

Sketch for an Historical Picture of the Advances of the Human Mind

Nicolas de Condorcet

1795

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis indicates the omission of a brief passage that seems to present more difficulty than it is worth. Longer omissions are reported between brackets in normal-sized type.—The author’s frequent first-person plural (‘We shall show. . .’) is replaced through out by the singular. In the work’s final paragraph he refers to himself only as ‘the philosopher’.—The many quiet switches from a past tense to the present tense (e.g. in the long paragraph on page 3) all occur in the French.—The A-B-C section-headings in two of the chapters are added. So are cross-headings in small capitals; each of these marks the place where a substantial new theme is launched, but there is no special indication of where it ends.—The title indicates that this was to be a preliminary sketch for a fuller picture, referred to as ‘the work itself’ on pages 7, 105 and 109, which explains the author’s frequent mentions of what he *will* show.—His full name was Marie-Jean-Antoine-Nicolas Caritat, Marquis de Condorcet.

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Glossary

advance: Translates *progrès* in the many places—including the work's title—where *progrès* is used as a plural noun. Its singular occurrences are translated by 'progress'.

alter: To be understood in the same sense as the French *altérer*, which it everywhere translates. The French means 'change for the worse'; we have no English word with that meaning; hence this note, which also applies to 'alteration'.

anathema: A formal act of consigning someone to damnation.

arbitrary: In early modern uses, this means 'chosen', resulting from someone's decision, or the like, with no implication (as there is in today's usage) that there weren't good reasons for the choice. On pages 16 and 69 the emphasis is on contrasting what happens because of what •some powerful person decides and what happens because of what •the law says.

art: Any practical activity that is governed by rules and (same thing?) requires skill. Portraiture, sculpting, farming, carpentry, weaving, . . .

caste: This translates *caste*. As used on pages 18–22 the word refers to cults, cliques, self-proclaimed 'professions', or the like. The meaning is vague but definitely derisive.

Christ: Condorcet uses this in its original meaning, as a general term meaning the same as 'messiah'. He gives both terms initial capitals but does not mean them as proper names. The hyphenated phrase on page 58 should be thought of as 'Jesus, the Christ'.

'civilised': In quotation marks (on pages 12–13 and 53) this word translates *politicés*, which means 'gentler, less rough' or the like.

deism: A deist is someone who believes there is a god (opposite of 'atheist'), but whose theology is *thin* compared with Christianity—e.g. the deist doesn't think of God as intervening in the world.

elysium: The home of the blessed after death in Greek mythology. In the last sentence of this work it occurs translating *élysée*, which was also the name of a royal palace in Paris.

era: Translates *époque*. 'A period of history characterised by a particular state of affairs, series of events, etc.' (OED). That isn't quite what 'epoch' means today, but it was and is the meaning of *époque*.

faculty: *faculté* This means 'basic ability', 'fundamental capacity'—an ability that a man is born with, or possesses in such a way that we can't investigate how or through what mechanism he has it.

irritability: High responsiveness to stimuli.

magistrate: Here, as elsewhere in early modern writings, a 'magistrate' is anyone with an official role in government. The magistracy is the set of all such officials, thought of as a single body.

mœurs: The *mœurs* of a people include their morality, their basic customs, their attitudes and expectations about how people will behave, their ideas about what is decent. . . and so on. This word—rhyming roughly with 'worse'—is left untranslated because it has no English equivalent. Good *English* dictionaries include it, for the same reason they have for including *Schadenfreude*.

nation: This always translates the French *nation*, though

in Condorcet's day a *nation* could be quite small, really no more than a tribe.

observation: In a good many places this translates *observation* in its sense of 'controlled, purposeful, disciplined collection of facts'. That explains why 'observations' are sometimes treated as additional to 'facts' in contexts where clearly *observed* facts are the topic. See for example page 93.

opinion: The six occurrences of this word on page 69 and one each on pages 16, 17, 55 and 79 translate the French *opinion* in a sense that doesn't correspond to any one English word. It's not **an** *opinion* or **the** *opinion* of. . . , but just *opinion*. The definition of it in the Petit Robert dictionary equates it with 'set of mental attitudes dominant in a society'.

Philosophe: As used on page 49 this is a standard French label (and sometimes an English one) for the public intellectuals of the Enlightenment in the 18th century; not necessarily philosophers.

picture: Translates *tableau*, which can also mean 'view' or 'chart' (see page 108).

popular: In early modern times this means 'of the people' or 'accessible to the people'; not (usually) 'liked by the people'.

positive: A positive law (or right) is one that has been made by men; it always stands in contrast with 'natural law (or right)', which is supposed to be inherent in nature and not an upshot of anything humans have done.

prejudice: In Condorcet's time, a *préjugé* could be any preconceived opinion; he mainly uses the word unfavourably, but not as narrowly as we do today in using 'prejudice' to refer to something pre-judged concerning race, sex, etc.

pyrrhonism: The doctrine of Pyrrho, the founder of ancient Greek scepticism, who held that nothing can be known.

speculative: This means 'having to do with non-moral propositions'. Chemistry is a 'speculative' discipline; ethics is a 'practical' one (and so is carpentry; on page 6 and elsewhere speculative/practical is aligned with science/art).

subtleties: *subtilités* When used in the plural in this work, it means 'hair-splitting', 'logic-chopping', or the like. Definitely dyslogistic.

theurgy: A system of white magic, originally practised by the Egyptian Neoplatonists, performed by the invocation and employment of beneficent spirits (Shorter OED).

tribe: This translates both *peuplade* and *tribu*. Condorcet uses *peuplade* when writing about the first three eras and the tenth; and uses *tribu* when writing about the second, third (page 15) and sixth (pages 42 and 47) eras. On page 11 the first 'tribe' is *peuplade* and the other five are *tribu*. If there's a shade of difference in their intended meanings, the present translator can't find it.

vulgar: Applied to people who have no social rank, are not much educated, and (the suggestion often is) not very intelligent.

[Condorcet's work in political science and philosophy (he was also a notable mathematician) made him a fertile source of ideas animating the French revolution, in which he was a participant until his criticisms of the Robespierre faction's excesses led to his being condemned. He hid in a friend's house for some months; then came out, was arrested and imprisoned, and died the next day—perhaps by poison (self-administered or not), perhaps through heart-failure. The present work's relation to these events is hinted at in its moving last paragraph, stated in this plaque that is now affixed to the friend's house, and explained in the anonymous Preface to its first publication.]



Preface

When Condorcet was condemned, he briefly thought of presenting to his fellow-citizens an account of his principles and his conduct as a public man. He wrote a few lines; but then, poised to recall thirty years of useful work, including all his writings since the revolution ·began·, writings

in which he had constantly attacked all the institutions that were contrary to liberty, he saw that this attempt at self-justification would be useless, and he gave it up. Being utterly free of passions ·such as resentment·, he didn't want to pollute his thought by thinking about his persecutors; so—with a sublime and continual lack of any thought about *himself*—he devoted the short amount of life left to him to something useful and lasting. This is the work presented here. It rests on many other works ·by Condorcet· in which, over many years,

- human rights were discussed and established,
- fatal blows were inflicted on superstition,
- the methods of the mathematical sciences were given new applications which open up new paths to knowledge in politics and morals,
- the true principles of social well-being were developed and demonstrated in absolutely new ways, and
- there were marks everywhere of the profound morality that banishes ·all the vices·, even the frailties of self-love; marks of the unchangeable virtues that one can't encounter without feeling a religious veneration.

What happened to Condorcet was a deplorable instance of wonderful talents lost to the country, to the cause of liberty, and to the progress of science and what it can do to meet the needs of civilized man. May it arouse regrets that will do good to the republic! This death will loom large in the pages of history, as a black mark against the era in which it has occurred. May it inspire an unbreakable attachment to the rights of which it was a violation! That is •the only homage worthy of the sage who, with the fatal sword suspended over his head, calmly meditated on how things could become better for his fellow-men; and •the only consolation possible for those who have been the objects of his affections and have known the full extent of his virtue.

Introduction

Man is born with the ability •to receive sensations, •to perceive and distinguish the simple sensations they are composed of, •to remember, recognise and combine them, •to compare their different combinations, •to grasp what they have in common and what distinguishes them from one another, and •to attach signs to all these items so as to recognise them better and more easily form new combinations from them.

This faculty [see Glossary] is developed in him

- by the action of external objects, i.e. by the presence of certain complex sensations whose constancy is independent of himself (I mean the constancy of •staying the same or •changing according to laws),
- by communication with individuals of his kind, and
- by all the artificial means that men have managed to invent ever since they first acquired this faculty.

Sensations are accompanied by pleasure and by pain; and man has the faculty of converting these momentary impressions into durable feelings—pleasurable or painful—which he experiences when he sees or remembers other sentient beings experiencing pleasures or pains.

Finally, this faculty unites with the faculty of forming and combining ideas to create ties of •interest and •duty between him and his fellow creatures—ties to which nature itself has chosen to attach our most precious episodes of happiness and our most painful sufferings.

If we observe and study only the general facts and unvarying laws in the development of these faculties, confining ourselves to what is common to the different individuals of the human species, we are engaging in the science called **metaphysics**.

But if we •consider this same development's results for the mass of individuals living at one time in one region, and •follow it down through the generations, that gives us **the picture of the advances of the human mind**. This progress is governed by the same general laws as can be seen in the development of the faculties of individuals, because it is just the upshot [*résultat*] of that individual development considered at once in many individuals united in society. That upshot at any instant depends on the upshots at the preceding instants and has an influence on future ones.

So this picture is *historical*, because it is a record of continual change based on the successive observation of human societies in the different eras they have gone through. The aim is •to exhibit the order in which the changes have occurred, •to reveal the influence of each instant on the next, and thus •to show—by the changes the human species has undergone in continually renewing itself as the centuries have unrolled—the path it has followed, the steps it has taken towards truth and happiness. These observations of what man has been and of what he is today will lead us to ways of assuring and accelerating the further advances that his nature allows him still to hope for.

That is the goal of the work I have undertaken. Its outcome will be to show, from reasoning and from facts, •that no limit has been set to how much the human faculties can improve; •that the perfectibility of man really is indefinite; •that the advances in this perfectibility—from now on they'll rise above every power that would block them—have no limit except the duration of the planet that nature has placed us on. No doubt these advances won't always go at the same rate, but they'll never be reversed—at least while the earth

keeps its present place in the system of the universe, and the general laws of this system don't subject our planet to •a general upheaval or to •changes that would block the human race from preserving and exercising the same faculties and finding the same resources.

The first state of civilisation observable in the human species is that of a small society of men •living by hunting and fishing, •having no arts [see Glossary] except for making crude weapons and household utensils and building or excavating places to live in, but •having already a language with which to communicate their needs, and a few moral ideas from which they derive common rules of conduct, •living in families, •conforming to general customs that serve for them as laws, and even •having a crude form of government.

You can see that the uncertainty and difficulty of making a living, demanding extreme physical effort alternating with absolute rest, don't leave a man with spare time in which to give himself over to his ideas and enrich his mind with new combinations of them. His ways of meeting his needs depend too much on chance and the seasons to provide a role for any occupation whose advances might be passed on; so each man focuses only on improving his own individual skill and nimbleness.

Thus the advances of the human species had to be very slow back then; they could occur only here or there when special circumstances made them possible. However, we see •the results of hunting, fishing and gathering replaced by •the food man can get from animals that he has domesticated and knows how to keep and breed. Then he adds a rough and ready agriculture: he doesn't settle for merely gathering the fruits or plants that chance throws in his way; he learns to store them, to sow or to plant them, to cultivate them so that they will reproduce.

In the first state of things a man owned only •the animals he killed, his weapons, his nets and his household utensils; then he came to own •his flock, and after that •the land he had cleared and was cultivating. When the head of a family dies, his property naturally goes to the •rest of family. Some people have surplus goods that can be preserved. If someone has a surplus of everything, that will give rise to new needs; if it is a surplus of only one commodity, and there's a shortage of some other, that leads to the idea of *exchange*; and from then on moral relations become more complicated and more numerous. [The 'new needs' remark foreshadows Condorcet's view [see page 109] that extreme wealth is a misfortune; but his present point is just to brush total surplus aside so as to get, through partial surplus, to the topic of *exchange*.] Greater security as well as more (and more certain) leisure-time enable people to engage in meditation or at least in systematic observation [see Glossary]. The practice is introduced for some people to give •part of their surplus in exchange for •work, which they then don't have to do themselves. So there exists a class of men whose time is not taken up by physical labour and whose desires extend beyond their bare needs. Industry is born; the arts that men already have expand and improve; as men become more experienced and attentive, quite casual information suggests new arts to them; as the means of living become less dangerous and less precarious, population increases accordingly; agriculture replaces other means of livelihood that can't sustain as many people per acre as agriculture can—and it favours population growth which in turn speeds up advances in agriculture. In a society that has become less nomadic, more connected, more intimate, new ideas are passed around more quickly and retained more securely. The dawn of the sciences begins to appear; man shows himself to be unlike other animal species in no longer being confined, as they are, to merely individual improvement.

As their inter-relations become more extensive, numerous and complicated, men come to need a way of

- communicating their ideas to someone who is absent,
- preserving the records of past facts more precisely than oral tradition can do it,
- fixing the conditions of an agreement more securely than by the memory of witnesses, and
- recording in a more stable way the respected customs that the members of a given society agree to conform to.

So they felt the need for writing—and they invented it. It seems at first to have consisted in straightforward pictures, then conventional pictures that presented only the characteristic features of the objects. Later on, by a kind of metaphor analogous to the metaphors already introduced into their language, the image of a *physical* object came to express *moral* ideas. The origin of those signs, like the origin of words, were inevitably forgotten in the course of time, and writing became the art of attaching a conventional sign to every idea, to every word, and then to every variant or version of each idea and word.

So now there was a written language and a spoken language, and a correspondence between them had to be established.

Some men of genius—eternal benefactors of the human race, though their names and their country are forever buried in oblivion—noticed •that all the words of a language were merely combinations of a very few basic sounds, and •that these sounds, few as they were, could form an almost infinite number of different combinations. They had the idea of using visible signs to represent not the corresponding ideas or words but the basic elements the words are composed of.

That was when alphabetic writing came on the scene: a small number of signs could be used to write anything, just

as a small number of sounds could be used to say anything. The written language was the same as the spoken language; one needed only to be able to recognise and to form these few signs; and this last step secured the advances of the human race for ever.

It might be useful *now* to invent a written language which—

- intended only for use in the sciences,
- expressing only combinations of simple ideas that are exactly the same in every mind, and
- used only in logically strict reasonings, i.e. precise and determinate operations of the mind

—would be understood by men of every country, and be translated into all their idioms without being—as those idioms themselves are—liable to be altered [see Glossary] by passing into common use.

•If we had had •this kind of writing •down the centuries, it •would only have served to prolong ignorance; but *now*, by a remarkable switch-over, it would in philosophy's hands become a useful instrument for the swift spread of enlightenment and for the improvement of scientific method.

All the peoples whose histories are known to us lie somewhere between •this level of civilisation and •the level at which we still find the savage tribes. Looking back, we see them

- sometimes making new advances,
- sometimes plunging back into ignorance,
- sometimes floating between the two alternatives or stopping at a certain limit;
- in some cases totally disappearing from the earth under the sword of conquerors, mixing with those conquerors or living in slavery, and finally
- sometimes receiving knowledge from a more enlightened people, to transmit it to other nations.

All these events form an unbroken chain of connection between the earliest periods of history and the century in which we live, between the first peoples known to us and the present nations of Europe.

So the picture that I have set out to draw can be seen to have three quite distinct parts .

·(1) **The first three eras** (pages 7–21)·

In the first part, in which travellers' tales show us the human condition among the least civilised nations ·today·, we can only *guess* by what steps men who were utterly isolated—or anyway as isolated as they could be consistently with propagating the species!—were able to take the first steps leading eventually to the use of a structured language (which is what, back then, mainly distinguished them from other social animals, along with a few other differences—more extensive moral ideas and the bare beginnings of social order). ·In this part of my picture·, therefore, ·with no historical knowledge of the actual course of ·events·, I can have no **guide** except theoretical observations regarding the development of our intellectual and moral ·faculties.

·(2) **The fourth through ninth eras** (pages 22–94)·

To trace man to the point where

- he exercises arts,
- the light of science begins to shine on him,
- trade brings men together into nations, and finally
- alphabetical writing is invented,

we can add to that first **guide** the history of the various societies that have been observed in almost every intermediate state, though we can't follow any one society all the way between those two great eras of the human race.

Here the picture starts to rely to a great extent on the sequences of events that we know about from history; but ·we shan't uncritically gulp down all these historical facts·; if

we are to construct a hypothetical history of a single people and depict the advances it has made, we have to select events from the histories of different nations and inter-relate and combine them.

From •the era when alphabetical writing was first known in Greece through to •the present state of mankind in the most enlightened countries of Europe we have an uninterrupted series of historical facts and observations [see Glossary], so that our picture of the journey and the advances of the human mind becomes strictly historical. Philosophy no longer has to guess at anything, has no more hypothetical surmises to make; it has only to collect and arrange facts, and exhibit the useful truths that arise from their inter-connections and from them as a whole.

·(3) **The tenth era** (pages 94–110)·

·When that is all done· there would be one last picture to be drawn—the picture of our hopes, of the advances that •are left to future generations to make and •seem to be assured by the constancy of the laws of nature. Drawing this would require showing

- by what steps things that would now seem quite out of reach must gradually become possible, and even easy;
- why, despite the transient successes of prejudices and the support they get from the corruption of governments or peoples, truth is bound to have the only lasting victory;
- by what ties nature has indissolubly united the advances of •knowledge with those of •liberty, •virtue and •respect for natural human rights;
- how these ·four·, the only real goods, though so often thought of separately that they're even regarded as incompatible, must in fact eventually become downright inseparable; this being something that will happen as soon as enlightenment reaches a certain level in many nations at once—as

soon as it penetrates the whole mass of one great people whose language becomes universal and whose commercial relations spread across the whole globe.

Once this union of goods had occurred among the whole class of enlightened men, these men would be considered as friends of mankind, working together to speed the coming of its perfection and happiness.

I shall lay bare the origin, and follow the history, of the general errors that have somewhat slowed or stopped reason in its onward march, and even—often—done as much as political events to drive men back towards ignorance.

The theory of the development of our individual faculties deals not only with the sound way of reasoning, i.e. the one that shows us the truth, but just as much with the operations of the mind that lead us to error or keep us there, ranging from subtle logical errors that can catch the most penetrating thinker off his guard right out to the mad fantasies of fanatics. Similarly, the historical picture of the human mind's advances also shows how general errors are introduced, propagated, transmitted and preserved among nations. Like the truths that improve and enlighten the mind, those errors are results of its activity and of the disproportion there always is between what the mind actually knows and what it wants to know or thinks it needs to know.

Indeed, error looms even larger than that: the general laws of the development of our faculties force the creation of certain prejudices [see Glossary] in each era; and any given prejudice keeps its power to seduce or dominate after the end of the era that gave rise to it, because men retain the errors of their infancy, their country, their century, long after learning the truths needed to destroy them.

A final point: always and everywhere a man's prejudices reflect his level of education and his profession. (i) The prejudices of philosophers make it hard to learn new truths,

(ii) those of the less enlightened classes slow the spread of truths already known, and (iii) those of certain eminent or powerful professions put obstacles in the way of truth. These prejudices are the three kinds of enemies that reason constantly has to battle with, often requiring a long and painful struggle to reach victory. So the history of these battles—of the rise, triumph, and fall of prejudices—will have a large place in this work, and won't be the least important or least useful part of it.

If there is a scientific way of foreseeing the advances the human race will make, and of directing and accelerating them, its main basis must be the history of the advances already made. The idea that the history of past ages is the *only* source for rules of conduct, and that the opinions of antiquity are the *only* source of truths—that's a superstition, and philosophy has had to proscribe it. But shouldn't it also proscribe the prejudice that arrogantly rejects the lessons of experience? No doubt the only way to learn general truths in the science of man is through meditation, with fruitful combinations of ideas. But if the study of individual human beings is useful to the metaphysician and moralist, why wouldn't the study of whole societies be equally useful? And why not also to political philosophy? If it is useful to observe different societies existing at the same time, studying how they relate to one another, why wouldn't it be useful to observe them also along the time-line? Even supposing we could neglect such observation when investigating speculative [see Glossary] truths, oughtn't we to bring it in when we are applying those truths to practice, deriving from a science the art that should be its useful result? Don't our prejudices, and the evils that result from them, stem from our ancestors' prejudices? And isn't studying their origins and effects one of the surest ways to correct old prejudices and prevent new ones?

Have we reached the point where there's nothing more for us to fear, whether from new errors or from the return of old ones? where no corrupt institution can be introduced by hypocrisy and adopted through ignorance or fanaticism? where no vicious combination—no gang of malefactors—can do harm to a great people? Of course not! Well, then, wouldn't it be useful to know how nations have been deceived, corrupted, or plunged in misery?

Everything tells us that we're approaching one of the great revolutions of the human race. What can better tell us what to expect from it, and reliably guide our conduct when it happens, than the picture of the previous revolutions that have prepared the way for it? The present state of enlightenment assures us that this revolution will go well;

but isn't that conditional on our ability to bring all our strength to it? And if the price of the happiness it promises isn't to be too high, if the revolution is to spread far and fast, and if its effects are to be more complete, don't we need to go to the history of the human mind to learn what obstacles remain to be feared and how we can overcome them?

I shall divide the time through which I mean to travel into nine great eras; and in a tenth I shall venture to present some ideas about the future destiny of mankind.

I shall present only the principal features of each era; I shan't linger on details or chase down special cases. I'll point out the subjects and the upshots; further developments, and proofs, will be given in the work itself. [That last phrase is meant in contrast to this mere *sketch*.]

First era

Men come together into tribes

We have no direct observation of what preceded this state; and it is only by examining man's intellectual or moral faculties and his physical constitution that we can guess at how he reached this first (tribal) level of civilisation.

So the only way to introduce the picture of this era is to offer some remarks about those of our physical qualities that could have favoured the first formation of society, and a brief analysis of the development of our intellectual or moral faculties.

A *family* seems to be a society that is natural to man. Formed at first by the children's need for their parents, and by the mother's affection as well as by the (sometimes less lively) affection of the father, it continued—because the children's need continued—for long enough for the devel-

opment of a feeling that could arouse a desire to keep this little society together and for awareness of its advantages. A family placed on land that easily supported life could then multiply and become a tribe.

Tribes formed by the union of several families must have come later, and more rarely, because the birth of any such tribe depends on less urgent motives and on the concurrence of more circumstances.

Arts aimed at meeting the simplest needs—

- making weapons,
 - preparing food,
 - getting utensils required for this preparation,
 - preserving food for storage against times of scarcity
- were the first fruits of a continued union, and the first

features that distinguished human society from the societies that some animal species form.

In some of these tribes the women cultivate edible plants around their huts, to supplement the output of hunting and fishing. In others, in places where the earth offers edible vegetation without its being cultivated, these primitive people spend some of their time seeking and gathering. In the latter tribes, where the advantage of remaining united is less felt, little civil structure is observed beyond what a single family has. But articulate language is found in all of them.

More frequent and more durable connections with the same individuals, shared interests, and mutual help in hunting or confronting enemies—all this must have given the members of the society •the sense of *justice* and •affection for one another; and this affection soon turns into an attachment to the society itself. This inevitably led to a violent hatred for the enemies of the tribe and a desire for vengeance against them.

The first ideas of political authority came to these societies through their need for leader under whom to act in common—for tribal self-defence and for getting a better and more reliable food-supply. In matters involving the interests of the whole tribe, where a common decision had to be made, all those who would have to act on it were to be **consulted**. The weakness of the women, which excluded them from long hunting expeditions and from war—the usual subjects of debate—excluded them also from these consultations. These decisions demanded experience, so only those who could be assumed to have it were allowed to take part. And the quarrels that arose within a society disturbed its harmony and could destroy it; so it was natural to agree that the decisions would be **made** by those whose age and personal qualities inspired the greatest confidence. Such was the origin of the first political institutions.

These institutions must have been preceded by the formation of a language. The idea of expressing things by conventional signs appears to be out of the reach of human intelligence as it was at this stage of civilisation; but it's likely that such signs came into use as the work of *time*, gradually and almost imperceptibly.

The invention of the bow was the work of one very clever man; the formation of a language was the work of the whole society. These two kinds of progress are equally achievements of the human species. The more rapid kind is the result of new combinations •of ideas• that men favoured by nature can form; it's the reward for their meditations and their energy. The other, slower kind arises from •reflections and observations that are possible for anyone, and even from •habits men develop in their common course of life.

When movements are regular and rhythmic they are •less tiring to make and •easier for the observer to see or hear as orderly and structured. For those two reasons such movements give pleasure. So the origin of dance, music and poetry runs back to the infant state of society. In that state they use dance as a pastime for the young and in public festivals. They have love songs and war songs; they can even make musical instruments. The art of eloquence is not absolutely unknown in these tribes: at least they know to adopt a graver and more solemn tone in their set speeches, and even know something about rhetorical exaggeration.

The characteristic errors of this era of civilisation were:

- regarding vengeance and cruelty towards enemies as virtues,
- the opinion about females that condemns them to a sort of slavery,
- the view that one privileged family has the right to make the tribe go to war, and
- the first glimmerings of various kinds of superstition.

We'll have to explore how these errors began and what caused them. If a man has a false belief that wasn't made sort-of-natural to him by his early education, something must be at work to make him have it: it is connected with the errors of his infancy, or he has been made vulnerable to it by his interests, passions, opinions, or other circumstances.

The only 'sciences' known to savage tribes are a vague knowledge of astronomy and of some medicinal plants used in the cure of wounds and diseases; and even this knowledge is corrupted by an admixture of superstition.

But this same era—early as it is—presents us with one fact of importance in the history of the human mind. We can see in it the first hints of an institution that has had opposite effects in that history:

- accelerating the advances of enlightenment, while also spreading error,
- enriching the sciences with new truths but also plunging people into ignorance and religious servitude,
- making them purchase a few transient benefits at the price of a long and shameful tyranny.

I'm talking about the formation of a class of men who are the guardians of

- the principles of the sciences or processes of the arts,
- the mysteries or ceremonies of religion,
- the practices of superstition, and often even
- the secrets of legislation and government.

That is, I'm talking about the division of the human race into two portions: one destined to teach, the other created to believe; one arrogantly concealing what it boasts of knowing, the other receiving with respect whatever its teachers condescend to reveal; one wanting to raise itself above reason, the other humbly renouncing its own reason and abasing itself to less than human stature by crediting other men with prerogatives that raise them above their common nature.

Now at the close of the eighteenth century we still see the dregs of this distinction in our priests; and it can be found in the least civilised of primitive tribes, which also have their quacks and sorcerers! It is so general, and turns up so constantly at all stages of civilisation, that it must have a foundation in nature itself; so we shall find in the human faculties at this early period of society the cause of

- the credulity of the first dupes, and of
- the gross cunning of the first impostors.

Second era

Pastoral state of mankind

Transition from that to the agricultural state

The idea of keeping in captivity certain animals taken in hunting must easily have come to men, provided that

- the animals' tameness made them easy to keep,
- the land around the hunters' homes provided these animals with plenty to eat,
- the family didn't itself need that food, and
- the family had reason to fear starvation from the failure of later hunts or the harshness of the weather.

Having kept these animals as a simple food-supply, men came to realise that they could be made to breed and so become a more durable resource, added to by their milk. So a flock that had been regarded only as a •supplement to the produce of the hunt became •a preferred alternative to hunting—more reliable than the hunt as well as being more abundant and less trouble. Thus, hunting stopped being regarded as a source of food, let alone the main one; it was kept up only •for pleasure or •to keep predators away from the flocks, whose numbers led to their having to graze at a considerable distance from the humans' habitations.

A more sedentary and easier life-style provided leisure that was favourable to the development of the human mind. Being sure now of having enough to eat, no longer anxious about their basic needs, men looked for new sensational improvements in their ways of providing for those needs.

The arts [see Glossary] made some advances: things were learned about the art of maintaining domestic animals, of favouring their reproduction, and even of improving their breed.

They learned to use wool for clothing, replacing skins by cloth.

Society within families continued to be intimate, but became gentler. The flocks of the different families couldn't all multiply at the same rate, so differences of wealth appeared. This prompted the idea that one man might share the produce of his flocks with another who hadn't any, and who was to devote his time and efforts to the care of the first man's flocks. Then they saw that the labour of a young, fit individual was worth more than the cost of his bare subsistence; and it became the custom to keep prisoners of war as slaves instead of cutting their throats.

Hospitality, also practised among primitive people •in the first era•, is more formal and important in the pastoral state •of the second era•, even among nomadic tribes who roam in their waggons or live in tents. Opportunities for hospitality—among individuals, families, or whole peoples—arise more frequently. This act of humanity becomes a social duty, and rules are made to govern it.

As some families had not only plenty to live on but a constant surplus, while other men lacked the bare necessities, natural compassion for the latter's sufferings gave rise to benevolent feelings and the practice of beneficence.

Inevitably, *mœurs* [see Glossary] became gentler. The slavery of women became less severe, and the wives of the rich were no longer condemned to arduous work.

A growing variety of •things used to satisfy the various needs and of •instruments to make them, and growing

inequality in their distribution, had to increase the number of exchanges and hence produce genuine *trade*—which couldn't grow without making men realise the need for a common measure of exchange-value, i.e. for some kind of money.

Tribes became more numerous. To make it easier to feed their herds, they set up their fixed homes further apart; or they became nomads, i.e. switched to having movable encampments when they realised that some of their domestic animals could pull or carry burdens.

Each nation had its chief for the conduct of war; but being divided into tribes by the need to separate so as to find pasturage, each tribe also had its own chief. In nearly every tribe one family always provided the chief. But the heads of families with numerous flocks, many slaves and a great number of poorer citizens working for them shared in the authority of the chiefs of their tribes, just as these shared in the authority of the chiefs of the nation—at least when their age, experience and achievements were thought to entitle them to this. This era of society is where we must place the origin of slavery and of adult men's inequality of political rights.

Tribunals made up of family heads or tribal chiefs settled, on the basis of ideas of natural justice or of established usage, the disputes that were already growing in number and complexity. The tradition of these decisions, by confirming and perpetuating the usage, soon formed a kind of jurisprudence that was more regular and coherent than had been needed for the society's advances until then. The idea of property and property-rights had acquired greater extent and precision. The division of inheritances, now more important, needed to be governed by fixed regulations. Contracts were entered into more frequently, and became more complex; they had to be formalised; and there were laws defining what constitutes a contract and what is involved in keeping it.

The utility of observing the stars, and the occupation they provided for shepherds during their long night-watches, had to lead to some slight advances in astronomy.

But at that same time we see men perfecting the art of deceiving others in order to rob them, and of dominating their opinions by an 'authority' based on fears and fanciful hopes. More regular forms of worship, and less crudely put-together systems of faith, were established. Ideas of supernatural powers were refined, in a way; and with this 'refinement' we see spring up

- in one place princes who are also bishops,
- in another families or tribes that have charge of religious ceremonies,
- in yet another colleges of priests

—each of these being a class of individuals insolently claiming special privileges, standing apart from the people so as more thoroughly to enslave them, and trying to possess medicine and astronomy, so as to bring into a single focus all the means for subjugating minds and leave them with no way to unmask the class's hypocrisy and break its chains.

Languages became richer without becoming less figurative or less bold. The images they used were more varied and more pleasing—coming from the farmer's life as well as from the hunter's, from nature's regular phenomena as well as from its upheavals (e.g. from grass rippling in the wind as well as from volcanoes and earthquakes). Song, poetry and musical instruments were improved for an audience whose leisure-time made them more peaceful but harder to please, and allowed each to reflect on his own feelings, examine his basic ideas, and select from amongst them.

They must have noticed that some plants fed the herds better (in quantity or quality) than others. They saw the advantage of cultivating these and separating them from other plants that were less nourishing, or unhealthy, or even

dangerous; and they found ways of doing this.

Similarly, in countries where plants, grains and fruits spontaneously offered by the earth provided food for the people, in addition to what they got from the flocks, they must have observed how those plants propagated themselves; and then they must have worked to

- get them growing nearer to the human habitations;
- separate them from weeds, giving them a soil to themselves; and
- protect them from wild beasts, from the flocks, and even from the greed of other men.

These ideas will have occurred even sooner in more fertile countries where the earth's spontaneous productions were almost enough on their own to meet human needs. That's when men began to devote themselves to agriculture.

In a fertile country with a temperate climate a given stretch of ground can support many more men with grains, roots and fruit than it could support if used only as pasture for a flock. So •when soil was easy enough to work with, •when men discovered how to use for travel and transport the animals that pastoral folk had used ·for food·, and •when agricultural tools had improved somewhat—*that* is when agriculture became the most plentiful source of subsistence, and men's primary occupation; it's when the human race entered its third era.

Some peoples have remained from time immemorial in one of the two states I have described. They haven't made any advances •of their own accord or •through commercial and other relations with more civilised peoples. Those relations have given them some knowledge, some industry, and (above all) many vices; but have never been able to pull them out of their state of stagnation.

The principal causes of this phenomenon ·of social stagnation· have been:

- climate;
- habits;
- the pleasures that come with this state of almost complete independence, an independence that won't be recovered again until there are societies even more perfect than any we have today;
- men's natural attachment to opinions they acquired as infants, and to their country's customs;
- the aversion that ignorance naturally feels to every sort of novelty;
- the bodily and (even more) the mental laziness which suppressed what little curiosity the people had; and
- the dominance that superstition already had over these infant societies.

To these causes must be added the greed, cruelty, corruption and prejudices of 'civilised' [see Glossary] nations, which seemed to these ·more primitive· folk to be

•stronger, richer, more informed and more active, but at the same time

•more vicious and (especially) less happy than they themselves were. They must often have been less •impressed with the superiority of such 'civilised' nations than •scared off by the number and extent of their needs, the torments they suffer through greed, the continual agitations of their passions—always active and never satisfied. Some philosophers have looked down on these ·primitive· people as stupid and lazy, while others have praised them as wise and virtuous.

This issue between these attitudes will be settled in the course of the present work. I'll show •why the mind's advances haven't always led to society's advancing towards happiness and virtue; and •how the the good that should flow from knowledge been altered [see Glossary] by an admixture of prejudices and errors, because that good depends more on

the knowledge's purity than on its extent. It will turn out that when a rude society's journey towards the state of civilisation of an enlightened and free people goes through a period of storms and troubles, this isn't a sign of degeneration in the human species, but rather a necessary crisis in its slow journey towards absolute perfection. You'll see that the vices

of 'civilised' nations have been produced not by the increase of knowledge but by its decline; and that knowledge—far from corrupting men—has at least made them less violent, even where it hasn't been able to correct or fundamentally change them.

Third era

Advances of mankind from the agricultural state to the invention of alphabetical writing

The uniformity of the picture I have drawn up to here will soon disappear. It will no longer be a matter of •considering peoples each of which is attached to its own soil and goes through the years as a single family with almost no mixing with anyone from the outside, and •noting only the faint shades of difference in *mœurs* [see Glossary], characters, opinions and superstitions that distinguish them from one another.

Before long, invasions, conquests, the rise and overthrow of empires, will mix and jumble nations, sometimes scattering them over new territories, sometimes covering the same terrain with different peoples.

Chance events will continually interfere with nature's slow but regular movement, often slowing it down, sometimes speeding it up.

When we observe a phenomenon in a nation at a certain time, its cause may well have been a big event that occurred a thousand leagues away and a thousand years earlier; and many of those events whose influence we see operating on our predecessors, and sometimes on ourselves, are hidden in the night of time. [Condorcet is here likening 'hidden in the past'

to 'hidden in the darkness'.]

But first we should look at how such a big event affects a single people independently of any influence from conquests and the intermixture of peoples.

Agriculture attaches man to the ground that he cultivates. If he wanted to move, he *could* move his person, his family, his hunting gear, and his flocks, which he could drive before him; •but he is still pinned down, because• in such a move he would find no nourishment for himself or for the animals he lives on, since the only land that might supply it would already belong to someone else.

Each parcel of land has a master who is the sole owner of its produce. When the output is more than is needed to feed and support the men and animals who have prepared it, the surplus gives the proprietor an annual income that he doesn't need to work for.

In the first two states of society, every individual—or at least every family—practised most of the necessary arts. But •when there were men who received unearned income from their land, and others who earned wages by working for them,

- when occupations were multiplied, and
- when the activities involved in the arts became more extensive and complicated,

it soon came to be in everyone's interest to divide them, .i.e. to get each individual to become a specialist in one art or a small group of related arts. They saw that an individual worked better when he had fewer kinds of thing to do; that the hand performed faster and more precisely a smaller number of operations that had been done often enough to become habitual; that less intelligence was needed to do something well if it had been repeated more often.

Thus, while some men devoted themselves to farming, others made farm implements. The care of flocks, household management, the making of clothes—all these became similarly distinct occupations. In a family with little property, one of these occupations wasn't enough to occupy the whole of an individual's time; and in these cases several such families jointly used the services and paid the wages of one man. Before long there was an increase in kinds of materials used in the arts, and the differences among them demanded different kinds of treatment. Where these differences were small, that created a distinct group of arts with a particular class of workmen. Trade expanded, taking in more objects and getting them from further afield; and then another class of men was formed, solely occupied in buying commodities, preserving and transporting them, and re-selling them at a profit.

Thus to the three classes of men in pastoral life—

- proprietors,
- domestics working for the proprietors' families, and
- slaves,

we must now add

- artisans of various kinds, and
- merchants.

This created a society that was more fixed, more close-knit and more complex, so that a need was felt for a more regular and comprehensive code of legislation; for more precision about the punishments for crimes and the formalities of contracts; for stricter rules regarding how to establish the facts in any legal case. These advances were the slow and gradual work of need and of circumstances; they took men only a few steps further along the road the pastoral nations had been following.

In the first two eras education was purely domestic. The children got their education through contact with their father, learning to do everyday tasks and also to practise whatever arts [see Glossary] he knew. From him they received •the few traditions that made up the history of the tribe and of the family, •the fables that had been passed down, •the knowledge of the national customs, principles and prejudices [see Glossary] that will have composed their rough-hewn morality. Singing, dancing and military exercises they acquired in the society of their friends.

In the era we have now reached, the children of the richer families received a sort of common education—either in towns through conversation with the elderly or in the house of some chief to whom they were assigned. That's how they were instructed in the country's laws, customs and prejudices, and how they learned to sing the poems in which its history had been encapsulated.

A more sedentary mode of life had created more equality between the sexes. The wives were no longer thought of solely as *useful*, as slaves who were more familiar with their master than the other slaves. The man now saw them as companions, and eventually learned how they could increase his happiness. Yet even in countries where wives were treated with most respect—where polygamy was forbidden—neither reason nor justice extended so far as to establish perfect

equality in •the duties and rights relating to divorce or in •the punishment for •marital• infidelity.

The history of this class of prejudices, and of their influence on the fate of the human species, must figure in the picture I'm planning to draw; and nothing will show better how human happiness depends on the advances of reason.

Some nations remained scattered across the countryside. Others pulled themselves together into towns in which lived •the chief of the nation (called by some title meaning 'king'), •the tribal chiefs who shared power with him, and •the elders of each big family. That is where the society's common affairs were decided, and where individual disputes were adjudicated. It's also where the rich brought their most valuable possessions so as to protect them from robbers (who were of course increasing when the wealth from unearned incomes was growing). When the people of a nation remained scattered across their territory, custom determined the time and place where the chiefs would meet to deliberate on the general interests of the community and to adjudicate law-suits.

Nations that recognised a common origin and spoke the same language nearly always entered into a confederacy, agreeing to come together •against foreign enemies or •to avenge wrongs done to any of them, or •to perform in common some religious duty. Such confederacies were more or less close, but didn't go as far as promising not to go to war with each other.

Hospitality and trade produced some lasting ties even between nations with different origins, customs and languages. Such ties were often broken by piracy and war, but were later renewed by necessity, a stronger force than the love of plunder or the thirst for vengeance.

Slaughtering the vanquished, or robbing them of everything and reducing them to slavery, stopped being the only

acknowledged way for victorious nations to behave. The surrender of land, ransoms, tribute, partly replaced those barbaric outrages.

In this era every man who owned weapons was a soldier. The man who

- had the best weapons,
- had made the best use of them,
- could furnish arms for others on condition that they followed him to war, and
- had the wealth to meet their needs

inevitably became a chief; but this almost voluntary obedience didn't involve his followers in a servile dependence.

These rudimentary governments nearly always had a hereditary succession system for their first chiefs or 'kings'; and other subordinate chiefs *grabbed* the prerogative of sharing the political authority among themselves, and exercising such functions of government as those of magistracy. Yet the men under these governments believed themselves to be free! •There were four reasons for this•. •There was seldom any need for new laws. •There were no public expenses that the citizens were forced to help meet; unavoidable expenses were defrayed out of the property of the chiefs or the product of common lands. •No-one had yet had the idea of constraining industry and trade by regulations. •Aggressive wars were decided by general consent, or waged only by those who were allured by the love of glory or desire for plunder.

But often a 'king' surrendered himself to the impulse of personal vengeance, to arbitrary acts of violence; often crimes broke out *within* these privileged families, caused by pride, hereditary hatred, the turmoils of love and greed for gold; while the chiefs who lived in the towns—the instruments of the kings' passions—aroused factions and civil wars there, oppressed the people by wicked judgments, and plagued them by their ambitious and piratical crimes.

In many nations the excesses of these families exhausted the people's patience; they were accordingly crushed, hunted down, or subjected to the common law; in rare cases a family was allowed to keep its *royal title* with the common law setting limits to its *authority*—and that was the establishing of what have since been called 'republics'.

·TYRANNY·

In other cases these kings, *protectively* surrounded by henchmen whose loyalty they bought with weapons and treasures, exercised absolute authority—and that was the origin of tyranny. (In other territories, especially ones where the small nations [see Glossary] didn't come together in towns, those rudimentary institutions kept their early forms until these populations either *fell under the yoke of a conqueror* or, themselves driven by the robber spirit, *became the plundering conquerors of other lands.*)

This tyranny, compressed within too narrow a space, couldn't last long. The people soon threw off a yoke that had been imposed purely by force and that and that even opinion [see Glossary] could not have kept in place. They had such a *close view* of the monster that they felt more horror *at its doings* than fear *of the consequences of resisting it*; and neither force nor public acceptance could forge durable chains unless the tyrant extended his power over a large enough area to be able, by dividing the nation he oppressed, to conceal from it the secret of its power and his weakness!

The history of republics belongs to the fourth era: but the third, which we are now considering, is about to show us something new.

·FEUDALISM·

An agricultural people that is subjected to a foreign power doesn't abandon its homes: necessity obliges it to *continue farming*, and thus to *work for its masters*.

(a) In some cases the ruling nation contents itself with *leaving* the conquered territory after supplying it with captains to govern it and soldiers to *defend it* and (especially) to *keep the inhabitants under control* and to extract a tribute of money or other goods from that submissive and disarmed populace.

(b) In other cases it *occupies* the conquered territory and gives its farms and estates to the soldiers and officers of the conquering army, in return for military service and a *monetary* tribute. The previous cultivators of each estate are required to stay at work on it, this being a new kind of slavery governed by more or less strict laws.

(c) *In a variant on this arrangement* the conquering nation keeps the ownership of the territory to itself, and merely distributes the *benefits of ownership* in the way I have just described.

Nearly always, though, all three of these systems for rewarding the soldiers and robbing the vanquished are in play at the same time.

Hence we see new classes of men come into being: the descendants of the conquering nation, constituting

- an hereditary nobility (not to be confused with the patrician dignity of republics);

and the descendants of the vanquished, dividing into

- a people condemned to labour, dependence and humiliation, but not going as far as slavery, and lastly
- field-slaves, whose servitude is less arbitrary [see Glossary] than that of domestic slaves because they can appeal to the law against the whims of their masters.

Here we see the origin of the feudal system, a curse that has turned up in nearly every part of the globe at a certain stage of civilisation, and always where a single territory was occupied by two peoples between whom military victory has established an hereditary inequality.

·DESPOTISM·

Despotism—to complete the list—was also an upshot of conquest. I'm not talking here about short-term tyrannies; in my usage 'despotism' refers to the oppression of a people by a single man who governs it by opinion [see Glossary], by habit and above all by a military force; each of his military people is totally under his thumb, but ·taking them as a group· he has to respect their prejudices, gratify their whims, and cater to their greed and pride.

Protected by a large hand-picked guard drawn from this armed force, belonging to the conquering nation and thus *foreigners* from the point of view of the populace; surrounded by the most powerful military captains; controlling the provinces through generals commanding inferior detachments of this same army—the despot reigns by terror. And no-one among the beaten people, or among those dispersed and mutually suspicious generals, can conceive of the possibility of opposing the despot with a force that couldn't be swiftly wiped out by the armies at his command.

A mutiny of the bodyguard or an insurrection in the capital may be fatal to the despot but they won't weaken the despotism. The general of a victorious army may destroy a supposedly sacred family, thereby establishing a new dynasty—but only so as to continue the same tyranny.

In this third era, peoples who haven't yet had the misfortune of conquering or of being conquered show the simple hardy virtues of agricultural nations, the *mœurs* [see Glossary] of heroic times, whose mixture of nobility and savagery, of generosity and barbarism, present a picture that draws us in so that we still admire them and even wish they hadn't gone.

On the other side, empires founded by conquerors present us with a picture of all the varieties of vileness and corruption that the human species can be reduced to by despotism and

superstition. There we see spring up •taxes on industry and trade, •fees a man must pay to be allowed to employ his talents as he pleases, •laws restricting him in his choice of work and use of his property, •other laws compelling each child to follow his father's profession, •confiscations, •atrocious tortures—in short, all the acts of arbitrary power, legalised tyranny and superstitious atrocities that a contempt for mankind has been able to invent.

In tribes that didn't have the help of any big revolution, the advances of civilisation can be seen to stop pretty early. Their members were already aware of that *need for new ideas or sensations* which is the fundamental force behind the advances of the human mind, generating both

- the taste for the superfluities of luxury that serves as a spur to industry and
- the curiosity that eagerly tries to pierce the veil that nature has thrown over her secrets.

But almost everywhere men dealt with this need by seeking and frenetically adopting *physical* means for getting sensations that could be continually renewed—for example, habitually using fermented liquors, distilled drinks, opium, tobacco or betel. Nearly every nation has at least one of these habits, which create a pleasure that

- fills whole days or can be repeated at any time,
- prevents the weight of time from being felt,
- satisfies the need for distraction or stimulation and then stifles it, and
- prolongs the infancy and inactivity of the human mind.

These habits, which have been an obstacle to the advances of ignorant or enslaved nations, are still at work in enlightened countries, where they block the truth from spreading a pure and equal light through all ·social· classes.

An account of the state of the arts in the first two eras of

society show how those primitive people were able to go on from the arts of working wood, stone, or the bones of animals, of preparing skins and of making cloth, to the more difficult arts of dyeing, making pottery, and even the beginnings of metal-work.

In isolated nations these arts will have advanced only slowly; but relations amongst these nations, slight as they were, served to speed things up. A new process discovered by one people became common property among its neighbours. Conquest, which has so often destroyed the arts, began by spreading and improving them and then stopped their progress or contributed to their collapse.

We see many of these arts carried to the highest degree of perfection among peoples in whom the long influence of superstition and despotism has completed the degradation of all the human faculties. But if we look at the superb products of this industry—an industry that at each stage involved exaggerated respect for what had gone before—we shan't see anything in them that speaks of genius; all their perfections appear to be the slow painstaking output of tedious routine; we see everywhere, alongside this work that astonishes us, marks of ignorance and stupidity that reveal to us its origin.

·SCIENCES AND PSEUDO-SCIENCE·

In non-nomadic peaceful societies, some improvements were made in astronomy, medicine, the simplest notions of anatomy, the knowledge of plants and minerals—the first elements of the study of the phenomena of nature. Or, really, these branches of knowledge grew through the mere influence of time, which increased the stock of observations and thus led men slowly but surely to an ability to grasp easily—almost intuitively—some of the general consequences those observations led to.

But these advances were very small; and the sciences would have stayed longer in their infant state if certain families, and especially particular **castes** [see Glossary], hadn't based their prestige or their power on them.

To the observation of nature they had already been able to add the observation of man and of societies. Already a few maxims of practical morality and of politics were being passed down the generations: those **castes** seized on them and enlarged their domain by bringing in religious ideas, prejudices and superstitions. They were the heirs to the first associations—the first families—of charlatans and sorcerers; but they needed and used more skill to seduce the more sophisticated minds of their victims. Their real knowledge, the apparent austerity of their lives, and their hypocritical contempt for everything that plain men want gave weight to their magic tricks, while these tricks gave to their slender stock of knowledge and their hypocritical virtues a sacred status in the eyes of the people. The members of these societies or castes pursued at first, with almost equal enthusiasm, two quite different goals: •getting new knowledge for themselves, and •using the knowledge they already had to deceive the people, to dominate their minds.

Their learned men worked mainly on astronomy; and judging by the skimpy records of their labours they seem to have carried astronomy as far as it could go without the help of telescopes or of mathematics more advanced than they had.

The fact is that a long series of observations can lead a man to some knowledge of the motions of the heavenly bodies—knowledge precise enough to enable him to calculate and predict celestial events. These empirical laws—easier to discover the longer the observations have gone on—didn't lead the first astronomers to discover the general laws of the system of the universe; but they served as well as the general

laws would have for every purpose that could concern human needs or curiosity, and they added to the credibility of these *usurpers* of the exclusive right to educate.

It seems that we're indebted to them for the ingenious device of . . . •representing all possible numbers by a few signs and •using very simple technical operations to perform calculations that would have defeated the unaided human intellect. This is the first example of those methods that double the mind's powers, enabling it to push its frontiers out indefinitely.

But they seem not to have extended the science of arithmetic beyond its first operations.

Their geometry, including what they needed for surveying and for the practice of astronomy, got no further than the famous theorem that Pythagoras brought to Greece or re-discovered for himself.

They left the theory of machines to those who were to use them. But some accounts, in which there is a mixture of fable, seem to claim that they developed this branch of the sciences themselves, as one more way of impressing men's minds by their 'miracles'.

The laws of motion, the science of mechanical powers, didn't attract their attention.

Though they studied medicine and surgery, especially for the treatment of wounds, they ignored anatomy.

Their knowledge in botany and natural history was confined to stuff used as remedies, to some plants, and to minerals whose special properties could serve their purposes.

Their chemistry, which came down to simple processes with no theory or method or analysis, consisted in •making certain preparations, •knowing a few secrets involved in medicine or the arts, and •performing certain tricks to dazzle an ignorant multitude whose rulers were as ignorant as they were.

Advances in the sciences were for them nothing but a secondary goal, a mere means of preserving or extending their power. They looked for the truth only so as to spread errors; no wonder they so seldom found it!

But these men couldn't have made even these slow and feeble advances if they hadn't known the art of writing, which is the only way by which knowledge, once it starts to grow, can be fixed, communicated and passed on.

So hieroglyphic writing either •had been discovered before these 'teaching' castes were formed or •was one of the first things that *they* invented.

Because their goal was not to enlighten but to dominate, they not only withheld some of their knowledge from the people but adulterated with errors the parts they were willing to disclose. They taught not what they believed to be true but what it was useful to them to teach.

Everything they gave to the people had an admixture of a something-or-other supernatural, sacred, heavenly, which led to their being regarded as superior to humanity, clothed with a divine character, recipients from heaven itself of knowledge forbidden to other men.

So they had two doctrines—one for themselves, the other for the people. Often indeed they divided themselves into different *orders*, each with its own exclusive mysteries. All the •members of the• lower orders were dupes as well as scoundrels; it was only a few adepts •in the highest order• who had a view of this hypocritical system as a whole.

•USE AND MISUSE OF LANGUAGE•

Nothing was more favourable to the establishment of this double doctrine than the changes in languages that were the work of time, communication, and the mixing of peoples. The double-doctrine men retained the old pre-change language or used a foreign one, thereby getting the advantage of having

a language understood only by themselves.

The first writing represented things by a more or less accurate *picture* of the thing itself or of something analogous to it; but this was replaced by a simpler form of writing in which *resemblance* pretty much dropped out in favour of signs that were purely conventional ·in their meanings·; so the secret doctrine ·of the castes· came to have its own writing, as it had already had its own spoken language.

In the origin of languages almost every word is a metaphor and every sentence an allegory—in the sense of ‘an extended or continued metaphor’. The mind catches the figurative sense and the proper sense, both at once; the word presents, along with the idea, the analogous image by which it has been expressed. But from the habit of using a word in its figurative sense the mind ends up using it *only* in that sense, filtering out the original sense; and in this way what used to be the word’s figurative sense gradually becomes its proper and ordinary sense.

The priests, who were the guardians of the original allegorical language, used it in their dealings with the people, who could no longer grasp its true [*véritable*] meaning. Having become accustomed to using each word with a single meaning which had become its proper [*propre*] one, the people received heaven-knows-what absurd fables from expressions that conveyed to the priests’ minds a plain and simple truth. They used their sacred writing in the same way. Where the priests reported an astronomical phenomenon or an event in recent history, the people saw men, animals, monsters.

Thus, for example, priests almost everywhere invented the metaphysical system of a great, immense, eternal *Whole*, of which •all •other• beings were only parts and •all observable events in the universe were only changes of state. All they got from the heavens were **(a)** groups of stars scattered through the immensity of space, **(b)** planets following more or less

complicated paths, and **(c)**

next phrase: *phénomènes purement physiques*

literally meaning: purely physical phenomena

what he probably meant: events occurring on the earth,

resulting from the positions of these heavenly bodies. As an aid to **(c)** explaining ·earthly· phenomena they gave names to these **(a)** constellations and planets, as well as to **(b)** the fixed or movable circles they had invented to represent their positions and apparent movements.

But their language, their records—which they took to express these metaphysical opinions, these natural truths—exhibited to the eyes of the people the most extravagant system of mythology, and became their basis for the most absurd creeds, the most senseless modes of worship and the most shameful or barbaric practices.

Such is the origin of almost all known religions, which the hypocrisy or the wild-mindedness of their inventors and their disciples afterwards loaded with new fables.

·THE CASE OF ASIA·

These castes took over education, so as to make each man more patiently willing to endure his chains—the chains that constituted his existence, so to speak—keeping him from being able even to *want* to break them. How far can these institutions, even without the aid of superstitious terrors, carry their power to harm the human faculties? Well, look for a moment at China. •The Chinese seem to have preceded all others in the arts and sciences, only to see themselves successively eclipsed by them all. •Their knowledge of artillery hasn’t saved them from being conquered by barbarous nations. •Their numerous schools of the sciences are open to every class of citizens, and are a route to every kind of advancement; but they are fettered by absurd prejudices,

which condemn them to eternal mediocrity. And, finally, •even the invention of printing has remained for the Chinese totally useless in advancing the human mind.

Men who had something to gain from deception were bound to turn against the pursuit of truth. Content with the people's docility, they thought they had no need for any further help to keep them docile. They themselves gradually forgot some of the truths concealed under their allegories; all they preserved of their previous science was the part that was strictly needed to maintain the confidence of their disciples; and •for the rest• they eventually became the dupes of their own fables.

From then onwards all progress in the sciences stopped, and even some of what previous centuries had witnessed was lost to the generations that followed. The human mind, a prey to ignorance and prejudice, was condemned to a shameful stagnation in those vast empires whose uninterrupted existence has dishonoured Asia for so long.

The peoples who inhabit those empires are the only ones we know who have combined this level of civilisation with such decadence. Those in the rest of the globe have been

- merely• *stopped* in their advances, giving us a re-play of the infant days of the human race, or else
- dragged along* by events through the more recent eras that I shall be describing in due course.

In the era we are considering, these same peoples of Asia

had invented alphabetical writing, which they substituted for hieroglyphics, apparently after •an **intermediate** stage in which• they adopted that other type of writing in which each idea has its own conventional sign—this being the only one that the Chinese know even today.

History and reasoning can throw some light on how the gradual transition from hieroglyphics to this **intermediate** sort of writing must have taken place; but nothing can tell us with any precision where or when alphabetical writing was first brought into use.

This discovery was in time introduced into Greece, i.e. to the home of that people

- which has exercised such a powerful and favourable influence on the advances of the human species,
- whose genius opened up for it all the avenues to truth,
- which was prepared by nature and destined by fate to be the benefactor and guide of all nations and all ages.

Up to now no other people has shared in this honour. Since that time only one nation has been able to *hope* to conduct a new revolution in the destiny of mankind. And both nature and the concurrence of events seem to agree in reserving this glory for the nation in question. But let's not try to see into the still uncertain future. [Condorcet is referring here to the French revolution, which is ongoing as he writes.]

Fourth era

Advances of the human mind in Greece up to the division of the sciences about the time of Alexander

The Greeks, disgusted with those kings who called themselves the children of the gods and disgraced humanity by their passions and their crimes, divided themselves into republics. Lacedaemonia—a region of Greece whose capital city was Sparta—was the only one that accepted *hereditary* chiefs; but these chiefs were kept within limits by other branches of government, subjected to the same laws as the citizens, and weakened by the division of royalty between the oldest sons of the two branches of the family of Heraclides.

The inhabitants of Macedonia, Thessaly and Epirus—connected to the Greeks by a common origin and the use of the same language, and governed by monarchs who were weak and divided among themselves—weren't strong enough to oppress Greece but were adequate to protect its northern edge from incursions by the Scythian nations.

To the west: there was nothing to fear from Italy, which was divided into small isolated states; and most of Sicily and the finest ports in the south of Italy were no threats because they were already occupied by Greek colonies; these were independent republics but with familial ties to their mother cities in Greece. Other colonies were established in the islands of the Aegean sea and on one stretch of the coast of Asia Minor. So it turned out that the only real threat to Greece's independence and the freedom of its inhabitants was the union of this part of the Asiatic continent with the vast empire of Cyrus.

Tyranny, though more durable in some colonies (especially ones established before the royal families were wiped

out), could only be considered as a transient and partial evil that made the inhabitants of a few towns miserable but didn't influence the general spirit of the nation.

Greece had acquired from the eastern peoples their arts, some of their knowledge, the use of alphabetic writing and their system of religion; but this happened through contacts between Greece and these peoples brought about by refugees from the East who had sought asylum in Greece and Greek travellers who had brought knowledge and errors from the East.

In Greece, therefore, the sciences couldn't become the occupation and preserve of one particular caste. The role of their priests was confined to the worship of the gods. Genius could deploy all its forces there without having to submit to the pedantic rituals or hypocritical theories of a college of priests. All men had an equal right to know the truth. All could pursue it and communicate it, without deletions, to everyone.

This fortunate circumstance—even more than political freedom—allowed the human mind among the Greeks an independence that was a sure guarantee that its advances would be fast and go far.

But their learned men, their scientists—who soon adopted the more modest title 'philosophers', i.e. friends of science and wisdom—took on a vastly over-sized scheme of exploration and wandered around in it, lost. They aimed to get to the core of man's nature and that of the gods; of the origin of the world and of the human race. They tried to

reduce all nature to a single force and bring the phenomena of the universe under just one law. They tried to find a single rule of conduct that would cover all moral duties and the secret of true happiness.

Thus, instead of discovering truths they constructed **systems**; they neglected the observation of facts and gave themselves over to their imaginations; and being unable to support their opinions with proofs they tried to defend them by subtleties [see Glossary]. (Yet these same men did succeed in geometry and astronomy. Greece owed to them the rudiments of these sciences, and even some new truths, or at least the knowledge of truths they had brought with them from the East—not as established creeds but as theories whose principles and proofs they understood.)

Out of the darkness of those **systems** we even see two really good ideas shine out, ideas that will re-appear in more enlightened centuries.

(1) Democritus saw all the phenomena of the universe as resulting from the combinations and motions of simple bodies whose shapes couldn't be changed. These bodies, he held, were set in motion by a first shove which gave the material world an amount of force that never changes, though there may be changes in how much force is at work in any individual atom. [In that sentence, 'force' translates *action*; perhaps 'motion' would be better.]

(2) Pythagoras proclaimed that the universe was governed by a harmony, the principles of which would be revealed by the properties of numbers; which means that all natural phenomena of nature were subject to general laws that could be calculated.

In these two doctrines we readily perceive **(1)** the bold systems of Descartes and **(2)** the philosophy of Newton.

Pythagoras knew the actual lay-out of the heavenly bodies, and the true system of the world; he either discovered this by

his own meditations or got it from Egyptian or Indian priests; and he told the Greeks about it. But this system conflicted too much with the testimony of the senses—was too much at odds with the opinions of the man in the street—for the weak proofs that were then available to get much hold on the mind. So it was confined to the Pythagorean school, and was forgotten when it was forgotten, to re-appear late in the 16th century supported by better proofs that could then triumph over the clash with the senses and over a still more powerful and dangerous opponent—the prejudices of superstition.

This Pythagorean school was chiefly prevalent in the Greek colonies of coastal Italy, where it produced legislators and brave defenders of human rights; but eventually it was crushed by the tyrants, one of whom burned the Pythagoreans in their own school. It was this, no doubt, that led the survivors not to •renounce philosophy or abandon the cause of the people, but to •drop their now dangerous name and •give up their ceremonies, which would serve only to re-awaken the rage of the enemies of liberty and of reason.

One of the main bases for all good philosophy is •to create for each science a precise and accurate language, where each term represents an idea that is well determined and marked off, and •to become able to determine and mark off the ideas by rigorous analysis.

The Greeks, on the other hand, exploited the defects of ordinary language

- to play on the meanings of words,
- to tangle the mind in miserable ambiguities,
- to lead it astray by making one sign mean different things at different times.

These subtleties *sharpened* men's minds while also *weakening* their ability cope with imaginary difficulties. Thus *verbal* philosophy, by filling the spaces where human reason seems to be blocked by some obstacle above its strength, didn't

immediately help it to move forward; but it prepared the way for later advances. I'll repeat this observation later on when its time comes.

·SOCRATES·

Philosophy's onward march was stopped at the outset by the philosophers' committing an error which was at that time quite excusable. Namely:

- focusing on questions that may never be answerable,
- being seduced by a project's importance or greatness, without considering whether they would have the means to carry it through;
- wanting to establish theories before collecting the facts, constructing a theoretical account of the universe when they didn't yet know how to observe it, even.

So Socrates, battling the sophists and exposing their empty subtleties to ridicule, cried out to the Greeks to *bring back to earth* this philosophy that was lost in the clouds. He didn't despise astronomy or geometry or the observation of natural phenomena; nor did he accept the childish and false idea of confining the human mind to the study of morality alone. On the contrary, the mathematical and physical sciences were indebted for their advances precisely to his school and his disciples. In plays that tried to make him look ridiculous, the biggest jokes concerned his •cultivating geometry, •studying phenomena in the sky, •making maps and •experimenting with burning-glasses—it's an odd fact that we wouldn't know how far back *they* go if it weren't for staged foolery by Aristophanes!

All Socrates wanted was to warn men to confine themselves to projects that nature has put within their reach; to be sure of every step before trying a new one; to study the space around them before leaping randomly into a space

they don't know.

His death is an important event in the history of the human mind. It is the first crime born of the war between philosophy and superstition.

The burning of the Pythagorean school had already announced the war—as old as the other and just as fierce—between philosophy and the oppressors of mankind. The two wars will continue to be waged as long as there are priests or kings on the earth, and they will loom large in the picture that I am going to draw.

The priests were *not* pleased to see men who, trying to perfect their reason and to get at the first causes of things, recognised all the absurdity of their dogmas, all the bizarreness of their ceremonies, all the fraudulence of their oracles and 'miracles'. They were afraid

- that these philosophers would pass this secret on to the disciples who attended their schools,
- that from them it would pass to all those who, for political or social reasons, had to pay some attention to improving their minds; and thus
- that the priests would soon hold sway only over the most ignorant people, and eventually even they would be undeceived.

Hypocrisy, terrified, rushed to accuse the philosophers of impiety towards the gods, so that they wouldn't have time to teach the people that those gods were the work of their priests! The philosophers thought they could escape persecution by employing—on the model of the priests themselves—a double doctrine, confiding only to a few trusted disciples doctrines that too openly offended vulgar prejudices.

But the priests told the people, regarding the simplest truths of natural philosophy, that they were blasphemies; and Anaxagoras was prosecuted for having dared to say that the sun was larger than the Peloponnese.

Socrates could not escape their punishment. Athens no longer had a Pericles to stand guard over intelligence and virtue. And anyway Socrates was guilty of more than that [i.e. more than merely being intelligent and virtuous]. His hatred for the sophists, and his zealous attempts to bring *wandering* philosophy back to projects where it could be useful, told the priests •that his only project was to find the truth, •that he didn't want to get men to adopt a new system and subject their imagination to his, but to teach them to use their own reason; and of all crimes this is what priestly pride is least able to forgive.

•PLATO•

It was at the foot of Socrates' tomb that Plato gave the lessons he had received from his master.

His enchanting style; his brilliant imagination; the conversational set-pieces, some joking and others gravely majestic; the clever and witty turns of phrase that save the philosophical discussions in his dialogues from being dry; the maxims of a mild and pure morality that he knew how to infuse into them; the skill with which he brings his people into action and keeps each in character—all those beauties that time and the revolutions of opinion haven't been able to tarnish—must have won favour for •the philosophical *dreams* that too often form the foundation of his works and •the abuse of words that his master had so much censured in the sophists but from which he couldn't preserve this first of his disciples.

When we read Plato's dialogues we're astonished at their being the work of a philosopher who placed on the door of his school an inscription forbidding anyone who hadn't studied geometry from entering; and astonished that someone who so boldly parades such empty and frivolous systems was the founder of a sect which for the first time rigorously examined

the foundations of the certainty of human knowledge, and carried rigour so far that they even cast doubt on beliefs that a more enlightened reason would have caused to be respected.

But the contradiction disappears when we consider that Plato never speaks in his own person; that in the dialogues his master Socrates always expresses himself with the modesty of doubt; that the systems exhibited there are attributed to those who were (or whom Plato thought to be) their authors; that thus these dialogues are indeed a school of pyrrhonism [see Glossary]; and that Plato knew how to display in them

the adventurous imagination of a scientist who chooses to combine and dissect splendid hypotheses combined with

the sober self-control of a philosopher who gives free play to his imagination without letting himself be bundled along by it,

the later being possible for him because his reason, armed with a healthy doubt, had the means to defend itself against even the most seductive illusions.

These schools in which the doctrine and especially the principles and method of their founders were perpetuated—though their successors were far from being slavish followers—brought the benefit of uniting in a free brotherhood men engaged in penetrating the secrets of nature. If the master's opinion was too often given a share of the authority that ought to be entirely reason's, and if in that way this institution of loosely inter-connected schools held up the advances of knowledge, still it *also* spread the fame of these schools fast and far at a time when printing was unknown and even manuscripts were rare. Their renown drew pupils from all over Greece, and they—the schools—were the most powerful means planting a liking for philosophy in that

country, and of spreading new truths.

The animosity with which rival schools fought one another led to a spirit of *sect*, and the interest of truth was often sacrificed to the success of some doctrine that each member of the sect took personal pride in. The personal passion for making converts corrupted the nobler passion for enlightening men. But at the same time this rivalry kept minds active in a useful way: the spectacle of these disputes, the sheer *interestingness* of these wars of opinion, awakened a host of men and got them interested in philosophy—men whom the mere love of truth couldn't have drawn away from their business or pleasure or even their laziness!

Because •these schools and sects, which the Greeks had the good sense never to give a role in public affairs, remained perfectly free, and because •anyone who wanted to open another school or found a new sect could do so, there was no reason to fear the enslavement of reason that utterly blocked the progress of the human mind in most other nations.

I shall show what influence the philosophers had on the Greeks' thinking, their *mœurs*, their laws and their governments. This influence must be ascribed largely to •their not having or even wanting ever to have a political role, to •nearly all these sects' having as a rule of conduct to keep away from public affairs, and lastly to •their setting themselves up as different from other men in their lives as well as their opinions.

In depicting these different sects I shall focus less on •their systems than on •the principles of their philosophy; less on •the all-too-common attempt to state precisely the absurd doctrines hidden from us by language that is now almost unintelligible than on •showing what general errors led them down those deceitful paths, and finding their origin in the natural course of the human mind.

I shall be especially careful to display the advances of the applied sciences, and the successive improvements in their methods.

In this era philosophy embraced all the sciences except for medicine, which had already been separated from it. Hippocrates' writings will show us what the state of this science was at that time, as well as of sciences naturally connected with medicine but not yet in existence except through that connection.

The mathematical sciences had been successfully cultivated in the schools of Thales and of Pythagoras. Yet in those schools they didn't get far beyond the limit at which the priestly colleges of the eastern peoples had stopped. But as soon as Plato's school began, the mathematical sciences leaped beyond the barrier that had been imposed by the idea of confining them to what is immediately useful and practical.

This philosopher, Plato, was the first who solved the problem of the duplication of the cube. . . . His early disciples discovered conic sections and determined their main properties, thereby opening up that vast field of investigation in which the human mind can exercise its powers to the end of time without reaching its borders. [The above ellipsis replaces something saying that Plato's solution, though merely mechanical, was ingenious and truly rigorous. It has since been proved that there is no rigorous solution to the problem. See 'Doubling the cube' in Wikipedia.]

The political sciences kept up their advances among the Greeks, and not solely because of philosophy. These small republics, defensively touchy about their independence and their liberty, almost all adopted the plan of entrusting to one man not the power of •making laws but the job of •formulating laws and •presenting them to the people to be examined and passed into law—or not, as the case may be—by *them*.

Thus the people gave a job to the philosopher whose virtues or wisdom had won their trust, but they gave him no authority; legislative power (as we now call it) was exercised by them, alone and unaided. This arrangement was admirably fitted to give the laws of a country the systematic unity needed for them to be sure and easy to apply, and to be long-lasting; but it was too often corrupted by the *fatal* practice of bringing superstition to the aid of political institutions. Also, politics didn't yet have any durable principles that could be relied on to prevent legislators from introducing their prejudices and their passions into these institutions.

They weren't yet capable of aiming to build—on the basis

- of reason,
- of the rights that all men have equally received from nature,
- on the maxims of universal justice

—the structure of a society of equal and free men. All they could envisage as a goal was to establish laws by which the hereditary members of an already existing society might preserve their liberty, live secure from injustice, and have enough *military* force at their disposal to guarantee their independence.

It was supposed that these laws—almost always tied to religion and consecrated by oaths—were to endure for ever; so there was less concern with *giving* a people a secure way of peacefully reforming the laws than with *blocking* any alteration [see Glossary] in the fundamental laws by preventing reforms in the details from altering the system or corrupting its spirit. They tried to form institutions that would cherish and give energy to the love of country (including love of its legislation and even its way of life); and a system of powers guaranteeing that the laws would be applied against the negligence or corruption of magistrates [see Glossary], the

undue influence of powerful citizens, and the restlessness of the multitude.

The rich, who alone were in a position to acquire knowledge, could seize the reins of authority and oppress the poor, forcing them to throw themselves into the arms of a tyrant. The ignorance and fickleness of the populace, and its resentment of powerful citizens, could *push* the state in either of two disastrous directions: **(i)** giving the powerful citizens the desire and the means of establishing an aristocratic despotism; **(ii)** weakening the state so that its ambitious neighbours could take over. Having to steer a course between these two reefs, the Greek legislators resorted to procedures that varied in how satisfactory they were but always showed the skill and wisdom that would characterise the general spirit of the nation from then onwards.

It would be hard to find in modern republics, or even in plans for them drawn up by philosophers, any institution for which the Greek republics hadn't provided the model or given an example. The Amphictyonic league, as well as the confederacies of the Etolians, the Arcadians and the Achaeans, had more or less tightly unified federal constitutions; and *with each of them* there were established a less barbaric law of nations and more liberal rules of trade *than elsewhere*, these different peoples being connected by a common origin, the same language and a similarity of *mœurs*, opinions and religious beliefs.

An intelligent and active people who cared about the public interest couldn't have failed to notice that agriculture, industry and trade were related to the state's laws and constitution, and had an effect on its prosperity, power and freedom. And thus among them we see the first traces of that big useful art now known as 'political economy'.

The mere observation of established governments was all it took for politics to become, quite early, an extensive science.

Thus in the writings even of the philosophers it is a science of facts—an empirical science, so to speak—rather than a true *theory* based on general principles that are drawn from nature and acknowledged by reason. This empirical-science approach is the point of view from which we should regard Aristotle's and Plato's political ideas if we want to understand them correctly and judge them fairly.

Almost all the Greeks' institutions presuppose **(a)** the existence of slavery and **(b)** the possibility of bringing the whole community of citizens together in one public place; and if we're to judge the effects of those institutions rightly, and especially to predict what how they were going to affect large modern nations, we ought never to lose sight of those two important differences between the Greeks and the moderns. But we can't reflect on **(a)** without realising sadly that back then even the most perfect forms of government aimed at the liberty or well-being of, at most, half the human species.

Political arrangements among the Greeks were much concerned with education. It shaped men for their country much more than for themselves or their family. This principle can be accepted only for a small population, where it is more excusable to think there's a national interest separate from the common interest of humanity. It is practicable only in countries where the hardest work in farming and in the arts is done by slaves. This education was restricted almost entirely to bodily exercises, principles of *mœurs* and customs meant to arouse narrow patriotism; the remainder was freely available in the schools of the philosophers or rhetoricians and in the artists' workshops; and this freedom was yet another cause of the Greeks' superiority.

We find in their politics, as in their philosophy, a general principle to which history provides few if any exceptions: they wanted their laws not so much to eliminate the *causes* of an evil as to destroy its *effects* by playing these causes

off against one another. They tried to take advantage of prejudices and vices, rather than dispelling or repressing them; they attended more often to ways of depriving man of his true nature, puffing him up and twisting his feelings, than to ways of refining and purifying the inclinations and desires that are the necessary result of his moral constitution. This whole wrong approach arose from the more general **error** of mistaking the man who reflects the actual state of civilisation—i.e. the man corrupted by prejudices, factional passions and social habits—for the man of nature.

What makes this an important matter, and requires us to track down the origin of this **error** so as to destroy it, is the fact that it has been passed down to our own times and still too often spoils both our morals and our politics.

If we compare the eastern nations with Greece in respect of their legislation, and especially the form and rules of their judicial procedures, we shall find that

- on one side the laws are a yoke whose force bowed the necks of slaves; on the other they are the conditions of a common compact among men;
- on one side the aim of legal forms is to ensure that the master's will is carried out; on the other, that the freedom of the citizens is not oppressed;
- on one side the law is made for those who impose it; on the other, for those who are to submit to it;
- on one side people are forced to fear the law; on the other they are taught to value it.

We find these differences again in modern nations, between the laws of enslaved peoples and the laws of free ones. In ancient Greece we shall find that man had at least a sense of his rights, even if he didn't yet know them—couldn't fathom their nature, embrace them, or grasp their full extent.

At this time of the first dim dawn of philosophy among the Greeks and their first steps in the sciences, their fine arts

were raised to a level of perfection never before known by any people and equalled by scarcely any since then. Homer lived through the time of the dissensions that accompanied the fall of the tyrants and the formation of republics. Sophocles, Euripides, Pindar, Thucydides, Demosthenes, Phidias and Apelles were all contemporaries of Socrates or of Plato.

I shall display the progress of those arts and discuss its causes; I shall distinguish what can count as a perfection of the art itself from what is to be ascribed only to the wonderful talent of the artist—a distinction that abolishes the narrow limits to which the perfecting of the fine arts has been restricted. I'll show how forms of government, systems of legislation and the spirit of religious observances have influenced the advances of the arts; I shall explore what they

owe to advances in philosophy, and what philosophy owes to them.

I shall show how liberty, arts and enlightenment helped to make *mœurs* smoother and gentler; I shall reveal that the vices of the Greeks, so often ascribed to the advances of their civilisation, were vices of rougher and cruder ages; and that enlightenment and the culture of the arts tempered them when they couldn't outright destroy them. I'll prove that the eloquent denunciations of the arts and sciences that some have made are based on a mistaken application of history, and that on the contrary the advances of virtue have always gone hand in hand with advances in knowledge, just as advances in corruption have always followed or heralded the decline of virtue.

Fifth era

Advances of the sciences from their division to their decline

Plato was still living when his disciple Aristotle opened a rival school right there in Athens.

He not only embraced all the sciences in his teaching but also applied the philosophical method to rhetoric and poetry. He had the bold thought—before anyone else did—that this method should be applied to everything that human intelligence can achieve, because this intelligence, always using the same faculties, must always to be governed by the same laws.

The larger his educational plan became, the more aware he was of the need to separate its different parts and to be precise in fixing the limits of each. From this era onwards the majority of philosophers, and even of whole sects, confined themselves to only some of those parts.

The mathematical and physical sciences constituted one large division. They were based on calculation and observation, and what they could teach has nothing to do with the opinions the sects were fighting over; so they were separated from philosophy, which these sects still dominated. So they became the study of scientists, nearly all of whom had the good sense to keep away from the disputes of the schools. Those disputes—where *reputation* was always at stake—did more for the transient fame of philosophers than for advances of philosophy itself. Before long the word 'philosophy' was reduced to referring only to the general principles of the system of the world, metaphysics, logic, and morals (including the science of politics).

Fortunately, this division of the mathematical and physical sciences from the rest occurred before the time when Greece, after long struggles, was deprived of its freedom. Those sciences took refuge in the capital of Egypt, whose despotic rulers might have turned away philosophy. Princes who owed much of their riches and power to trade stretching from the Mediterranean to the Asiatic [= Indian?] Ocean naturally encouraged sciences useful to navigation and commerce.

So these sciences escaped the speedy decline that philosophy soon underwent, its renown vanishing when liberty vanished. Roman despotism, so indifferent to advances in knowledge, didn't extend to Egypt till much later when the city of Alexandria had become necessary to Rome's survival. Already the capital city of the sciences and the centre of trade, Alexandria had all it needed to preserve their sacred flame, enabled to do this by

- its population,
- its wealth,
- the many foreigners who came there, and
- the establishments that the Ptolemies had established and the conquerors never thought of destroying.

The Academic [= Platonic] sect, which had cultivated mathematics from its outset and had confined its philosophical instruction almost entirely to proving the value of doubt and showing the narrow limits of certainty, was bound to be the sect of scientists; and this doctrine about doubt and certainty couldn't alarm the despots, so it became dominant in the school of Alexandria.

The previously narrow scope of geometry was extended by the theory of conic sections, and its uses in constructing geometrical loci and solving problems, and by the discovery of some other curves.

•ARCHIMEDES•

Archimedes discovered the quadrature of the parabola [look it up in Wikipedia] and measured the surface of the sphere. These were the first steps in the theory of *limits* that determines the ultimate value of a quantity, i.e. the value which—in an infinite progression—it always approaches but never reaches. This science shows how to determine the ratios of vanishingly small quantities, and to get from those the ratios of finite quantities [= 'quantities that are more than infinitesimal']; it is, in short, the calculus that the moderns, with more pride than justice, have termed 'the infinitesimal calculus' and attributed to Newton and Leibniz. It was Archimedes who first determined the approximate ratio of the diameter of a circle to its circumference, showed how we can get approximations that are closer and closer, and made known the *method of approximation*—that wonderful addition to the small stock of known methods and often an enrichment of the science itself.

We could in a way regard him as the father of rational mechanics. We owe the theory of the lever to him, as well as the discovery of the principle of hydrostatics that a body immersed in liquid loses a portion of its weight equal to the weight of the fluid it has displaced.

His talents in the science of mechanics—which scientists had neglected because not enough of the relevant theory was known for it to be managed—are shown by the screw that bears his name, his burning glasses, and the wonders he worked in the siege of Syracuse. These great discoveries, these new sciences, make Archimedes one of those happy geniuses whose life forms an era in human history, and whose existence appears as one of nature's gifts. [Syracuse was Archimedes' home. When he was in his 70s Rome destroyed Syracuse after a long and costly siege, made hard for them partly by ingenious defensive devices he had invented.]

It is in the school of Alexandria that we find the first traces of **algebra**, i.e. of the calculation of quantities considered simply as such. The nature of the problems proposed and resolved in Diophantus's book required numbers to be considered as having a general indeterminate value, and subject only to certain conditions. But this science didn't have then, as it does today, its own special signs, methods and technical operations. The general value of quantities was indicated by words; and it was only through a series of reasonings—not through calculations—that the solutions of problems were discovered and developed.

Some observations by the Chaldeans, sent back to Aristotle by Alexander, sped up the advances of **astronomy**. The most brilliant upshot of them was due to the genius of Hipparchus. And although, after him in astronomy as after Archimedes in geometry and mechanics, there have been no more of those discoveries and inventions that change the whole face of a science, those sciences did for a long time continue to be improved, expanded, and enriched at least in the details.

In his **natural history of animals**, Aristotle had given the principles and a valuable model for •precisely observing and systematically describing the objects of nature, for •classifying those observations and •grasping the general results they exhibited. The natural histories of plants and of minerals were treated after his time, but less precisely and from a narrower and less philosophical standpoint.

Anatomy progressed very slowly, not only because religious prejudices condemned the dissection of corpses but also because vulgar opinion thought that even touching them was a sort of moral defilement.

Hippocrates' **medicine** was merely a science of observation which hadn't yet been able to generate anything but empirical methods. The spirit of *sect* and the love of

hypotheses soon infected it, making it more than merely empirical. The upshot was more errors than new truths; the •sectarian• prejudices or •hypothetical• systems of the physicians did more harm than their observations could do good; but it can't be denied that during this era medicine made small but real advances.

Aristotle didn't bring to **physics** either the accuracy or the wise caution that characterise his natural history of animals. He paid tribute to the customs of his times and the spirit of the schools by disfiguring his physics with hypothetical principles whose vague generality enables them to explain everything with a sort of ease because they can't explain anything with precision.

Anyway, observation alone was not enough; experiments were needed. These required instruments; and it appears that back then men hadn't collected enough facts and examined them in enough detail to feel the need—indeed to conceive the idea—of this •experimental• mode of questioning nature and forcing it to answer.

Also, the history of the advances of physics in this era is confined to a very few items of knowledge that were acquired by chance, observations made in the practice of the arts, rather than from the researches of the scientists. Hydraulics, and especially optics, yield a somewhat richer harvest, but it consists more of •facts that were noticed because they *presented* themselves than of •theories or physical laws discovered by experiments or reached by thinking.

Agriculture had previously been confined to simple routine and a few regulations that priests had corrupted with their superstition when transmitting them to the people. •In this fifth era• agriculture became, with the Greeks and still more with the Romans, an important and respected art whose usages and precepts were eagerly collected by the most knowledgeable men. When these were precisely

described and judiciously arranged, they could enlighten practical farming and spread useful methods; but the age of experiment and planned observations was still very far off.

The mechanical arts began to be linked with the sciences. Philosophers examined the procedures they involved, researched into their origins, studied their history, and occupied themselves with describing the processes and products of arts as practised in various territories, collecting these observations, and transmitting them to posterity.

Thus Pliny includes •man, •nature and •the arts in the enormous plan of his natural history—a valuable inventory of everything that then constituted the true riches of the human mind; and his claim to our gratitude can't be cancelled by the justified complaint that he collected with too little discrimination and too much credulity everything that the ignorance or lying vanity of historians and travellers fed to his insatiable appetite for knowing everything.

Athens in the days of its power had honoured philosophy and letters; when Greece was declining there was a debt the other way—Athens owed to philosophy and letters the preservation for a while longer of some vestiges of its ancient splendour. Athens was no longer the tribunal at which the destinies of Greece and Asia were decided; but it was in the Athenian schools that the Romans learned the secrets of eloquence; and it was at the base of Demosthenes' lamp that the first of their orators was formed.

The Academy, the Lyceum, the Portico (in Athens) where the Stoics taught, and the gardens of Epicurus were the nursery and principal school of the four sects that disputed the domain of philosophy.

•THE ACADEMY (following Plato)•

In the Academy they taught that nothing is certain; that man can't attain absolute certainty about any topic, or even

complete understanding of it; and they took this out to the extreme, maintaining that man couldn't be sure even of this impossibility of knowing anything, and that even the necessity of doubting everything should be doubted.

The opinions of other philosophers were expounded, defended and attacked in this school, but merely as hypotheses to provide mental exercise and—through the uncertainty that accompanied these disputes—to intensify the students' sense of the futility of human 'knowledge' and the absurdity of the other sects' dogmatic confidence.

This doctrine, when it leads to

- not reasoning on words to which we can't assign clear and precise ideas,
- keeping our acceptance of propositions in line with their probabilities, and
- settling the scope of the certainty we can have with each species of knowledge,

is something that reason itself proclaims. But when it extends to demonstrated truths, and attacks the principles of morality, it becomes either stupidity or insanity; and that is the extreme that the sophists went to—the ones who came after Plato's first disciples in the Academy.

I shall follow the steps of these sceptics and exhibit the cause of their errors. I'll search for the element of their extravagant doctrine that is due to the passion for distinguishing oneself by bizarre opinions; and I'll show that although they were flatly opposed by other men's instincts and by the instincts that the sceptics themselves steered by in their daily lives, they weren't properly refuted or even properly understood by the philosophers of their time.

But this extravagant scepticism hadn't possessed the whole sect of academics. The doctrine of an eternal idea of what is just, fine and honest—an idea that

- is independent of human interests and conventions, and even of human existence, and,
- imprinted on our soul, became our principle of duty and the law of our actions

—this doctrine, derived from Plato’s dialogues, was still inculcated in his school as the basis of moral teaching.

·THE LYCEUM (following Aristotle)·

Aristotle was no better skilled than his masters in the art of analysing ideas, i.e. of working back from a complex idea to the simpler ideas making it up, and of observing the origin of these simple ideas themselves, doing these things in step with the movement of the mind and the development of its faculties. So his metaphysic, like those of the other philosophers, was nothing but a vague doctrine based partly on the misuse of words and partly on mere guesswork.

Yet it is to him that we owe the important truth—the first step in the science of the human mind—that our ideas, even such as are most abstract (most purely ‘intellectual’, so to speak) owe their origin to our sensations. But he provided no support for this. It was •the intuitive perception of a man of genius rather than •the upshot of a series of observations accurately analysed and then combined so as to generate a general truth. So this seed, thrown onto barren ground, took more than twenty centuries to produce a harvest.

Aristotle in his logic, having •reduced all demonstrations to a series of arguments in syllogistic form, and then •divided all propositions into four classes, shows us how to recognise among all possible triplets of propositions of these four classes the ones that express conclusively valid syllogisms. In this way we can judge whether an argument is valid solely by knowing what kind of triplet it belongs to; so the art of sound reasoning is somewhat subjected to technical rules.

This ingenious idea has been useless until now; but it may become the first step towards a completion that the art of reasoning and discussion seems still to need.

According to Aristotle, every virtue is placed between two vices, of which one is the lack of it and the other an excess of it. A virtue is, in a way, merely a natural inclination that reason tells us not to resist too strongly or obey too slavishly.

This general principle could have been suggested to him by one of those vague ideas of order and conformity that were so common in philosophy at that time; but he defended it in a less vague and general way by stating it in terms of Greek words for the virtues.

At about the same time two new sects, basing their systems of morality on principles that at least appeared to be contrary, divided thinkers into two camps, extended their influence far beyond their schools, and sped up the collapse of Greek superstition; but unfortunately a gloomier and more dangerous superstition—one more hostile to enlightenment—was soon to take its place.

·THE PORTICO (the Stoics)·

The Stoics held that virtue and happiness consist in the possession of a soul that

- feels neither pleasure nor pain,
- is free from all the passions,
- is superior to every fear and every weakness,
- knows no true good but virtue and no real evil but a guilty conscience.

They believed that a man could raise himself to this level if he strongly and constantly wanted to, and that then— independent of fortune and always master of himself—he’ll be out of the reach both of vice and of misfortune.

A single mind animates the world: it may be the only thing that exists, but if it isn’t then it’s at least present

everywhere. The souls of human beings are emanations of it. The soul of a wise man who hasn't defiled the purity of his origin is re-united with this universal mind at the moment of death. So death would be a blessing for the sage if it weren't for the fact that for him—a follower of nature who is hardened against all the so-called 'evils'—it is even finer to regard death as neither good nor bad.

·THE GARDENS (Epicurus)·

Epicurus equates happiness with the enjoyment of pleasure and freedom from pain. Virtue consists in following one's natural inclinations while knowing how to purify and direct them. The road to both happiness and virtue runs through temperance, which prevents pain and (by preserving our faculties in their full force) secures all the enjoyments that nature provides for us; and through the care

- to guard ourselves against hostile or violent passions that torment and tear the heart that surrenders to their bitterness and fury,
- to cultivate instead the gentle and tender affections,
- to moderate the pleasure that comes from having acted beneficently,
- to keep one's soul pure, so as to avoid the shame and feelings of guilt that punish bad actions, and enjoy the lovely feeling that rewards good ones.

Epicurus saw the universe as merely a collection of atoms whose various combinations acted according to necessary laws. The human soul was itself one of those combinations. The atoms that composed it came together when the body came alive, and scattered at the moment of death, to re-unite with the common mass and enter into new combinations.

Not wanting to shock popular [see Glossary] prejudices too directly, he had admitted gods into his universe; but they were a kind of after-thought—they were indifferent to the

actions of men, had no role in the order of the universe, and were governed like everything else by the general laws of its mechanism.

Hard, proud, mean men hid behind the mask of Stoicism. Voluptuous and corrupt men often glided into the gardens of Epicurus. Some people condemned the principles of the Epicureans, accusing them of regarding the gratification of sensual appetites as the highest good. Others ridiculed the claim of the sage Zeno of Citium, the founder of Stoicism that he wouldn't be less happy, free and independent if he were a slave at the mill or tormented by gout. [The original implies that Zeno *was* a slave at the mill or tormented by gout; but that was presumably a slip.]

The Stoic philosophy that claimed to rise above nature, with a morality that acknowledged no good except virtue, and the Epicurean one that wanted only to obey nature, and with a morality that equated happiness with sensual pleasure—these two led to the same practical consequences, though they started from such opposite principles and were expressed in such contrary languages. This resemblance among the moral precepts of all religious systems and all philosophical sects would be sufficient to prove that the truth of these precepts doesn't depend on religious dogmas or sectarian principles; that the basis of man's duties and the origin of his ideas of justice and virtue must be sought in *his moral constitution*. The Epicureans came closer to this truth than any other sect did; and this may have done more than anything else to earn for them the enmity of hypocrites of all kinds for whom morality is merely a *commodity* that they are fighting for control of.

The fall of the Greek republics brought the fall of the political sciences. After Plato, Aristotle and Xenophon they almost ceased to be included in the system of philosophy.

·ROME·

Now for an event that changed the fate of a considerable part of the world, and influenced the advances of the human mind in ways that are still felt today.

The city of Rome had extended its empire over every nation in which human intelligence had risen above the weakness of its earliest infancy—except India and China.

It gave laws to every country to which the Greeks had taken their language, their sciences and their philosophy. These peoples, held by a chain that their defeat had fastened to the base of the capitol, no longer existed except by the will of Rome and for the passions of the Roman leaders.

My plan for the present work includes depicting accurately the constitution of this dominating city. In it we'll see

- the origin of hereditary patrician rank, and the ingenious means by which it was made stabler and stronger by being made less odious;
- a people
 - accustomed to weapons but never using them in internal quarrels,
 - combining real power with lawful authority, yet
 - scarcely defending itself against a haughty senate that chained it down by superstition while dazzling it with the splendour of its victories;
- a great nation, the plaything of its tyrants and of its defenders, and through four centuries the passive dupe of an absurd but sacrosanct electoral system.

We'll see how this constitution, made for a single city, changed its nature but not its form when it had to be extended to a great empire. This empire could maintain itself only by continual wars, and before long was destroyed by its own armies. Eventually the sovereign people, debased by the habit of being fed at the expense of the public treasury, and corrupted by hand-outs from the senators, *sold to one*

man the illusory ruins of its useless freedom.

The Romans' ambition led them to look to Greece for masters in the art of rhetoric, which in Rome was one of the roads to fortune. The taste for exclusive and refined enjoyments—the need for new pleasures—that springs from wealth and idleness made them look to the arts of the Greeks and even to the conversation of their philosophers. But the sciences and philosophy were plants foreign to the soil of Rome, as were the graphic arts. The greed of the conquerors covered Italy with masterpieces of Greece, taken by violence from the temples and cities of which they had been ornaments, consoling an enslaved people; but they never dared to set up any Roman works alongside them! Cicero, Lucretius and Seneca wrote eloquently on philosophy in their own language, but the philosophy in question was Greek. When Caesar wanted to reform Numa's primitive calendar he had to employ a mathematician from Alexandria.

Rome, long torn by the factions of ambitious generals, busy with new conquests or agitated by civil discords, eventually fell from its **(i)** restless liberty into a **(ii)** stormy military despotism. Where were the calm meditations of philosophy and the sciences to find a place **(i)** among captains who aspired to be tyrants or, a bit later, **(ii)** under despots who feared the truth and hated talents and virtue equally? Anyway, the sciences and philosophy are bound to be neglected in any country where naturally studious folk have open to them an honourable career leading to wealth and dignities—and in Rome the law provided such a career.

When laws are tied to religion, as they are in the east, the right of interpreting them becomes one of the strongest supports of priestly tyranny. In Greece the laws of each city had been part of the code given to the city by its legislator, who had tied them to the spirit of the constitution and the government that he had established. [That sentence could have

read ‘*which* had tied’ and ‘that *it* had established’; nothing in the French requires that the ‘legislator’ was a person rather than a collective of some kind.] They went through few changes. The magistrates often abused them; there were many individual injustices; but the vices of the laws never led in Greece to a regular and coldly calculated system of robbery. In Rome—

- where for a long time the only known authority was the tradition of customs,

- where the judges announced each year what principles they would follow in settling disputes during their time in office,

- where the first written laws were a compilation from the Greek laws, drawn up by a committee—the ‘decemvirs’ [= ‘ten men’]—whose members were more anxious to *preserve* their power than to *honour* it by presenting good legislation,

- where, after that era, laws dictated by the party of the senate alternated rapidly with laws dictated by the party of the people, so that they were incessantly destroyed or confirmed, improved or worsened, by changes in the political situation,

—the laws soon became so numerous, complicated, and obscure. . . .that knowledge of them and research into them became a separate science. [The ellipsis in that sentence replaces *suite nécessaire du changement de la langue* = ‘inevitable result of the change of language’; perhaps referring to the fluidity of languages in general or of Latin in particular, or perhaps to the switch from Greek to Latin.] The senate, profiting from the people’s respect for the old institutions, soon picked up that the privilege of interpreting laws was nearly equivalent to the right to make new ones; and accordingly this body was packed with legal experts. *Their* power outlived that of the senate itself; it grew under the emperors, because the weirder and more uncertain the laws are, the more power the lawyers have.

So jurisprudence is the only new science that we owe to the Romans. I shall trace its history, because it is connected with the history of the advances—and especially of the obstacles to the advances—that the science of legislation has made among the moderns.

I shall show how •respect for the positive [see Glossary] law of the Romans helped to preserve some ideas of the natural law of men, but then went on to prevent these ideas from increasing and spreading; and how •we owe to Roman law a few useful truths and many tyrannical prejudices.

The mildness of the penal laws under the republic is worth our notice. They had, in a way, made the blood of a Roman citizen sacrosanct. He couldn’t be sentenced to death except by bringing into play a special power that announced ‘public calamities’ and ‘danger to the country’. The whole body of the people could be brought in to judge between one man and the republic. It had been thought that for a free people this mildness was the only way to prevent political dissensions from degenerating into bloody massacres; the aim had been for the humaneness of the laws to correct the ferocious *mœurs* of a populace that freely spilled the blood of its slaves, even in its entertainments. Accordingly, up to the time of the Gracchi [towards the end of the second century BCE] there was no country where so many violent and frequent disturbances cost so little blood or produced so few crimes.

We don’t now have any work of the Romans about politics. Cicero’s work on the laws was probably just a polished extract from books by Greeks. Social science couldn’t be established and perfected amidst the convulsions of expiring liberty. Under the despotism of the Caesars the study of it would have been seen by the despots as nothing but a conspiracy against their power. The best evidence of how ignorant the Romans were of this science is the following fact. •There was an uninterrupted succession—unique in

all history—from Nerva to Marcus Aurelius of five emperors who all had virtue, talents, knowledge, a love of glory, and zeal for the public welfare; and yet •none of them produced a single institution that would mark the desire to set limits to despotism, prevent revolutions, and cement by new ties the parts of that huge mass, •the Roman Empire•, whose imminent dissolution was everywhere apparent.

The union of so many peoples under one sovereignty, and the spread of the two languages that divided the empire between them and were both known by nearly every educated man—these causes could be expected to contribute jointly to the more equal diffusion of enlightenment over a greater area. Another natural effect would have been to gradually lessen the differences amongst the philosophical sects, and to unite them into one •eclectic• philosophy, •i.e. one• that would select from each sect those of its doctrines as were most in conformity with reason, best confirmed by sober reflection. This was the point to which reason might be expected to bring philosophers when it alone could be heard because time had quietened the passionate clamour of the sects. And we do find already, in Seneca, marks of this philosophy; indeed it was never alien to the sect of the academics, which seemed to become entirely mixed up with it; and the last of Plato's disciples were the founders of eclecticism.

•RELIGIONS•

Almost every religion of the empire had belonged to one of the conquered nations; but they had strong resemblances—a kind of family likeness. In *all* of them:

- no metaphysical doctrines;
- many weird ceremonies whose meaning was unknown to the people and often even to the priests;
- an absurd mythology which the multitude saw as the marvellous history of its gods, while better educated

men suspected it to be an allegory of something more uplifting;

- bloody sacrifices;
- idols representing gods, some of them—consecrated by time—acquiring celestial powers themselves;
- priests devoted to the worship of each divinity, but without coming together to form a political body or even a religious community;
- oracles attached to certain temples and certain statues; and lastly,
- mysteries, which their presiding priests never revealed without imposing an inviolable law of secrecy.

These were the features of resemblance •among the different religions in this era•.

I should add that the priests, arbiters of the religious conscience, never ventured to make claims on the moral conscience; that they directed the conduct of worship but not the actions of private life. They sold oracles and auguries to political powers; they could launch whole peoples into wars, and order them to commit crimes; but they exercised no influence over the government or the laws.

When the different peoples as subjects of a single empire came to be habitually in communication with each other, and advances in knowledge were nearly equal everywhere, educated people soon saw that all these •religious• cults were worshipping just *one* god—that the numerous divinities to which popular adoration was immediately addressed were merely versions of, or ministers [here = 'intermediaries'] of, a single god.

But among the Gauls and in some provinces in the east the Romans had found religions of another kind. There the priests *were* the judges of morality: virtue consisted in obedience to a god of whom they were, they said, the sole interpreters. Their power extended over the whole

man; the temple wasn't properly distinguished from the country; a man's status as a worshipper of Jehovah or *Æsus* outranked his status as a citizen or subject of the empire; and the priests decided which human laws their god allowed men to obey. [You might think that *Æsus* is Jesus, but there is no warrant for that translation; and Condorcet's topic here is religions of Gaul as well as of the east. The present translator is defeated.]

These religions were bound to offend the pride of the masters of the world. That of the Gauls was too powerful for the Romans not to seek its immediate destruction. As for the Jewish one: the nation itself was scattered; but the ·Roman· government's vigilance didn't bother to reach—or else *couldn't* reach—the obscure sects that were secretly formed out of the ruins of the old systems of worship.

One benefit of the spread of Greek philosophy had been to destroy belief in popular divinities in all classes of men who had had more than a bare minimum of education. A vague theism or the pure mechanism of Epicurus was, as early as Cicero's time, the common doctrine of everyone who had cultivated his mind and ·thus· of all those who were directing public affairs. This class of men was necessarily attached to the old religion; but they tried purify it, because the credulity of even the common people had been exhausted by all those gods from different countries. So philosophers constructed systems based on *intermediary spirits*, subjecting themselves to preparatory observances, rites and a religious discipline, to become more worthy of approaching these superior intelligences; and they looked to Plato's dialogues for the foundations of this doctrine.

The people of the conquered nations—the unfortunate ones, men with weak but yearning imaginations—were bound to prefer the priestly religions, because the self-interest of the ruling priests 'inspired' them to preach the doctrine of

- equality in slavery,
- renunciation of worldly goods, and
- rewards in heaven awaiting those who blindly submit, who suffer, who undergo humiliations inflicted by themselves or endured without complaining

—that doctrine so attractive to oppressed humanity! But they needed to refine their crude mythology by metaphysical subtleties, and for these they looked again to Plato. His dialogues were the arsenal that the two opposing parties went to for theological weaponry. Later on we'll see Aristotle obtaining a similar honour, and becoming at once the master of the theologians and the leader of the atheists.

·CHRISTIANITY·

Twenty Egyptian and Jewish sects combined against the religion of the empire, but fought each other with equal fury and were eventually absorbed into the religion of Jesus. From their ruins were composed a history, a creed, rituals and a system of morality, to which the mass of these 'inspired' folk gradually attached themselves.

They all believed in a Christ [see Glossary], a Messiah, sent from God to restore the human race. This was the fundamental dogma of every sect that tried to raise itself on the ruins of the previous ones. They didn't agree about when and where he would appear or about his earthly name; but the name of a prophet who was said to have appeared in Palestine during the reign of Tiberius eclipsed all the other candidates for the role of Messiah—and the new fanatics rallied under the standard of the son of Mary.

The more the empire weakened, the faster this christian religion advanced. The degraded state of the former conquerors of the world spread to their gods, who had presided over the Romans' victories and were now merely the impotent witnesses of their defeats. The spirit of the new sect was

better suited to a time of decline and misery than to any other. Its leaders, in spite of their impostures and their vices, were genuine fanatics who were ready to die for their doctrine. The religious zeal of the philosophers and of the great men was a merely political devotion; and any religion that men permit themselves to defend as 'a creed that it's useful to leave to the people' can't look forward to anything but more or less prolonged death-throes. Christianity soon became a powerful party; it mixed in with the quarrels of the Caesars; it put Constantine on the throne, and then put itself there alongside his weak successors.

The emperor Julian, one of those extraordinary men whom chance sometimes exalts to sovereign power, tried to free the empire from this christian plague that was sure to hasten its fall; but in vain. His virtues, his indulgent humanity, the simplicity of his *mœurs*, the elevatedness of his soul and his character, his talents, his courage, his military genius, the splendour of his victories—all this seemed to promise him success. (The only reproach he was open to was his attachment to a religion—the ancient Greek religion—which had become ridiculous. If this attachment was sincere it was unworthy of him, and if it was merely political its bizarreness made it clumsy.) But he died at the height of his glory, after a reign of two years. The colossus of the Roman empire no longer had arms strong enough to hold it up; and Julian's death broke the only dyke that could still have held against the torrent of new superstitions and the floods of barbarians.

THE SCIENCES

Contempt for the human sciences was one of the first features of christianity. It had to avenge itself for philosophy's outrages; it feared that spirit of investigation and doubt, that confidence in one's own reason, which is the scourge of all

religious creeds. Even knowledge of the natural sciences was odious to it, because those sciences are dangerous to the success of miracles; and there's no religion that doesn't require its devotees to swallow some physical absurdities. So christianity's triumph signalled the total downfall of the sciences and of philosophy.

If the art of printing had been known, the sciences could have held their ground; but there were few manuscripts of any one book; and to procure anything like a complete scientific library required trouble, often journeys, and expense that only the rich could afford. It was easy for the ruling party to make *disappear* any books that collided with its prejudices or unmasked its impostures. A barbarian invasion could in a single day deprive a whole country, for ever, of the means of learning. The destruction of a single manuscript was often an irreparable loss for an entire region. Besides, only works by known authors were copied. All those investigations that can be important only when they are assembled, those isolated observations and fillings-in of details that serve to keep the sciences from slipping back and prepare their future advances, those materials that time amasses and that await a genius to make something of them—all these were condemned to stay in the dark for ever. The working-together of scientists, the combination of all their forces that is so advantageous—indispensable, indeed, in certain eras—didn't exist. Any discovery required one individual to start it and carry it through, fighting unaided nature's obstacles to our efforts. Works that

- facilitate the study of the sciences,
- clarify their difficulties, and
- present
 - their truths in simpler and more manageable forms,
 - details of observations, and

- developments that show up errors in results, enabling the reader to grasp what the author himself had missed

—such works, if they had existed back then, would have found neither copyists nor readers.

So it was impossible for the sciences—which had already reached an extent that made it hard to advance them or even to study them thoroughly—to support themselves and resist the slope that was leading them swiftly to their decline. It is no surprise, then, that christianity was able at this time to accomplish their ruin, whereas later on, after the invention of printing, it hadn't the strength to prevent them from re-appearing in splendour.

·LANGUAGE AND LITERATURE·

The Greeks' language and literature retained their splendour for a long time. (I except from this •the dramatic art, which flourished only in Athens and inevitably fell when Athens fell, and •eloquence, which can breathe only in a free air.) ·The Greek writers· Lucian and Plutarch would not have disfigured the age of Alexander ·four centuries earlier·. Rome, it is true, rose to Greece's level in poetry, eloquence, history, and the art of treating the dry topics of philosophy and the sciences with dignity, elegance and charm. Greece itself had no poet who made the reader think 'perfection!' as fully as Virgil did, and had no historian to equal Tacitus. But this moment of splendour ·for the Latin language· was quickly followed by decline. After Lucian the Roman writers were all close to being barbarous. Chrysostom still speaks the language of Demosthenes. We don't see Cicero's or Livy's language in Augustine, or even in Jerome, who couldn't excuse himself with the plea—which Augustine might have used—of the influence of African barbarity.

The point is that in Rome the study of letters and love of

the arts were never the real taste of the people; the transient perfection of its language was the work not of the national genius but of a few men who had been shaped by Greece. Roman territory was always a foreign soil for literature; intense cultivation had been able to make the literary arts grow there, but they were bound to wither as soon as they were left to themselves.

The importance that Greece and Rome for so long attached to the tribune and the bar—i.e. to judging and legal pleading—increased their numbers of orators. Their labours contributed to the progress of the art ·of rhetoric·, developing its principles and its subtleties. But they taught another art that the moderns have too much neglected, and which these days would have to be carried over from spoken works to printed ones. I mean the art of

- composing, quickly and easily, speeches in which the layout of the parts, the over-all method, and the ornaments are all at least tolerable; of

- being able to speak almost impromptu without wearying the hearers by putting one's ideas in a jumble or being long-winded; without disgusting them by wild declamations, gross nonsense or weird changes of tone or content.

In any country where the functions of office, public duty, or private interest may require a man to speak or write without having time to think about his speech or composition, how useful this art would be! The history of this art deserves our attention all the more because the moderns, who often really *need* it, seem to have been aware only of its comic aspects.

From the start of this fifth era (which I have nearly finished with), there were growing numbers of books; but the passage of time had spread so many obscurities over the works of the chief Greek writers that *erudition*—the study of books and opinions—came to constitute an important

intellectual occupation; and the library at Alexandria was full of grammarians and textual critics.

In what has come down to us of their output, we see in these critics a tendency

- to proportion their level of confidence in, or admiration of, a book to its antiquity, how hard it is to understand, and how hard it is to find a copy;
- to judge opinions not on their merits but on the strength of who first came up with them; and
- to base their belief on authority rather than on reason;

and we also see in them

- the false and destructive idea of the deterioration of the human race and the superiority of ancient times.

This last error, of which learned men always everywhere have been more or less guilty, can be explained by—and excused by—the importance men give to whatever they have focused on and put energy into.

The Greek and Roman scholars, and even their scientists and philosophers, can be reproached for their total lack of the spirit of *doubt* that submits factual claims and the evidence for them to severe rational scrutiny. In reading their accounts of the history of events or of *mœurs*, of the productions and phenomena of nature, or of the works and methods of the arts, we are astonished to see them calmly reporting the most palpable absurdities, and the most revolting ‘miracles’. They seemed to think they could escape being ridiculed for puerile credulity by starting sentences with ‘They say . . .’ or ‘It is reported . . .’. This indifference to

whether what they were writing was true or not spoiled their study of history and was an obstacle to their making any advances in the knowledge of nature; it is mainly due to the misfortune of their not yet knowing the art of printing. The certainty of our having collected all the authorities for and against a given factual claim, and ease in comparing the different testimonies and learning from the discussions that arise from those differences—these means of ascertaining truth can exist only when a great many books are available, copies of them can be indefinitely multiplied, and there’s no reason to fear giving them too wide a circulation.

Travellers’ tales, descriptions of which there was often only a single copy and which weren’t subjected to public judgment—how could they acquire the *authority* that is ultimately based on the item’s not having been contradicted given that it *could* have been contradicted? So everything was recorded because it was hard to make confident choices about what was worth recording. But we have no right to astonishment at this practice of being equally confident of the most miraculous supposed events and utterly natural events because the ‘authorities’ for both are equal. This error is still taught in our schools as a principle of philosophy, while in the opposite direction an exaggerated incredulity leads us to reject without examination everything that strikes us as unnatural; and the only science that can show us the point where reason directs us to stop between these two extremes has only just begun to exist.