The Turgot Collection

Writings, Speeches, and Letters of Anne Robert Jacques Turgot, Baron de Laune

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CHAPTER 14

A Philosophical Review of the Successive Advances of the Human Mind

The phenomena of nature, governed as they are by constant laws, are confined within a circle of revolutions which are always the same. All things perish, and all things spring up again; and in these successive acts of generation through which plants and animals reproduce themselves time does no more than restore continually the counterpart of what it has caused to disappear.

The succession of mankind, on the other hand, affords from age to age an ever-changing spectacle. Reason, the passions, and liberty ceaselessly give rise to new events: all the ages are bound up with one another by a succession of causes and effects which link the present state of the world with all those that have preceded it. The arbitrary signs of speech and writing, by providing men with the means of securing the possession of their ideas and communicating them to others, have made of all the individual stores of knowledge a common treasure-house which one generation transmits to another, an inheritance which is always being enlarged by the discoveries of each age. Thus the human race, considered over the period since its origin, appears to the eye of a philosopher as one vast whole, which itself, like each individual, has its infancy and its advancement.

We see the establishment of societies, and the formation of nations which in turn dominate other nations or become subject to them. Empires rise and fall; laws and forms of government succeed one another; the arts and the sciences are in turn discovered and
perfected, in turn retarded and accelerated in their progress; and they are passed on from country to country. Self-interest, ambition, and vainglory continually change the world scene and inundate the earth with blood; yet in the midst of their ravages manners are softened, the human mind becomes more enlightened, and separate nations are brought closer to one another. Finally commercial and political ties unite all parts of the globe, and the whole human race, through alternate periods of rest and unrest, of weal and woe, goes on advancing, although at a slow pace, toward greater perfection.

In the time placed at my disposal I could not hope to portray for you the whole of so vast a panorama. I shall try merely to indicate the main lines of the progress of the human mind; and this discourse will be wholly taken up with some reflections on the origin and growth of the arts and sciences and the revolutions which have taken place in them, considered in their relation to the succession of historical events.

Holy Writ, after having enlightened us about the creation of the universe, the origin of man, and the birth of the first arts, before long puts before us a picture of the human race concentrated again in a single family as the result of a universal flood. Scarcely had it begun to make good its losses when the miraculous confusion of tongues forced men to separate from one another. The urgent need to procure subsistence for themselves in barren deserts, which provided nothing but wild beasts, obliged them to move apart from one another in all directions and hastened their diffusion through the whole world. Soon the original traditions were forgotten; and the nations, separated as they were by vast distances and still more by the diversity of languages, strangers to one another, were almost all plunged into the same barbarism in which we still see the Americans.

But natural resources and the fertile seeds of the sciences are to be found wherever there are men. The most exalted mental attainments are only and can only be a development or combination of the original ideas based on sensation, just as the building at whose great height we gaze in wonder necessarily has its foundation in the earth upon which we tread. The same senses, the same organs, and
the spectacle of the same universe, have everywhere given men the
same ideas, just as the same needs and inclinations have everywhere
taught them the same arts.

Now a faint light begins occasionally to penetrate the darkness
which has covered all the nations, and step by step it spreads. The
inhabitants of Chaldea, closest to the source of the original tradi-
tions, the Egyptians, and the Chinese apparently lead the rest of the
peoples. Others follow them at a distance, and progress leads to fur-
ther progress. The inequality of nations increases; in one place the
arts begin to emerge, while in another they advance at a rapid rate
toward perfection. In some nations they are brought to a standstill
in the midst of their mediocrity, while in others the original dark-
ness is not yet dissipated at all. Thus the present state of the world,
marked as it is by these infinite variations in inequality, spreads out
before us at one and the same time all the gradations from barbarism
to refinement, thereby revealing to us at a single glance, as it were,
the records and remains of all the steps taken by the human mind, a
reflection of all the stages through which it has passed, and the his-
tory of all the ages.

But is not nature everywhere the same?—and if she leads all
men to the same truths, if even their errors are alike, how is it that
they do not all move forward at the same rate along the road which
is marked out for them? It is true that the human mind everywhere
contains the potential for the same progress, but nature, distributing
her gifts unequally, has given to certain minds an abundance of tal-
ents which she has refused to others. Circumstances either develop
these talents or allow them to become buried in obscurity; and it
is from the infinite variety of these circumstances that there springs
the inequality in the progress of nations.

Barbarism makes all men equal; and in early times all those who
are born with genius are faced with virtually the same obstacles and
the same resources. Societies are established and expanded, however;
national hatreds and ambition—or rather greed, the only ambition
of barbarous peoples—cause war and devastation to increase; and
conquests and revolutions mix up peoples, languages, and customs
in a thousand different ways. Chains of mountains, great rivers and
seas confine the dealings of peoples with one another, and consequently their intermingling, within fixed boundaries. This results in the formation of common languages which become a tie binding several nations together, so that all the nations of the world become divided as it were into a number of different classes. Tillage increases the permanence of settlements. It is able to feed more men than are employed in it, and thus imposes upon those whom it leaves idle the necessity of making themselves either useful or formidable to the cultivators. Hence towns, trade, the useful arts and accomplishments, the division of occupations, the differences in education, and the increased inequality in the conditions of life. Hence that leisure, by means of which genius, relieved of the burden of providing for primary necessities, emerges from the narrow sphere within which these necessities confine it and bends all its strength to the cultivation of the arts. Hence that more rapid and vigorous rate of advance of the human mind which carries along with it all parts of society and which in turn derives additional momentum from their perfection. The passions develop alongside genius; ambition gathers strength; politics lends it ever-widening perspectives; victories have more lasting results and create empires whose laws, customs, and government, influencing men’s genius in different ways, become a kind of common education for the nations, producing between one nation and another the same sort of difference which education produces between one man and another.

United, divided, the one raised up on the other’s ruins, empires rapidly succeed one another. The revolutions which they undergo cause them to run the whole gamut of possible states, and unite and disunite all the elements of the body politic. Like the ebb and flow of the tide, power passes from one nation to another, and, within the same nation, from the princes to the multitude and from the multitude to the princes. As the balance shifts, everything gradually gets nearer and nearer to an equilibrium, and in the course of time takes on a more settled and peaceful aspect. Ambition, when it forms great states from the remains of a host of small ones, itself sets limits to its own ravages. Wars no longer devastate anything but the frontiers of empires; the towns and the countryside begin to breathe
the air of peace; the bonds of society unite a greater number of men; ideas come to be transmitted more promptly and more widely; and the advancement of arts, sciences, and manners progresses more rapidly. Like a storm which has agitated the waves of the sea, the evil which is inseparable from revolutions disappears: the good remains, and humanity perfects itself. Amidst this complex of different events, sometimes favorable, sometimes adverse, which because they act in opposite ways must in the long run nullify one another, genius ceaselessly asserts its influence. Nature, while distributing genius to only a few individuals, has nevertheless spread it out almost equally over the whole mass, and with time its effects become appreciable.

Genius, whose course is at first slow, unmarked, and buried in the general oblivion into which time precipitates human affairs, emerges from obscurity with them by means of the invention of writing. Priceless invention!—which seemed to give wings to those peoples who first possessed it, enabling them to outdistance other nations. Incomparable invention!—which rescues from the power of death the memory of great men and models of virtue, unites places and times, arrests fugitive thoughts and guarantees them a lasting existence, by means of which the creations, opinions, experiences, and discoveries of all ages are accumulated, to serve as a foundation and foothold for posterity in raising itself ever higher!

But what a spectacle the succession of men’s opinions presents! I seek there for the progress of the human mind, and I find virtually nothing but the history of its errors. Why is its course, which is so sure from the very first steps in the field of mathematical studies, so unsteady in everything else, and so apt to go astray? Let us try to discover the reasons. In mathematics, the mind deduces one from another a chain of propositions, the truth of which consists only in their mutual dependence. It is not the same with the other sciences, where it is no longer from the intercomparison of ideas that truth is born, but from their conformity with a sequence of real facts. To discover and verify truth, it is no longer a question of establishing a small number of simple principles and then merely allowing the mind to be borne along by the current of their consequences. One must start from nature as it is, and from that infinite variety
of effects which so many causes, counterbalanced one by the other, have combined to produce. Notions are no longer assemblages of ideas which the mind forms of its own accord and of whose range it has exact knowledge. Ideas emerge and are assembled in our minds almost without our knowing it; we are beset by the images of objects right from the cradle. Little by little we learn to distinguish between them, less by reference to what they are in themselves than by reference to their relation to our habits and needs. The signs of language impress themselves on the mind while it is still undeveloped. At first, through habit and imitation, they become attached to particular objects, but later they succeed in calling up more general notions. This chaotic blend of ideas and expressions grows and becomes more complex all the time; and when man starts to seek for truth he find himself in the midst of a labyrinth which he has entered blindfold. Should we be surprised at his errors?

Spectator of the universe, his senses show him the effects but leave him ignorant of the causes. And to examine effects in an endeavor to find their unknown cause is like trying to guess an enigma: we think of one or more possible key words and try them in turn until one is found which fulfils all the conditions.

The natural philosopher erects hypotheses, follows them through to their consequences, and brings them to bear upon the enigma of nature. He tries them out, so to speak, on the facts, just as one verifies a seal by applying it to its impression. Suppositions which are arrived at on the basis of a small number of poorly understood facts yield to suppositions which are less absurd, although no more true. Time, research, and chance result in the accumulation of observations, and unveil the hidden connections which link a number of phenomena together.

Ever restless, incapable of finding tranquility elsewhere than in the truth, ever stimulated by the image of that truth which it believes to be within its grasp but which flies before it, the curiosity of man leads to a multiplication of the number of questions and debates, and obliges him to analyze ideas and facts in a manner which grows ever more exact and more profound. Mathematical truths, becoming from day to day more numerous and hence more fruitful, point
the way to the development of hypotheses which are more far-reaching and more precise, and indicate new experiments which, in their turn, present new problems for mathematics to resolve. Thus the need perfects the tool; thus mathematics is sustained by natural philosophy, upon which it sheds its light; thus everything is bound together; thus, in spite of the diversity in their development, all the sciences render mutual aid to one another; thus, by feeling his way, by multiplying systems and draining them, as it were, of their errors, man at last attains to the understanding of a great number of truths.

What ridiculous opinions marked our first steps! How absurd were the causes which our fathers thought up to make sense of what they saw! What sad monuments they are to the weakness of the human mind! The senses constitute the unique source of our ideas: the whole power of our mental faculties is restricted to combining the ideas which they have received from the senses: hardly even can they form combinations of ideas of which the senses do not provide them with a model. Hence that almost irresistible tendency to judge of what one does not know by what one knows; hence those delusive analogies to which the first men in their immaturity abandoned themselves with so little thought; hence the monstrous aberrations of idolatry. Men, oblivious of the original traditions, when affected by sensible phenomena, imagined that all effects which were independent of their own action were produced by beings similar to them, but invisible and more powerful, whom they substituted for the Divinity. When they were contemplating nature, it was as if they fixed their gaze on the surface of a deep sea instead of on the sea-bed hidden by the waters, and saw there only their own reflection. All objects of nature had their gods, which, being created after the model of man, shared his attributes and vices. Throughout the world, superstition sanctified the caprices of the imagination; and the only true God, the only God worthy of adoration, was known only in one corner of the earth, by the people whom he had expressly chosen.

In this slow progression of opinions and errors, pursuing one another, I fancy that I see those first leaves, those sheaths which nature has given to the newly-growing stems of plants, issuing before
them from the earth, and withering one by one as other sheaths come into existence, until at last the stem itself makes its appearance and is crowned with flowers and fruit—a symbol of late-emerging truth!

Woe be to those nations, then, in which the sciences, as the result of a blind zeal for them, are confined within the limits of existing knowledge in an attempt to stabilize them. It is for this reason that the regions which were the first to become enlightened are not those where the sciences have made the greatest progress. The respect for the new-born philosophy which the glamour of its novelty inspires in men tends to perpetuate the first opinions; the sectarian spirit comes to be attached to it. Such a spirit is natural for the first philosophers, because arrogance feeds on ignorance, because the less one knows the less one doubts, and because the less one has discovered the less one sees what remains to be discovered. In Egypt, and long after in the Indes, superstition, which made the dogmas of the ancient philosophy the patrimony of the priestly families, who by consecrating them enchained them and incorporated them in the dogmas of a false religion; in great Asia, political despotism, the result of the establishment of great empires during the centuries of barbarism; the civic despotism born of slavery and of the plurality of wives which is a consequence of it; the want of vigor on the part of princes; the prostration of their subjects; in China, the very care which the Emperors took to regulate research and to tie up the sciences with the political constitution of the state, held them back forever in mediocrity: these trunks which since their origin had been too productive of branches soon ceased to grow higher.

With the passing of time new peoples came into being. In the course of the unequal progress of nations, the civilized peoples, surrounded by barbarians, now conquering, now conquered, intermingled with them. Whether the latter received from the former their arts and their laws together with servitude, or whether as conquerors they yielded to the natural empire of reason and culture over brute force, the bounds of barbarism steadily retreated.
The Phoenicians, inhabitants of a barren coast, had made themselves the agents of exchanges between peoples. Their ships, spread out over the whole Mediterranean, began to reveal nation to nation.

Astronomy, navigation, and geography were perfected, one by means of the other. The coasts of Greece and Asia Minor came to be filled with Phoenician colonies. Colonies are like fruits which cling to the tree only until they have reached their maturity: once they had become self-sufficient they did what Carthage was to do later, and what America will one day do.

Out of the intermingling of these colonies, each independent of the others, with the ancient peoples of Greece and with the remnants of all the swarms of barbarians who had successively ravaged her, there arose the Greek nation, or rather that family of nations comprised of a large number of small peoples who were prevented from aggrandizing themselves at one another’s expense by the fact that they were all equally weak and by the nature of the terrain, which was broken up by mountains and sea, and who were intermingled, divided, and reunited in a thousand different ways by their associations, their public and private interests, their civil and national wars, their migrations, the reciprocal duties of colonies and metropolises, one language, customs, a common religion, trade, public games, and the Amphictyonic league. In the course of these revolutions, and by means of these manifold interminglings, there was formed that rich, expressive, and sonorous language, the language of all the arts.

Poetry, which is no more than the art of painting with words, and the perfection of which depends so greatly on the genius of the languages which it employs, assumed in Greece a grandeur which it had never previously known. It was no longer, as it had been with the first men, a succession of barbarous words chained to the beat of a rustic song and to the steps of a dance as uncouth as the riotous joy which it expressed. It had decked itself out in a harmony which was all its own. The ear, ever more difficult to please, had laid down stricter rules; and if the burden of these had become heavier, the new expressions, turns of phrase, and felicitous boldnesses of style, which had increased in proportion, lent greater strength to bear it.
Good taste had finally succeeded in outlawing those involved figures and elephantine metaphors which we object to in Oriental poetry.

In those countries of Asia where societies arrived earlier at a stable state, and where writers appeared earlier, languages became stabilized at a point nearer to their first origin, and as a result were marked by that high-flown style which is characteristic of a language in its first imperfect stage. Languages are the measure of men’s ideas: thus in early times there were names only for the objects which were most familiar to the senses; and to express these imperfect ideas it was necessary to have recourse to metaphors. A word which is coined signifies nothing, so that one must try, by putting together the signs of the ideas which are nearest akin, to set the mind on the track of what one wishes to communicate to it. The imagination attempts to grasp the thread of a certain analogy which binds together our senses with their different objects. An imperfect or farfetched analogy gives birth to those clumsy and abundant metaphors which necessity, more ingenious than fastidious, employs, which good taste disavows, of which the first languages are full, and of which even now etymologists find vestiges in the most cultivated.

Languages, which are necessarily used by all men, and thus often by men of genius, are always perfected over time, when they are not immobilized by written works which become a permanent standard by which to judge of their purity. The habitual use of the spoken word leads continually to new combinations of ideas, calls attention to new relationships between them and to new shades of meaning, and makes felt the need for new expressions. Moreover, through the migrations of peoples, languages blend with one another like rivers and are enriched by the coming together of several languages.

Thus the Greek language, formed by the intermingling of a greater number of languages, and stabilized later than those of Asia, unites together harmony, richness, and variety. Homer consummated its triumph, poured into it the treasures of his genius, and lifted it to the greatest heights by the harmonious character of his poetry, the charm of his expression, and the splendor of his images.
Following on this, liberty, which as the result of a revolution natural to small states came to be established in all cities on the ruins of the government of a single man, gave a new stimulus to the genius of the Greeks. The different forms of government into which the opposing passions of the powerful and the people turn by turn precipitated them, taught the legislators to compare and to weigh up all the different elements in society, and to find the proper equilibrium between their forces; while at the same time the combined quarrels and interests of so many ambitious, weak, and jealous neighboring republics taught the states to fear one another, to keep constant watch on one another, and to counterbalance successes with leagues, and led at the same time to the perfecting of politics and the art of war.

It was only after several centuries that philosophers appeared in Greece—or rather it was only then that the study of philosophy became the business of particular thinkers and appeared sufficiently extensive in its scope to occupy them fully. Until then, the poets had been at the same time the only philosophers and the only historians. When men are ignorant it is easy to know everything. But ideas were not yet by any means clear enough. A sufficiently large number of facts was not available; the time of truth had not by any means arrived, and the systems of the Greek philosophers could not yet be anything but adroit. Their metaphysics, shaky on the most important truths and often superstitious or blasphemous, was scarcely more than a collection of poetic fables or a tissue of unintelligible words; and their natural philosophy itself was nothing but shallow metaphysics.

Morality, although still imperfect, was less affected by the infancy of reason. The recurring needs which constantly call men into society and force them to bow to its laws; that instinct, that feeling for the good and the honorable which Providence has graven on all our hearts, which comes before reason, and which often seduces it in spite of itself, leads the philosophers of all ages to the same fundamental principles of the science of behavior. Socrates guided his fellow-citizens along the path of virtue; Plato sowed this path with flowers; the charm of his eloquence beautified even his errors. Aristotle, the most
wide-ranging, profound, and truly philosophical mind of all antiquity, was the first to carry the torch of exact analysis into the sphere of philosophy and the arts. Unveiling the principles of certitude and the springs of feeling, he subjected the development of reason and even the fire of genius to constant rules.

Happy centuries, in which all the fine arts spread their light on every side, and in which the passion of a noble emulation was swiftly transmitted from one city to another! Painting, sculpture, architecture, poetry, and history grew up everywhere at the same time, as we see in the expanse of a forest a thousand different trees springing up, growing, and being crowned together.

Athens, governed by the decrees of a multitude whose tumultuous waves the orators calmed or agitated at their pleasure; Athens, where Pericles had taught the leaders how to buy the state at the expense of the state itself, and how to dissipate its treasures in order to exempt themselves from giving an account of them; Athens, where the art of governing the people was the art of amusing them, the art of feasting their ears, their eyes, and their curiosity always greedy for novelties, with festivities, pleasures, and constant spectacles, Athens owed to the very vices of its government which made it succumb to Lacedaemon that eloquence, that taste, that magnificence, and that splendor in all the arts which have made it the model of nations.

While the Athenians, the Spartans, and the Thebans are in turn arrogating to themselves superiority over the other cities, the Macedonian power, unnoticed, like a river which overflows its banks, slowly extends into Greece under Philip, and violently inundates Asia under Alexander. This host of regions and states, from which the conquests of the Assyrians, the Medes, and the Persians, in successively swallowing one another up, had formed this great body, the product of so many conquerors and so many centuries, breaks up with a crash on the death of the conqueror of Darius. Wars between his generals establish new kingdoms; Syria and Egypt become a part of Greece, and receive the language, the customs, and the sciences of their conquerors.
Commerce and the arts render Alexandria the rival of Athens. Astronomy and the mathematical sciences are carried there to an even higher level than they have ever been before. Above all we see flourishing there that erudition with which until then the Greeks had been little acquainted—that kind of study which is concerned less with things than with books, which consists less in producing and discovering than in assembling together, comparing, and evaluating what has been produced and what has been discovered; which does not move forward at all, but which turns its gaze backwards in order to survey the road which has been taken. The studies which demand the most genius are not always those which imply the greatest progress in the mass of mankind. There are minds to whom nature has given a memory which is capable of assembling together a large number of pieces of knowledge, a power of exact reasoning which is capable of comparing them and arranging them in a manner which puts them in their full light, but to whom at the same time she has denied that fire of genius which invents and which opens up new roads for itself. Created to unite past discoveries under one point of view, to clarify and even to perfect them, if they are not torches which shine with their own light, they are diamonds which brilliantly reflect a borrowed light, but which total darkness would confound with the meanest stones.

The known world, if I may put it like that, the commercial world, the political world, had expanded as a result of the conquests of Alexander. The dissensions of his successors began to present a vaster spectacle, and, amid these clashes and these oscillations of the great powers, the little cities of Greece, situated in the midst of them, often the arena of their struggles and a prey to the ravages of all the parties, were no longer conscious of anything but their weakness. Eloquence was no longer the mainspring of politics: henceforth, degraded in the obscurity of the schools by childish declamations, it lost its brilliance along with its power.

But for several centuries already, Rome, in Italy as if in a world apart, had been advancing by a continual succession of triumphs toward the conquest of the world. Victorious over Carthage, she appeared suddenly in the midst of the nations. Peoples trembled and
were brought into subjection: the Romans, conquerors of Greece, became aware of a new empire, that of intellect and learning. Their austere uncouthness was tamed. Athens found disciples, and soon rivals, among her conquerors. Cicero displayed, at the Capitol and on the rostrum, an eloquence derived from the lessons of the Greeks, of which its enslaved masters no longer knew anything but the rules. The Latin language, softened and enriched, brought Africa, Spain, and Gaul under orderly government. The boundaries of the civilized world were identical with those of the Roman power, and two rival languages, Greek and Latin, shared it between them.

The laws of Rome, created to govern one city, sank under the burden of the whole world: Roman liberty was extinguished in waves of blood. Octavius alone finally gathered in the fruit of the civil strife. Cruel usurper, temperate prince, he gave tranquility to the earth. His enlightened protection stimulated all the arts. Italy had a Homer, less productive than the first, but wiser, more equal, just as harmonious, and perhaps more perfect. Sublimity, reason, and the graces united to create Horace. Taste was perfected in every sphere.

Knowledge of nature and of truth is as infinite as they are: the arts, whose aim is to please us, are as limited as we are. Time constantly brings to light new discoveries in the sciences; but poetry, painting, and music have a fixed limit which the genius of languages, the imitation of nature, and the limited sensibility of our organs determine, which they attain by slow steps and which they cannot surpass. The great men of the Augustan age reached it, and are still our models.

From this time until the fall of the Empire, we see nothing but a general decadence in which everything is plunged. Do men raise themselves up, then, only to fall? A thousand causes combine to deprave taste more and more: tyranny, which degrades minds below all things which are great; blind luxury, which, born of vanity, and judging works of art less as objects of taste than as symbols of opulence, is as opposed to their perfection as a civilized love of magnificence is favorable to it; enthusiasm for new things among those who, not having enough genius to invent them, only too often have
enough wit to spoil the old; the imitation of the vices of great men and even the misplaced imitation of their beauties. Writers proliferate in the provinces and corrupt the language: I know not what remnants of the old Greek philosophy, mixed up with oriental superstitions, confounded with a host of empty allegories and magical spells, take possession of men’s minds and smother the healthy natural philosophy which was beginning to spring up in the writings of Seneca and Pliny the Elder.

Soon the Empire, abandoned to the caprices of an insolent militia, becomes the prey of a host of tyrants, who, in the process of seizing it from one another, bring desolation and havoc to the provinces. Military discipline is destroyed, the northern barbarians penetrate on every side, peoples fall upon peoples, the cities become deserted, the fields are left uncultivated, and the western Empire, weakened by the transference of all its power to Constantinople, ruined everywhere by so many repeated ravages, at last suddenly collapses, and the Burgundians, Goths, and Franks are left to quarrel over its far-flung ruins and to found kingdoms in the different countries of Europe.

Could it be, in this sanctuary, that I should pass over in silence that new light which, while the Empire was proceeding toward its ruin, had spread out over the world—a light a thousand times more precious than those of letters and philosophy? Holy religion, could it be that I should forget you? Could I forget the perfecting of manners, the dissipation at last of the darkness of idolatry, and the enlightenment of men on the subject of the Divinity! Amid the almost total ruin of letters, you alone still created writers who were animated by the desire to instruct the faithful or to repel the attacks of the enemies of the faith; and when Europe fell prey to the barbarians, you alone tamed their ferocity; you alone have perpetuated the knowledge of the discarded Latin tongue; you alone have transmitted to us across so many centuries the minds, so to speak, of so many great men which had been entrusted to that language; and the conservation of the treasure of human knowledge, which was about to be dissipated, is one of your benefactions.
But the wounds of the human race were too deep; centuries were necessary to heal them. If Rome had been conquered by one people alone, their leader would have become a Roman, and his nation would have been absorbed in the Empire together with its language. We would have seen what the history of the world presents to us more than once: the spectacle of a civilized people invaded by barbarians, communicating to them its manners, its language, and its knowledge, and forcing them to make one people with it. Cicero and Virgil would have sustained the Latin language, just as Homer, Plato, and Demosthenes had defended theirs against the Roman power. But too many peoples, and too many ravages, succeeded one another; too many layers of barbarism were added one after the other before the first had time to disappear and yield to the force of the Roman sciences. Too many conquerors, too single-mindedly devoted to war, were for several centuries too much occupied with their quarrels. The genius of the Romans was extinguished and their language was lost, confounded with the Germanic languages.

It is a consequence of the intermingling of two languages that a new one is formed from them which is different from each; but a long time passes before they can be combined in a really intimate manner. Memory, wavering between the two, decides at random between the expressions of one and the other. Analogy, that is, the art of forming conjugations and declensions, of expressing the relationships between objects, and of arranging the expressions in discourse, has no longer any fixed rules. Ideas are associated in a confused manner; there is no longer any harmony or clarity in the language. Pour two liquids into the same vessel: you will see them become turbid and cloudy, and not recover the transparency they had when they were separate until time has rendered their mixture more intimate and more homogeneous. Thus, until a long succession of centuries has succeeded in giving the new language a uniform quality of its own, poetry, eloquence, and taste disappear almost completely. Thus new languages grew up in Europe, and in the chaos of their first formation ignorance and vulgarity ruled everywhere.
Unhappy empire of the Caesars, must new misfortunes be visited even upon those remnants which have escaped from thy wreck! Must it be that barbarism destroys at once all the refuges of the arts! And thou too, Greece, thine honors are then eclipsed! Finally the north seems to become exhausted, and new storms gather in the south against the only provinces which are not yet groaning under a foreign yoke!

The standard of a false prophet unites the wandering shepherds in the Arabian deserts; in less than a century Syria, Persia, Egypt, and Africa are covered by a raging torrent which ravages the whole territory from the Indian frontiers to the Atlantic Ocean and the Pyrenees. The Greek empire, confined within narrow boundaries, devastated in the south by the Saracens and then by the Turks, and in the north by the Bulgarians, laid waste internally by factions and by the instability of its throne, falls into a state of weakness and lethargy, and the cultivation of letters and arts ceases to occupy a debased, slack, and indolent populace.

In vain does Charlemagne in the west try to revive a few sparks of a fire which is buried under the ashes; their glow is as evanescent as it is feeble. Soon the quarrels of his grandsons disturb his empire; the north once again raises and sends forth new destroyers; the Normans and the Hungarians once again cover Europe with new ruins and a new darkness. Amid the general weakness, a new form of government puts the finishing touch to the ruin: the annihilated royal power gives way to that host of small sovereignties, subordinate one to another, among which the feudal laws maintain I know not what false semblance of order in the midst of the very anarchy which they perpetuate.

The kings without any authority, the nobles without any constraint, the peoples enslaved, the countryside covered with fortresses and ceaselessly ravaged, wars kindled between city and city, village and village, penetrating, so to speak, the whole mass of the kingdoms; all commerce and all communications cut off; the towns inhabited by poor artisans enjoying no leisure; the only wealth and the only leisure which some men still enjoy lost in the idleness of a nobility scattered here and there in their castles who do nothing
but engage in battles which are useless to the fatherland; the gross-
est ignorance extending over all nations and all occupations! An
unhappy picture—but one which was only too true of Europe for
several centuries!

But nevertheless, from the midst of this barbarism, perfected
arts and sciences will one day rise again. Amid all the ignorance,
progress is imperceptibly taking place and preparing for the brilliant
achievements of later centuries; beneath this soil the feeble roots of
a far-off harvest are already developing. The towns among all civi-
lized peoples constitute by their very nature the centers of trade and
the backbone of society. They continued to exist; and if the spirit of
feudal government, born of the ancient customs of Germany, com-
bined with a number of accidental circumstances, had abased them,
this was a contradiction in the constitution of states which was
bound to disappear in the long run. Soon we see the towns revive
again under the protection of the princes; and the latter, in holding
out their hands to the oppressed peoples, reduce the power of their
vassals and little by little re-establish their own.

Latin and theology were already being studied in the univer-
sities, together with the Aristotelian dialectic. For a long time the
Mussulman Arabs had been teaching themselves Greek philo-
osophy, and their learning was spreading to the west. Mathematics had
been extended as a result of their work. More independent than the
other sciences of the perfection of taste and perhaps even of preci-
sion of intellect, one cannot study mathematics without being led
to the truth. Always certain, always pure, its truths were emerging,
encircled about by the errors of judicial astrology. The chimeri-
cal search for the philosophers’ stone, by encouraging the Arab phi-
losophers to separate and to recombine all the elements of bodies,
had led to the blossoming under their hands of the vast science of
chemistry, and had spread it to all places where men were capable of
being imposed upon by their greedy desires. Finally, on all sides, the
mechanical arts were coming to be perfected by virtue of the sim-
ple fact that time was passing, because even in the decline of the sci-
ences and taste the needs of life preserve them, and because, conse-
quently, among that host of artisans who successively cultivate them
it is impossible not to meet every now and then with one of those men of genius who are blended with the rest of mankind as gold is blended with the clay in a mine.

As a result, what a host of inventions unknown to the ancients and standing to the credit of these barbarous ages! Our art of musical notation, our bills of exchange, our paper, window glass, plate glass, windmills, clocks, spectacles, gunpowder, the magnetic needle, and the perfection of navigation and commerce. The arts are nothing but the utilization of nature, and the practice of the arts is a succession of physical experiments which progressively unveil nature. Facts were accumulating in the darkness of the times of ignorance, and the sciences, whose progress although hidden was no less real, were bound to reappear one day augmented by this new wealth, like those rivers which after disappearing from our view for some time in a subterranean passage, reappear further on swollen by all the waters which have seeped through the earth.

Different series of events take place in different countries of the world, and all of them, as if by so many separate paths, at length come together to contribute to the same end, to raise up once again the ruins of the human spirit. Thus, in the night, we see the stars rise one after the other; they move forward, each in its own orbit; they seem in their common revolution to bear along with them the whole celestial sphere, and to bring in for us the day which follows them. Germany, Denmark, Sweden, and Poland through the efforts of Charlemagne and the Othos, and Russia through trade with the Greek empire, cease to be uncultivated forests. Christianity, in bringing together these scattered savages, in settling them in towns, is going to dry up forever the source of those inundations which have so often been fatal to the sciences. Europe is still barbarous; but the knowledge brought by her to even more barbarous peoples represents for them immense progress. Little by little the customs introduced by Germany into the south of Europe disappear. The nations, amid the quarrels of the nobles and the princes, begin to fashion for themselves the principles of a more stable government, and to acquire, in accordance with the different circumstances in which they find themselves, the particular character which distinguishes
them. The wars against the Mussulmans in Palestine, by giving a common interest to all Christian states, teach them to know one another and to unite with one another, and sow the seeds of that modern political state of affairs in which so many nations seem to comprise nothing but one vast republic. Already we see the royal authority reviving again in France; the power of the people establishing itself in England; the Italian towns constituting themselves into republics and presenting the likeness of ancient Greece; the little monarchies of Spain driving the Moors before them and little by little joining up again into one whole. Soon the seas, which have hitherto separated the nations, come to be the link between them through the invention of the compass. The Portuguese in the east and the Spaniards in the west discover new worlds: at last the world as a whole is known.

Already the intermingling of the barbarous languages with Latin has during the course of the centuries produced new languages, of which the Italian, less removed from their common source and less mixed with foreign languages, takes precedence in the elegance of its style and the beauties of its poetry. The Ottomans, spreading through Asia and Europe with the swiftness of a violent wind, end by overthrowing the empire of Constantinople, and disseminate in the west the feeble sparks of those sciences which Greece still preserved.

What new art is suddenly born, as if to wing to every corner of the earth the writings and glory of the great men who are to come? How slow in every sphere is even the least progress! For two thousand years medals have presented to all eyes characters impressed upon bronze—and then, after so many centuries, some obscure individual realizes that they can be impressed upon paper. At once the treasures of antiquity, rescued from the dust, pass into all hands, penetrate to every part of the world, bear light to the talents which were being wasted in ignorance, and summon genius from the depths of its retreats.

The time has come. Issue forth, Europe, from the darkness which covered thee! Immortal names of the Medici, of Leo X, of Francis I, be consecrated for ever! May the patrons of the arts share
the glory of those who cultivate them! I salute thee, O Italy!—
happy land, for the second time the homeland of letters and of taste,
the spring from which their waters have spread to fertilize our ter-
ritories. Our own France still only beholds thy progress from afar.
Her language, still tainted by remnants of barbarism, cannot follow
it. Soon fatal discords will rend the whole of Europe; audacious men
have shaken the foundations of the faith and those of the empires;
do the flowered stems of the fine arts grow when they are watered
with blood? A day will come, and it is not far off, when they will
beautify all the countries of Europe.

Time, spread your swift wings! Century of Louis, century of
great men, century of reason, hasten! Already, even amidst the tur-
moil of heresy, the long-disturbed fortunes of states have ended by
settling down, as if as the result of a final shock. Already the unre-
mitting study of antiquity has brought men’s minds back again to
the point where its progress was arrested; already that host of facts,
experiments, instruments, and ingenious exercises which the prac-
tice of the arts has accumulated over so many centuries, has been res-
cued from obscurity through printing; already the productions of
the two worlds, brought together before our eyes as the result of a
far-flung commerce, have become the foundation of a natural phi-
losophy hitherto unknown, and freed at last from alien specula-
tions; already on every hand attentive eyes are fixed upon nature: the
remotest chances, turned to profit, give birth to discoveries. The son
of an artisan in Zealand brings together for amusement two convex
glasses in a tube; the boundaries of our senses are made to recede,
and in Italy the eyes of Galileo have discovered a new firmament.
Already Kepler, seeking in the stars for the numbers of Pythagoras,
has discovered those two famous laws of the movements of the plan-
ets which one day in the hands of Newton will become the key to
the universe. Already Bacon has traced out for posterity the road
which it must follow.

Who is the mortal who dares to reject the learning of all the
ages, and even those notions which he has believed to be the most
certain? He seems to wish to extinguish the torch of the sciences
in order to relight it all on his own at the pure fire of reason. Does
he wish to imitate those peoples of antiquity among whom it was a crime to light at other fires that which was made to burn on the altars of the Gods? Great Descartes, if it was not always given to you to find the truth, at least you have destroyed the tyranny of error.

France, whom Spain and England have already outstripped in the glory of poetry; France, whose genius finishes forming itself only when the philosophical spirit begins to spread, will owe perhaps to this very backwardness the exactitude, the method, and the austere taste of her writers. Rarefied and affected thoughts, and the ponderous display of an ostentatious erudition, still corrupt our literature: a strange difference between our progress in taste and that of the ancients! The real advancement of the human mind reveals itself even in its aberrations; the caprices of Gothic architecture are never found among those who possess nothing but wooden huts. The acquisition of knowledge among the first men and the formation of taste kept pace, as it were, with one another. Hence a crude severity and an exaggerated simplicity were their prerogative. Guided by instinct and imagination, they seized little by little upon those relations between men and the objects of nature which are the sole foundations of the beautiful. In later times, when, in spite of the imperfection of taste, the number of ideas and perceptions was increased, when the study of models and rules had caused nature and feeling to become lost from men's view, it was necessary for them through reflection to take themselves back to where the first men had been led by blind instinct. And who is not aware that it is here that the supreme effort of reason lies?

At last all the shadows are dispelled: and what a light shines out on all sides! What a host of great men in every sphere! What a perfection of human reason! One man, Newton, has subjected the infinite to the calculus, has revealed the properties of light which in illuminating everything seemed to conceal itself, and has put into his balance the stars, the earth, and all the forces of nature. And this man has found a rival. Leibnitz encompasses within his vast intellect all the objects of the human mind. The different sciences, confined at first to a small number of simple notions common to all, can no longer, when as a result of their progress they have become
more extensive and more difficult, be envisaged otherwise than sep-
arately; but greater progress once again unites them, because there
is discovered that mutual dependence of all truths which in linking
them together illuminates each through the other; because, if each
day adds to the vast extent of the sciences, each day also makes them
easier, because methods are multiplied with discoveries, because the
scaffolding rises with the building.

O Louis, what majesty surrounds thee! What splendor thy
beneficent hand has spread over all the arts! Thine happy peo-
ple have become the centre of refinement! Rivals of Sophocles, of
Menander, and of Horace, gather around his throne! Arise, learned
academies, and unite your efforts for the glory of his reign! What a
multitude of public monuments, of works of genius, of arts newly
invented, and of old arts perfected! Who could possibly picture
them? Open your eyes and see! Century of Louis the Great, may
your light beautify the precious reign of his successor! May it last
for ever, may it extend over the whole world! May men continually
make new steps along the road of truth! Rather still, may they con-
tinually become better and happier!

In the midst of these vicissitudes of opinions, of sciences, of
arts, and of everything which is human, rejoice, gentlemen, in the
pleasure of seeing that religion to which you have consecrated your
hearts and your talents, always true to herself, always pure, always
complete, standing perpetuated in the Church, and preserving all
the features of the seal which the Divinity has stamped upon it.
You will be her ministers, and you will be worthy of her. The Fac-
ulty expects from you her glory, the Church of France her illumina-
tion, Religion her defenders. Genius, learning, and piety are united
to give ground for their hopes.