of the people who have natural talents receives the necessary education to develop them; and how, if this were done, there would be a proportionate increase in the number of men destined by their discoveries to extend the boundaries of science.

We shall show how this equality in education and the equality which will come about among the different nations would accelerate the advance of these sciences whose progress depends on repeated observations over a large area; what benefits would thereby accrue to mineralogy, botany, zoology and meteorology; and what a vast disproportion holds in all these sciences between the poverty of existing methods, which have nevertheless led to useful and important new truths, and the wealth of those methods which man would then be able to employ.

We shall show how even the sciences in which discovery is the fruit of solitary meditation would benefit from being studied by a greater number of people, in

the matter of those improvements in detail which do not demand the intellectual energy of an inventor but suggest themselves to mere reflection.

If we turn now to the arts, whose theory depends on these same sciences, we shall find that their progress, depending as it does on that of theory, can have no other limits; that the procedures of the different arts can be perfected and simplified in the same way as the methods of the sciences; new instruments, machines and looms can add to man's strength and can improve at once the quality and the accuracy of his productions, and can diminish the time and labor that has to be expended on them. The obstacles still in the way of this progress will disappear, accidents will be foreseen and prevented, the insanitary conditions that are due either to the work itself or to the climate will be eliminated.

A very small amount of ground will be able to produce a great quantity of supplies of greater utility or higher quality; more goods will be obtained for a smaller outlay; the manufacture of articles will be achieved with less wastage in raw materials and will make better use of them. Every type of soil will produce those things which satisfy the greatest number of needs; of several alternative ways of satisfying needs of the same order, that will be chosen which satisfies the greatest number of people and which requires least labor and least expenditure. So, without the need for sacrifice, methods of preservation and economy in expenditure will improve in the wake of progress in the arts of producing and preparing supplies and making articles from them.

So not only will the same amount of ground support more people, but everyone will have less work to do, will produce more, and satisfy his wants more fully.

With all this progress in industry and welfare, which establishes a happier proportion between men's talents and their needs, each successive generation will have larger possessions, either as a result of this progress or through the preservation of the products of industry; and so, as a consequence of the physical constitution of the human race, the number of people will increase. Might there not then come a moment when these necessary laws begin to work in a contrary direction; when, the number of people in the world finally exceeding the means of subsistence, there will in consequence ensue a continual diminution of happiness and population, a true retrogression, or at best an oscillation between good and bad? In societies that have reached this stage, will not this oscillation be a perennial source of more or less periodic disaster? Will it not show that a point has been attained beyond which all further improvement is impossible, that the perfectibility of the human race has after long years arrived at a term beyond which it may never go?

There is doubtless no one who does not think that such a time is still very far from us; but will it ever arrive? It is impossible to pronounce about the likelihood of an event that will occur only when the human species will have necessarily acquired a degree of knowledge of which we can have no inkling. And who would take it upon himself to predict the condition to which the art of converting the elements to the use of man may in time be brought?



But even if we agree that the limit will one day arrive, nothing follows from it that is in the least alarming as far as either the happiness of the human race or its indefinite perfectibility is concerned. If we consider that, before all this comes to pass, the progress of reason will have kept pace with that of the sciences, and that the absurd prejudices of superstition will have ceased to corrupt and degrade the moral code by its harsh doctrines instead of purifying and elevating it, we can assume that by then men will know that, if they have a duty towards those who are not yet born, that duty is not to give them existence but to give them happiness; their aim should be to promote the general welfare of the human race or of the society in which they live or of the family to which they belong, rather than foolishly to encumber the world with useless and wretched beings. It is, then, possible that there should be a limit to the amount of food that can be produced, and, consequently, to the size of the population of the world, without this involving that untimely destruction of some of those creatures who have been given life, which is so contrary to nature and to social prosperity....

Organic perfectibility or deterioration amongst the various strains in the vegetable and animal kingdom can be regarded as one of the general laws of nature. This law also applies to the human race. No one can doubt that, as preventive medicine improves and food and housing become healthier, as a way of life is established that develops our physical powers by exercise without ruining them by excess, as the two most virulent causes of deterioration, misery and excessive wealth, are eliminated, the average length of human life will be increased and a better health and a stronger physical constitution will be ensured. The improvement of medical practice, which will become more efficacious with the progress of reason and of the social order, will mean the end of infectious and hereditary diseases and illnesses brought on by climate, food, or working conditions. It is reasonable to hope that all other diseases may likewise disappear as their distant causes are discovered. Would it be absurd, then, to suppose that this perfection of the human species might be capable of indefinite progress; that the day will come when death will be due only to extraordinary accidents or to the decay of the vital forces, and that ultimately the average span between birth and decay will have no assignable value? Certainly man will not become immortal, but will not the interval between the first breath that he draws and the time when in the natural course of events, without disease or accident, he expires, increase indefinitely? Since we are now speaking of a progress that can be represented with some accuracy in figures or on a graph, we shall take this opportunity of explaining the two meanings that can be attached to the word *indefinite*.

In truth, this average span of life, which we suppose will increase indefinitely as time passes, may grow in conformity either with a law such that it continually approaches a limitless length but without ever reaching it, or with a law such that through the centuries it reaches a length greater than any determinate quantity that we may assign to it as its limit. In the latter case such an increase is truly indefinite in the strictest sense of the word, since there is no term on this side of which it must of necessity stop. In the former case it is equally indefinite in relation to us if we cannot fix the limit it always approaches without

ever reaching, and particularly if, knowing only that it will never stop, we are ignorant in which of the two senses the term *indefinite* can be applied to it. Such is the present condition of our knowledge as far as the perfectibility of the human race is concerned; such is the sense in which we may call it indefinite.

So, in the example under consideration, we are bound to believe that the average length of human life will forever increase unless this is prevented by physical revolutions; we do not know what the limit is which it can never exceed. We cannot tell even whether the general laws of nature have determined such a limit or not.

But are not our physical faculties and the strength, dexterity and acuteness of our senses, to be numbered among the qualities whose perfection in the individual may be transmitted? Observation of the various breeds of domestic animals inclines us to believe that they are, and we can confirm this by direct observation of the human race.

Finally may we not extend such hopes to the intellectual and moral faculties? May not our parents, who transmit to us the benefits or disadvantages of their constitution, and from whom we receive our shape and features, as well as our tendencies to certain physical affections, hand on to us also that part of the physical organization which determines the intellect, the power of the brain, the ardor of the soul or the moral sensibility? Is it not probable that education, in perfecting these qualities, will at the same time influence, modify and perfect the organization itself? Analogy, investigation of the human faculties and the study of certain facts, all seem to give substance to such conjectures, which would further push back the boundaries of our hopes.

These are the questions with which we shall conclude this final stage. How consoling for the philosopher, who laments the errors, the crimes, the injustices which still pollute the earth, and of which he is often the victim, is this view of the human race, emancipated from its shackles, released from the empire of fate and from that of the enemies of its progress, advancing with a firm and sure step along the path of truth, virtue and happiness! It is the contemplation of this prospect that rewards him for all his efforts to assist the progress of reason and the defense of liberty. He dares to regard these strivings as part of the eternal chain of human destiny; and in this persuasion he is filled with the true delight of virtue and the pleasure of having done some lasting good, which fate can never destroy by a sinister stroke of revenge, by calling back the reign of slavery and prejudice. Such contemplation is for him an asylum, in which the memory of his persecutors cannot pursue him; there he lives in thought with man restored to his natural rights and dignity, forgets man tormented and corrupted by greed, fear, or envy; there he lives with his peers in an Elysium created by reason and graced by the purest pleasures known to the love of mankind.