With the close of the fifth century and the breakdown of Athenian hegemony, a chapter in the political history of Greece was ended. During the fourth century the independent city-states lost power and strength and were finally superseded by the Macedonian monarchy and the world empire of Alexander. No less significant were the changes in general outlook which began in the last decades of the preceding age but assumed their full importance only now. These were in some measure both responsible for the political development and intensified by it. The community with its demands and its tasks ceased to be the center of the life of the citizen, who became conscious of himself as a free personality with views and rights of his own. More and more he looked upon the outside world not "through the medium of his city, but directly, as it were, with his own eyes and in its bearing on him individually."

Transformations as far-reaching as these do not come about without bitter dissension in the field of politics as well as in that of theorizing about actual events. There must have been those who lamented the decay of the old order and those who identified

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1 J.B. Bury, A History of Greece, p. 560. Cf. also H. Berve, op. cit., II, p. 76. There is disagreement as to when in the fifth century the political "decline" began; cf. G.C. Field, Plato and His Contemporaries, pp. 107 ff. On the other hand, the time from the fall of Athens to the death of Alexander, roughly speaking the fourth century, is generally recognized to be a distinct historical unit; and it is in this sense that I speak of "the fourth century."
themselves with the new. There must have been both despair and hope. Which of the two reactions was the more characteristic of the time is a question to which modern interpreters have given various answers. Some say that the fourth century was one of discouragement, the effects of which permeated philosophy, literature, and art as well as political and moral reflection. Others, far from admitting a general feeling of failure, find that the "capacity for sustained effort and constructive imagination was little impaired, as the history of Greek art, literature, and science no less than of politics and strategy declares. In fine, the fourth century was not an age of senile decay but of mature and active manhood."

The student of the history of the idea of progress may at first be inclined to side with those for whom disillusionment is the outstanding feature of the period between the fall of Athens and the rise of the kingdoms of the Diadochi, for he cannot fail to be impressed by the fact that during that period the trust in human advance was challenged in an unprecedented manner by some of the new philosophical schools. The teaching of Antisthenes and Aristippus called into question the premises of civilization, the acknowledgment of the value of theoretical and practical knowledge. The Cynic doctrine condemned civilization altogether; and it may reasonably be argued that its criticism is indicative of the general response to the dissolution of inherited forms of social existence and to the political turmoil and vicissitudes which revealed the vanity of all mundane affairs.3


3 Cf. Murray (op. cit., pp. 83 ff.), who in his account does not include Aristippus. I have named him together with Antisthenes, since the philosophies of both, divergent as they are in their evaluation of the good, lead to the same negative attitude to the world in which man lives, a similarity recognized even by the ancient testimony; cf. F. Ueberweg-K. Praechter, op. cit., p. 176; and Zeller, op. cit., II, I, 372 f.; and in general C.J. Classen, "Aristippos," Hermes, LXXXVI (1958), 182 ff. On the other hand, I make a distinction between Antisthenes' doctrine and that of the Cynics because Cynic rigorism is presented clearly for the first time in the teaching of Diogenes, whether he merely transformed the tenets of Antisthenes
It is true that Antisthenes and Aristippus, the followers of Socrates, were not opposed to all learning and education. The former stressed the importance of philosophical training, especially of logic and epistemology (Epictetus, I, 17, 12); and the latter maintained that it is better to be a beggar than to be without mental culture, "for the one needs money, the other needs humanization." (Diogenes Laertius, II, 70.) Yet both thinkers emphasized ethics to the neglect of the other branches of philosophy, and they restricted the scope of objective knowledge and thereby the sphere of scientific inquiry. Moreover, they were concerned primarily with the goodness and happiness of the individual which they identified with his "self-sufficiency" (αὐτάρκεια). Antisthenes demanded a return to the simple, natural life and renunciation of everything that may endanger inner freedom. Aristippus exalted enjoyment but urged acceptance of whatever might happen, whether good or bad, without letting oneself be enslaved by either. Thus detachment was the watchword of the ascetic Antisthenes and of the hedonist Aristippus alike. Both recommended withdrawal from society and its concerns. They permitted man to continue to live in the world of civilization but left him no incentive to work for it or to contribute to its advance, for man to reach his true goal must learn to be indifferent or superior to all things. Progress in understanding, consequently, could mean only increasingly clear recognition of that form of self-contained existence for which man is destined, so that he may reduce the complexity of social activities to proportions that he considers fitting and sufficient for human dignity.  

(Ueberweg-Praechter, op. cit., p. 168) or was the founder of Cynicism (D. R. Dudley, A History of Cynicism [London, 1937], p. 15).

* Cf. e.g., Ueberweg-Praechter, op. cit., pp. 162, 174.

* This evaluation of culture and progress is not explicitly expressed in the preserved fragments, but the evidence seems to imply it. Scanty and inconsistent in details as this evidence is, beginning with the reports of Xenophon (Symposium IV, 34 ff.; Memorab. II, 1.), a contemporary of Aristippus and Antisthenes, it shows that their aim was "Befreiung des Menschen durch die Einsicht, Erhebung desselben über die äußeren Dinge und Schicksale" (Zeller, op. cit., p. 372). Antisthenes achieved this goal by "living with himself" (Diogenes Laertius, VI, 6), that is by renunciation; but Aristippus did so by "living with all things" (Diogenes Laertius, II, 68), that is by making use of them without "being possessed by them" (idem., II, 75); cf. Zeller, ibid., and p. 364. Their criticism of civilization was negative and did not advocate changes of the established institutions. R. Hölstad's contention (op. cit.) that
Thus the doubt expressed in the fifth century that the cultivation of the arts and science had made life happier or man better came to have practical significance. Antisthenes and Aristippus, convinced that the human good whether of soul or of body need not be identical with the good produced by the unchecked process of civilization, restricted the activity of the individual. This attitude of aloofness distinguishes the doctrine of the Socratics from the teaching of their master and gives an entirely different turn even to the views they had in common with him. Socrates too had warned his pupils not to busy themselves too much with the investigation of scientific problems. He wished them to study geometry and astronomy only to the extent that these may be of practical use (Xenophon, Memorab., IV, 7, 2-5); and he restricted physical studies by disapproving any attempt to discover the laws that govern celestial phenomena, since the gods had not chosen to reveal their secret. (Memorab., IV, 7, 6.) His summons to return to ethics, however, did not involve a conflict with civilization, which itself is divinely ordained. On the contrary, Socrates endorsed man's obligations within the community and urged upon him greater responsibility and stricter standards in these pursuits rather than abstention and detachment from practical life.

With the Cynics, the anti-progressive tendencies inherent in the teaching of Antisthenes and Aristippus take an extreme form. Not only does Diogenes deride as useless and unnecessary music, geometry, astronomy, and other studies of this kind (Diogenes Laertius, VI, 73; cf. 104), recommending concentration on ethical practice, scolding the astronomers for neglecting "what is close at hand," and inveighing against the orators because they speak about the good yet fail to do it (Diogenes Laertius, VI, 28); but he finds all civilization a positive impediment to virtue. Human inventiveness and human ability to devise technical improvements have in his

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Antisthenes had a positive political theory is unconvincing; cf. E.L. Minar "Review of R. Høistad . . .," A.J.P., LXXII (1951), 436 f.

6 For Socrates on progress, cf. above, chap. II, p. 55. In the "didactic conversations" too Xenophon gives his recollections of his teacher (E. Edelstein, Xenophontisches und platonisches Bild des Sokrates [Berlin, 1935], pp. 95 and 131 ff.), and what he says in Memorab. IV, 7 may therefore be used to reconstruct the teaching of the "historical Socrates."
opinion been of little benefit to mankind, for they have been misused for the aggrandizement of pleasure rather than devoted to the furtherance of courage and justice. (Dio Chrysostomus, VI, 28 ff.) This verdict of the Cynic, he holds, is not at variance with the foresight of the gods, for they withheld fire from the human race and punished Prometheus for stealing it and, as they would not out of hatred or envy have deprived men of anything beneficial, they must have considered civilization to be the origin of all evil. (Dio Chrysostomus, VI, 25.)

For the Cynic, then, progress was not a god-given task but delusion and self-destruction. Nor could he be satisfied with preaching indifference to what might become harmful, for in fact the harm had already been done and to be virtuous and achieve moral perfection one had to abandon the ways of civilized life. A revaluation of all values was imperative. It was no longer enough to live a simple, natural life without the accretions of false pleasures or merely to free oneself from all involvement. Man must return to his original state before his fall from grace and before the existence of any of his proud inventions. He must imitate the example of the animals, who follow their instincts and are happy and content with what they have by nature. (Theophrastus in Diogenes Laertius, VI, 22.)

Kurt von Fritz ("Quellenuntersuchungen zu Leben und Philosophie des Diogenes von Sinope," Philologus, Suppl. XVIII, Heft 2 [Leipzig, 1926]) has shown that Diogenes Laertius' account of Diogenes is the most authentic one, while that by Dio Chrysostomus is quite unreliable. The interpretation of the story of Prometheus he like others ascribes to Antisthenes (p. 78), for, even though in the fragment surviving from the latter's Heracles Prometheus teaches Heracles that exercise in worldly affairs without knowledge of "the higher things in life" is of no avail, von Fritz supposes that at the end of the conversation the roles were exchanged and that Prometheus was represented to be the destroyer of human life even as he is by Dio Chrysostomus. This is unwarranted, however, because Antisthenes did believe that for the philosopher the things of the spirit are important; cf. above, p. 59. On the other hand, the denigration of Prometheus, the fire-bringer, which is ascribed by Dio Chrysostomus to Diogenes here and also in VIII, 33, where Heracles appears as the teacher of Prometheus, is at least in accord with Diogenes' views, for he decided "to eat raw meat" (Diogenes Laertius, VI, 34), "a raw polyp" (Plutarch, De Esu Carnium I, 6, 995 C-D), in order to denounce the cooking of meat, which is "contrary to nature" and "makes man's soul swell from satiety and surfeit." (Zeller [op. cit., p. 319, note 1] had already compared the passages quoted with Dio Chrysostomus, VI, 25.)

For Diogenes' praise of animals, cf. further Dio Chrysostomus, VI, 26 f. and Dudley, op. cit., p. 32. The Cynic was consistent enough to assume that "the first men" could live without fire, houses, clothes, or any nourishment other than that
No harsher or more far-reaching indictment of progress can be imagined than that pronounced by the Cynic of the fourth century. His very life was a denial of civilization itself, of that seemingly splendid superstructure that mortals have erected above their true needs, desires, and aims. He tried to break the chains by which the individual had come to be shackled in the course of history. While progressivism early in its development had identified the rise of the arts and sciences with man’s liberation from the bondage of an initially savage and animal-like existence, with his increasing humanization, Cynicism championed the superiority of the beasts, the doctrine of animalitarianism in its most outspoken form. While the anti-progressivists of earlier centuries had tended to defend old values against novel ideas and had been wary of the new and untried, Cynicism subverted all cultural values. In the hands of Diogenes it became “the first and most vigorous philosophic revolt of the civilized against civilization.”

How widespread was this disillusionment with culture which for the first time finds expression in deeds as well as in words? It is certain that the circle of Antisthenes, Aristippus, and Diogenes was small; and it cannot be maintained that the feeling of dissatisfaction underlying their censures was a common malaise to which they merely gave exaggerated expression. In the general opinion, no matter how great the political and moral crisis, civilization itself afforded by the earth herself (VI, 28). Consequently, a life according to nature was one stripped of “all the accretions of conventions, tradition, and social existence” (Dudley, op. cit., p. 31); in contrast to Antisthenes he practised “absolute simplicity of living, absolute renunciation of comforts” (ibid., p. 10). Any kind of law or convention he considered to be unnatural (Diogenes Laertius, VI, 72; cf. von Fritz, op. cit., pp. 59 ff.).

9 Lovejoy and Boas, op. cit., p. 118. The question of the nature and degree of the difference between man and animals had, of course, been discussed before Diogenes (ibid., p. 389); but the Cynics were the first to “fuse animalitarianism with primitivism by sometimes substituting animals for primitive men in their depreciation of civilized man” (p. 391). For Democritus, Fr. 198 (Diels-Kranz) see above, chap. II, note 61.

10 Only through Crates, a younger contemporary of Diogenes, does Cynicism seem to have exercised a popular appeal, at least in Athens; and, ascetic though he was, he did not maintain the original rigor of the doctrine. He treated people with kindness, attempted to free them from self-deception, their greatest disease in his opinion, and played the role of a moral counsellor to all; cf. Dudley, op. cit., pp. 42–53. A criticism of culture based on the conception of self-sufficiency is perhaps to be found in a writing of Alexinus. (See Jacoby, Fr. gr. Hist. 70 T 31, and his commentary.)
was not in question. The first evidence of this is provided by the teaching of the three great schools that were contemporaneous with the Cyrenaics and Cynics and were all opposed to cultural primitivism.

Plato, first of all, although he was willing to grant that “the first men” — men at the beginning of a new cycle of history after the destruction wrought by some natural catastrophe — were “more righteous generally” (*Laws* III, 679 E) and also that they were “better” because the simplicity of their life and their ignorance of most things gave them less opportunity to be bad, still maintained that, if the height of villainy can be achieved only in a fully developed civilization, the same thing is true of maturity in virtue. (678 B.) It is consistent with such a view that he could let pass uncensored the remark that the “healthy city” of primitive conditions — healthy because it knows few activities in comparison with the multifarious occupations in the “fevered city” of later times — is “a city of pigs.” (*Rep.* II, 372 D.) The true “Islands of the Blest” (*Rep.* VII, 519 B) is for him the realm of ideas; and references to an earthly paradise or even to the reign of Cronus, occasionally introduced into his dialogues, he used as allegories (*Laws* IV, 713 C–D) or in order to suggest that what he considered to be the best policy could be put into practice (*Critias* 109 B ff.), for by saying that it once had been done in the highly developed Athens of another cycle of history remembered only by the Egyptian priests (*Timaeus* 22 A) he meant to indicate that it should not be beyond men of the present to do the same.11

11 That the “healthy city” does not represent Plato’s “wishful thinking” is shown by P. Friedländer, *Platon II*, 362. As he says, Plato in this passage is concerned neither with historical explanations nor with polemic against other ideals but with the principle that as prefigured in the primitive society virtue could exist only in an imperfect form. Cf. also below, pp. 85 f.

12 After scrutinizing the pertinent passages in the dialogues mentioned, Lovejoy and Bosco (op. cit., pp. 156–164) came to the conclusion that none of them justifies classifying Plato as an adherent of primitivism, though certain sentences taken out of context “could plausibly be construed as giving support to cultural primitivism” (p. 158; cf. also p. 164). I fail to see that even in other passages Plato “gives a summary endorsement to the general thesis of chronological primitivism” (p. 168). Surely, he did not really believe that the gods have children (*Tim.* 40 D) or that there were heroes who were the sons of Poseidon or Zeus (*Republic* III, 391 D); and the sentence, “the men of early times were better than we and nearer to the gods” (*Philebus* 16 C), if not simply a literary reminiscence (*Republic* 391 E), can hardly
Plato's greatest rival, Isocrates, knew no higher praise to give Athens than that she had given civilization to mankind. (Panegyricus, 28–33.) In his many references to the development of culture he never so much as mentions the dream of a Golden Age of the past, and he frequently asserts that human existence in its initial stage was savage and therefore bad. (Antidosis, 254; cf. Busiris, 25; Panegyricus, 48.)

That Aristotle, Plato's greatest pupil, had no patience with any primitivistic beliefs goes without saying. For him, "the earliest known human beings, whether they were 'earth-born' or the survivors of some cataclysm, were in all probability similar to ordinary or even foolish people today. (Indeed that is actually the tale that is told of the 'earth-born' men.) It would therefore be an absurdity to remain constant to their notions" (Politics II, 8, 1269 a 4–8), to the "barbarism," the "utter foolishness" of ancient customs. (1268 b 39 ff.)

As to popular beliefs, the tale mentioned in passing by Aristotle—obviously so well known that it was unnecessary to give the details—cannot have been flattering to the "first men"; and Plato, too, speaks of the "proverbial simplicity" of early mankind. (Laws IV, 679 C.) Herodotus' view of the simplemindedness of archaic centuries had by this time, it seems, become a commonplace applied to the earliest times. This makes it highly unlikely that even Aristotle's "ordinary" or "foolish people" of the day found much to praise in men of primitive times. To gauge their beliefs is extremely difficult because exceedingly few fragments survive from the poeti-
cal works of the period. It is perhaps also true that the poetry of the fourth century was becoming literature to be read and so reflects the temper of the educated rather than of the general populace. Nevertheless, it is significant that such evidence as there is on the whole favors progressivism.

The fact that comedy ridicules Cynics and Cyrenaics has, of course, not much importance, for other philosophers too and notably the Pythagoreans were derided, but, had there not been a fervent pride in Greek civilization, one could not account for the moving words of a barbarian slave who rejects the thought of betraying his master by recalling the benefits of his “savior” and “father”: “Through him, I came to live under Greek laws, I learned to read, I was initiated into the mysteries of the gods.” (Theophrastus, Fr. 1 [Kock].) When the problem of man’s early existence and of the value of culture is discussed at length in one of the tragedies, the answer given is definitely anti-primitivist and has polemic overtones directed against the Cynic contention—perhaps the boldest of all their theses—that according to the law of nature nothing is bad, not even the eating of human flesh.

“First I shall begin to unfold in my poem,” says Moschion, “the original condition of human life. For once there was a time when men lived like beasts, dwelling in mountain-caves and sunless ravines. For there was not yet to be found either a roofed house or a wide city fortified with stone turrets. Nor was the black earth cut with curved ploughs to be a nurse of the ripening corn, nor did the pruning iron care for the exuberant rows of Bacchic vineyards, but the sterile earth lay silent and solitary. The flesh of their fellows was men’s food. And Law was humble, and Brute Force was enthroned with Zeus, and the weak was food for his better. And when Time, the father and nurturer of all things, changed mortal life either by the forethought of Prometheus or through necessity or again through long practice making nature herself their teacher, then were cultivated fruits discovered, the nourishment given by chaste

16 Cf. 58 E (Diels-Kranz), and in general A. Weiher, Philosophen und Philosophenspott in der attischen Komödie (Nördlingen, 1913).

17 Diogenes defended cannibalism in his Republic and in his tragedies; cf. Dudley, op. cit., p. 26. (The authenticity of the early catalogue of Diogenes’ writings containing these works has been proved by K. von Fritz, op. cit., p. 55-57.)
Demeter, and the sweet stream of Bacchus was found. And the earth, until then unsown, was now ploughed by yoked oxen; and cities were turreted and roofed houses were built; and they exchanged their savage life for one that is soft. And Law decreed that the dead be concealed in tombs and that the unburied dead be buried and not left before men’s gaze as a reminder of their impious deeds.” (Stobaeus, Ecl., I, viii, 38 = Fr. 7, p. 633 [Nauck].)

Moschion’s prologue reads like a summary from a textbook on progress. The various agents that may be at work in the rise of civilization—forethought, necessity, long practice—are enumerated; and it is as if one were permitted to choose from among them and as if the choice were not very important, for in the last analysis all these powers are only handmaidens of time, which itself creates things and arranges events by its own devices. Time is, in Bacon’s famous phrase, “the author of authors.” (Novum Organum, I, 84.)

What truly engaged the emotions of the poet, however, is the contrast between the horrors of uncivilized life, from which he recoils, and the blessings of culture, which he treasures. His is the voice of a highly refined society. The thought of men once having eaten “their fellows’ flesh” haunts his imagination; he celebrates the release from such “impious deeds” of primordial centuries through the law, order, and morality established by later generations. And one can sense his indignation at those who dare to attack the most precious achievements of mankind and to speak of a return to the dark ages, which are best forgotten.


19 This comfortable belief, which makes progress almost an automatic outcome of time, is obviously sophistic, though in part reminiscent of the archaic concept of time; cf. above, chap. I, pp. 10 f. and chap. II, p. 46. The specific theories that Moschion had in mind cannot be determined. The tragic poet Chaeremon expressed his trust in progress in a form similar to that of Xenophanes: “There is nothing in this world that men searching for it do not find out in time.” (Fr. 21, p. 788 [Nauck].)

20 The satyr play, following the tragedy in the true Greek manner, is provided by a fragment from a work of the comic poet Athenio. According to him, it was the art of cooking that liberated mankind from cannibalism and it is really the progress in this art that led men to desire to live in communities (Athenaeus, XIV, 660 E—661 D = III, p. 369 [Kock]). The last statement incidentally testifies to the currency of the idea of continuous progress from the original state of barbarism to present civilization. Athenio’s dates are uncertain. He may belong to the beginning of the Hellenistic era (Lovejoy and Boas, op. cit., p. 213).
No wish was expressed to set the clock back in politics either and to revive a way of life that had been customary in the distant past, and this is true despite the fact that the slogan of the “ancestral constitution” played an increasing rôle. Demosthenes praised as “ancestral” the virtues of the fifth century (Olynth., III, 35); and Isocrates, if he did not do the same (On The Peace, 26), imagined an early Athens that was democratic as was in reality the Athens of a much later day. (Areopagiticus; cf. Demosthenes, Adv. Aristocrat., 65-79.)

Even those who wrote the history of Athens, the Atthidographers, were not, as has often been claimed, inspired by a “romantic regret for a transformed past,” as is “suitable for a time conscious of political decline.” They saw the past of Athens as merely a phase in the whole development, and their interests seem to have been concentrated on the present. The “ancestral constitution” was the ideal constitution that each had drawn for himself.

Furthermore, there can hardly have been a widespread belief that a better state of affairs existed among other distant peoples at the ends of the earth, a belief such as that in which the previous century had indulged itself despite its admiration of culture. At any rate, no such belief is expressed in the poetry of the fourth century. Even comedy, realistic as it had become and eager to expose the fancies of the human mind, pillories only the weakness revealed in the petty details of daily life.

A glorification of the Noble Savage can be detected only among historians who obviously used it for a particular purpose. Ephorus, feigning shock because his predeces-

21 Burckhardt (Griechische Kulturgeschichte IV, 195, 337) rightly points out that the idealization of the fifth century began in the fourth. The attitude of Demosthenes and Isocrates is reminiscent of that of Aristophanes, who in fighting the democracy of his time recalled the Athens of Aristides (cf. G. Murray, Aristophanes, p. 56).

22 F. Jacoby, Atthis, p. 112 (cf. 109) and pp. 113 ff., 213 ff.

23 The mention of the Scythians by Antiphanes (Athenaeus VI, 226 C ff. = II, p. 75 [Kock]) might seem to be an exception, and it is treated by Lovejoy and Boas as an ironic reference to these tribes, which in his time began to be regarded as the prototype of the Noble Savage (pp. 289, 324); but, as will soon be seen, this view was at that time still unusual. Moreover, according to Athenaeus Antiphanes held the Scythians to be “the most miserable of men”; and the praise of their wisdom by his character, a fishmonger, is meant to emphasize the misanthropy of this class of people. The Scythians being barbarians, men without culture, the reference to them may be due not to the poet’s wish to deride some idealization of them but simply to the traditional contrast of Greeks and barbarians, which Antiphanes mentions elsewhere. (Athenaeus, IV, 131 e–f = II, p. 81 [Kock].)
sors reported of the Scythians only "their savagery," refers on the authority of Homer and Hesiod to Scythians of another kind and tries "to set them up as an example" for their frugal living and their contempt of money, qualities responsible in turn for their justice, good government, and disdain of war and fighting. To be sure, these Scythians are not altogether ignorant of technical inventions and devices; but, "having everything in common," they are better than the rest of mankind. (Strabo, VII, 3, 9 = Fr. 42 [Jacoby].) Even if Ephorus thought that his description was true to the facts, still he introduced it in order to hold up to his contemporaries a mirror in which they might contemplate their own mistakes. His praise of distant countries, unique even among historians, was written for didactic purposes, as befitted the historian of Isocratean persuasion, criticism of the present rather than genuine belief in the values of primitive life.  

24 The romance or utopia written by Theopompus had the same purpose. A member of the school of Isocrates also, he could find only things to blame in the people whom he had occasion to mention, whether they were highly civilized or men still living in more primitive conditions. Therefore, when he wished to preach the gospel of moral truth, he, like Plato, invented a fable and one more fabulous than any of Plato's. On a continent beyond all known lands and visited only once by the Silenus Marsyas, life is entirely different from life here; it is better and happier. (Aelian, Varia Historia, III, 18 = Fr. 75 [Jacoby].) The story, admittedly fictitious, was invented, Theopompus declares, in order to divert

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24 Ephorus says that he follows Homer and Hesiod in his glorification of the Scythians. (According to Lovejoy and Boas, he "visited" their country [p. 288], but the word thus translated [πορεύσως, p. 327] can in this context mean only "having gone through the whole of Europe up to Scythia in his description." In addition to literary sources, he is supposed to have followed Cynic teaching (cf. Jacoby, Fr. gr. Hist., ad Fr. 42; also K. Trüdinger, Studien zur Geschichte der griechisch-römischen Ethnographie [Basel, 1918], p. 140); but, if this is true, his source can have been only Antisthenes, who found examples of right living among Greeks and barbarians alike (Diogenes Laertius, VI, 2), whereas Diogenes rejected civilization altogether, and the Scythians of Ephorus are not uncultured. Since Ephorus maintains that "the other writers" (i.e., other than Homer and Hesiod) give an unfavorable picture of the Scythians, he is unlikely to have been influenced by any contemporary author and may be justified in asserting that he was the first to introduce the Scythians as an example.
the reader's mind but also as a way of telling not what once was or now is but what ought to be.\textsuperscript{25}

The characteristic note of thought in the fourth century, then, was not one of disillusionment with civilization itself. That human life and civilized life are one and the same and that the arts and crafts and sciences are great achievements of the human race, if not the very greatest, remained the firmly established conviction of the vast majority. Primitivism, the most dangerous enemy of progressivism, was on the wane rather than gaining in favor. It is not true that men, disappointed by the present, took refuge in a past when life had been less unwieldy and therefore less frustrating. They did not assume that mankind had decayed or that the original conditions of existence in a Golden Age had been a surer warrant of happiness.\textsuperscript{26}

This is not very strange, for among the intellectuals, at any rate, the general conviction was that men were living in an age of incomparably great advance in all fields of intellectual endeavor. Aristotle asserted that “now” progress had been made from small beginnings within the shortest time by those concerned with geometry, logic, and the other disciplines such as had been made by no

\textsuperscript{25} Theopompus too is said to have been influenced by “Cynic” philosophy; cf. especially G. Murray, Greek Studies (Oxford, 1946), pp. 149 ff. Antisthenes was, in fact, the only Socratic for whom he had any admiration (Fr. 295 [Jacoby] = Diogenes Laertius, VI, 14); but, whether or not one assumes such an influence on him as a moralist (cf. Trüdinger, op. cit., pp. 140 ff.), Theopompus remains fundamentally an historian of the Isocratean school, as Murray himself admits (op. cit., pp. 151, 156). For the story of the Meropians cf. E. Rohde, Der griechische Roman, pp. 204 ff.

\textsuperscript{26} To be sure, primitivism did not disappear altogether; and there was admiration for other peoples and other cultures, even for those less advanced. Ctesias made India the land of fable \textit{par excellence} and praised the justice of its inhabitants, doing so either for philosophical reasons or simply out of his love of the curious and miraculous; cf. E. Schwartz, \textit{Fünf Vorträge über den griechischen Roman} (2. Auf.; Berlin, 1943), pp. 109 ff. Xenophon mentions the courage and outstanding strength of the Arcadians (\textit{Hellenica} VII, 1, 22 ff.), not a highly civilized people; and Theopompus refers to their social equalitarianism (Fr. 215 [Jacoby] = Athenaeus, IV, 149 d; cf. Lovejoy and Boas, op. cit., pp. 344 ff.). Yet the inference that “the increasing luxury of the fourth century stimulated the development of the idea of ‘natural simplicity’” (T.S. Brown, \textit{Onesicritus}, p. 155, note 37, following Trüdinger, op. cit., p. 137) is justifiable only if, like Trüdinger, one draws on the literature of Stoicism as well as of Epicureanism, movements not of the fourth century but of the beginning of the Hellenistic period, or like Brown on the historical novels and utopias written by the generation flourishing at that time (see below, chap. IV, note 16).
generation before in any of the sciences. (Iamblichus, De Comm. Math. Scientia, 26 = Aristotle, Fr. 53 [Rose]; cf. Fr. 52 [Rose] = Euclid, p. 28, 13 [Friedlein].) He had seen philosophy too make immense progress in a span of only a few years. (Fr. 53 [Rose] = Cicero, Tusc. Disp., III, 28, 69.) Plato had given specific examples of the rapidity of the progress made. In one of his earlier works, he introduced as quite recent what he considered to be the true doctrine concerning the surface of the earth (Phaedo, 108 C); and late in life he asserted that “not long ago” the course of the planets had come to be adequately understood (Laws VII, 821 E) and only “now” had the regularity of the movement of all celestial bodies and the nature of the forces controlling their movements, “before” only suspected, been fully grasped. (Laws XII, 967 A–D.) “Rather belatedly,” he said, a theory of irrational numbers had been framed. (Laws VII, 819 D.)

Other testimony is given in more polemic language and shows that from the height of their own achievement men looked down upon the contributions of their predecessors as a mere beginning. Thus, Aristoxenus protested loudly that before him no one had had anything worthwhile to say about music. (The Harmonics, I, 3, 4,

27 The Aristotelian statements quoted are usually attributed to the Protrepticus, a relatively early dialogue of Aristotle; but see W.G. Rabinowitz, Aristotle’s Protrepticus and the Sources of its Reconstruction (University of California Publications in Classical Philology, XVI [Berkeley, 1957]), 1 ff. For Fr. 52 cf. also W. Jaeger, Aristotles (Berlin, 1923), pp. 97 ff. Assertions to the same effect, less sweeping in scope, but not different in spirit, appear in the Aristotelian treatises, e.g., Meteorol. I, 3, 339 b 7 and 32 (concerning astronomy) and Polit. VII, 11, 1331 a 1 (concerning military science); see also Fr. 246 (Rose): “This is no longer a problem, for the facts have been seen,” and Magna Moralia 1198 a 13: αὐτὸς τὴν πρὸς τὸν ἀληθὲν ἀνακαλέσαι.

28 F. Frank (Plato und die sogenannten Pythagoreer, pp. 23 ff. and p. 59) first emphasized the significance of the Platonic passages as evidence that the discoveries referred to by Plato were recent. Taylor in his translation of the Laws (p. 206, note 1) denies that the novelty of the theory of irrational numbers can be inferred from VII, 819 D; but cf. Frank, op. cit., p. 228. Taylor himself takes Laws XII, 968 D and 969 B to be references to the Academy’s progress in astronomy and legislation (p. 364, note 1). Details concerning the views called novel in Phaedo 108 C and Laws XII, 967 A have been variously interpreted, cf. Frank, op. cit., pp. 184, 193; and, opposing him, H. Chemis, Aristotle’s Criticism of Presocratic Philosophy (Baltimore [Md.], 1935), pp. 395 ff.; it has also been debated whether Plato in Laws VII, 821 E ff., was thinking merely of the regularity of the planetary movements or anticipating the heliocentric theory (cf. the short summary by Taylor, ad loc., p. 210, note 1). A resolution of these various problems seems to be unnecessary here, where the issue is only Plato’s awareness of the progress achieved in his time.
6, 7). Theopompus declared that the writers who formerly held first rank in historiography were far inferior to the authors of his own time and would not be given even second place if they were his contemporaries. History, he added, had made great progress even within his own memory. (Fr. 25 [Jacoby] = Photius, Bibl., 176, p. 120 b 30.) The author of the Ps. Hippocratic treatise On Regimen in Acute Diseases thought worthy of being put into writing “especially that which has not yet been discovered by physicians” (chap. 3). He admitted that his predecessors had dealt adequately with a great many things, but he added mordantly that these were precisely the things that even laymen might describe correctly if they only took the trouble to learn from the sick what ails them. In the truly medical interpretation of the data, that which the physician has to discover for himself and which the patient is unable to tell him, they had overlooked much in practically every field (chap. 1). It had thus far not been customary even to propose the kind of investigation that he was about to undertake, although, unless his new question was answered by physicians, medicine would not differ essentially from divination, where the same sign is interpreted as a good omen by one prophet and as a bad one by another (chap. 3, finis).29

As music, history, and medicine were thought by the workers in these fields to be undergoing revolutionary changes, the same was thought to be true of the fine arts and the art of rhetoric, so dear to the Greeks, by those who cultivated these subjects. According to Pliny (XXXIV, 65) Lysippus, the sculptor who adopted “a procedure new and hitherto not followed” and abandoned the artistic principles of his predecessors, used to say that they had represented the human body in its objective, numerical proportions, while he represented men “as they are seen to be,” thereby arrogating to himself the merit of having for the first time given a lifelike quality

29 The criticism is directed especially against the authors of the Cnidian Sentences, Euryphon and his associates; cf. J. Ilberg, “Die Arzteschule von Knidos,” pp. 4 f. Since they are contemporaries of Hippocrates, the essay can hardly be dated earlier than the first half of the fourth century. It is, I think, the work of a member of the Cnidian school of a younger generation; cf. L. Edelstein, Lepi ápòv und die Sammlung der Hippokratischen Schriften, Problemata, IV (Berlin, 1931), 154 ff.; esp. p. 156, note 2, and below, p. 73, note 33.
and a realistic truth to the work of stone. No less emphatic were the claims made by Isocrates for the originality of his rhetoric. Stating that no one had ever tried to vie in prose with the poetical encomiums on individuals as he attempted to do (Euagoras, 8 ff.), he justified his novel enterprise by asserting that in rhetoric as well as in the other arts and sciences and in fact in everything improvements come about not by abiding by the established tradition but by making revisions and having the courage to change matters whenever they are in a poor way. (Ibid., 7.) For his political speeches, trusting that they would surpass all speeches made by previous orators both in style and in adequacy of subject matter (Panegyricus, 4:9), he expected the reward that should be given to all innovators, for oratory or in his terminology “the philosophy concerned with human discourse” like all arts and crafts can advance only when people cease to admire those who “have made a first start” and learn instead to honor those “who do them in the best way.” (Ibid., 10.)

As to logic and philosophy, Aristotle in speaking of his refutation of Sophistic proofs contended that hitherto the subject had not been treated in part and partially neglected but had not existed at all (183 b 35 ff.). Of the concept of space he asserted that his precursors had not laid anything down or even formulated any problems on the subject. (208 a 34; cf. 209 b 15.) He said that generation and corruption had been dealt with superficially by everybody except Democritus (315 a 34) and that concerning growth no one had said anything that could not be said by anyone (315 b 1); and in discussing winds and waters he remarked in the same spirit that “just as in regard to the rest, so here too we have

30 Though an anecdote, the saying of Lysippus is generally taken to be authentic and used in interpreting his workmanship; cf. e.g., Franz Winter, “Griechische Kunst,” Einleitung in die Altertumswissenschaft, ed. A. Gercke and E. Norden (3. Aufl.; Leipzig, 1922), II, 176. See also G.M.S. Richter, The Sculpture and Sculptors of the Greeks (New Haven [Conn.], 1950), p. 288; below, pp. 77 f.

31 F. Dümmler (Akademika [Giessen, 1889], pp. 58, 272), who emphasized the importance of these two passages, also suggested that Isocrates’ belief in progress is ridiculed in the figure of Hippias in Plato’s Hippias Major. Hippias, however, was himself a defender of what is new; cf. above, chap. II, p. 26, so that, if Plato thought that a representation of Hippias was a jibe at Isocrates, the implication would be that the positions of the two were essentially the same. (Isocrates’ belief in “progress” is referred to in passing by Jaeger, Paidea III, 152.)
not found anything said by a writer that could not have been said by just anybody." (349 a 14 f.) In his work On the Heavens he wrote: “This question, then, has become, as one might expect, a subject of general inquiry. But one may well wonder that the answers suggested are not recognized as being more incomprehensible than the question which they set out to solve.” (294 a 19 ff.)

It is in agreement with such proud self-assertion that writers of the fourth century used the term “the ancients” to include generations not far removed from their own or even the generation of their own youth. Isocrates in referring to the “ancient teachers of wisdom” meant Empedocles, Ion, Alcmaeon, Parmenides, Melissus, and Gorgias, whose “juggling devices” he thought attractive only to fools. (Antidosis, 268 ff.) Theopompus, so sure that the historians of his day were superior to those of old and so certain of his own accomplishments, named Herodotus, Hellanicus, and Ctesias among those whom he surpassed (Fr. 381 = Strabo, I, 2, 35). The physician of whom I have spoken meant by “the ancients” (On Regimen in Acute Diseases, chap. 11) or “elders” (chap. 14) whom he took to task especially the authors of the Cnidian Sentences, that is Euryphon and his associates or, roughly speaking, older contemporaries of Hippocrates.

In Platonic and Aristotelian usage the term in question is quite precise and has a definitely dyslogistic implication. In mentioning “the famous men of old” (Sophist, 243 A) Plato is thinking of

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32 I owe most of these passages to R. Eucken, Die Methode der Aristotelischen Forschung (Berlin, 1872), p. 5, notes 3 and 4. It is interesting to note that twice Aristotle uses the same word as the Hippocratic author does (above, p. 71) to indicate that the knowledge of previous generations was that which anyone, i.e., a layman, could have.

33 Cf. above, note 29. Democritus once speaks of “ancient views” (ἀρχαῖα [ἀρχαῖα]) concerning the sun and moon which he charges Anaxagoras with having plagiarized (Fr. 5 [Diels-Kranz]). Diels (ad loc.) took this to mean that in Democritus’ opinion Anaxagoras had copied Leucippus. W. Kranz (“Empedokles und die Atomistik,” Hermes, XLVII [1912], 41, note 1) denied that Democritus could have applied the word “ancient” to the immediately preceding generation and explained Aristophanes, Knights 507, the parallel quoted by Diels, as a reference to a poet old in years in contrast to the young Aristophanes. The Aristophanes passage perhaps has the sense Kranz attributed to it, for the Knights is one of the poet’s earliest plays; but, since the evidence given in the text shows that in the fourth century the word in question did include the preceding generation and since Democritus lived into the fourth century, Diels’ interpretation may be correct.
Parmenides and his followers and of Empedocles and his associates. They “address us as if we were children,” he says (243 C), “to whom they are telling a story,” and he submits their inspired utterances to a criticism made even sharper by the professions of awe and reverence that he intersperses in it. “The ancients,” as he puts it elsewhere, are the philosophers since Thales, including the “later” Anaxagoras. (Hippias Major 281 C; 283 A.)

For Aristotle they are the philosophers from Thales to Anaxagoras and Democritus—the Pre-Socratics, as they are now called. (Metaphysics I, 1069 a 25; On Generation and Corruption I, 341 a 6; On Parts of Animals 640 b 5 ff.) Their knowledge was only the “stammering” and “vague” expression of the truth (Metaphysics I, 993 b 15), although in some of these early philosophers, notably in Anaxagoras and Democritus, something “newer” or more modern can be detected (Metaphysics I, 989 b 6; On the Heavens 308 b 31); but on the whole their insight is antiquated and out of date.

This general indictment is specified in the emphasis frequently placed upon the ancients’ lack of knowledge. The physician and historian Ctesias, for example, in words that have a familiar ring to

34 Cf. Also Gorgias 518 E—519 A, where “the old statesmen” are Themistocles, Cimon, and Pericles; and Laws XII, 927 B and D, where Anaxagoras is certainly included among the thinkers who “then” divined what is “now” known. There is no reason, therefore, to doubt the authenticity of the Hippias Major on the ground alleged by M. Pohlenz that Plato could not have spoken of Anaxagoras as one of the ancients (Aus Platos Werdezeit [Berlin, 1913], p. 125 and “Review of D. Tarrant, The Hippias Major Attributed to Plato,” Gnomon, VII [1931], 305.) On the other hand, I am not convinced by P. Friedländer (Platon II, 291, note 31) that in this dialogue Anaxagoras is not included among the ancient philosophers, for the έπαθεμα (283 A) with whom Anaxagoras is ranked are surely the ἀφελεῖα, as the sentence immediately preceding shows. Pohlenz’s further contention that Plato could not have attributed a theoretical ideal of life to a Pre-Socratic is hardly reconcilable with the mention of Thales in the famous excursus in the Theaetetus, on which see Friedländer, Platon II, 436 ff.

35 Although the Aristotelian usage of the term “the ancients” is generally recognized, its dyslogistic connotation (see also Problemata 922 b 3 and 918 a 13) is not always remembered. (The exception occasionally made with respect to Anaxagoras and Democritus is emphasized by E. Frank, “Mathematik und Musik und der griechische Geist,” Logos, IX [1920–21], 243; cf. also the expression “the more recent of the ancients,” Physics 155 b 29.) This usage must be distinguished from the enlogistic connotation that the word has when Aristotle treats the knowledge of the ancients as a survival of what was found in earlier highly developed civilizations; cf. Metaphysics XII, 8, 1074 a 38—b 14: Meteorology I, 3, 339 b 20; On the Heavens I, 3, 270 b 16 and 9, 279 a 23; II, 1, 284 a 2 and 284 b 2.
modern ears condemns the shortcomings of medicine before his time: “In the generations of my father and my grandfather no physician prescribed hellebore, for they did not know how to mix a potion of it or the measure and amount in which to give it; and, if a physician ever dared to prescribe a potion of hellebore, he first asked the patient to make his will, since he was facing great danger, and of those who took the potion many were choked to death and only few survived. Now, however, hellebore seems to be a perfectly safe remedy.” (In Oribasius, Collect. Medic. Reliquiae, VII, 8.)

Aristotle has variations on the same theme. “Parmenides did not yet know,” he asserts (Physics I, 3, 186 a 32), or “dialectic was not yet well-known then” (Metaphysics XIII, 4, 1078 b 25); and in the same spirit as that of Galileo and Kepler, who felt sure that they could have convinced Aristotle of his mistakes if they could only have communicated their new discoveries to him, the latter exclaims: “[my predecessors] . . . would perhaps have left off holding their childlike opinions, had they been able to contemplate what mathematical research now has shown conclusively to be true.” (Meteorology I, 3, 339 b 32–34; cf. 339 b 30.)

The fourth century, then, was surely not given to adulation of the past but, if anything, was more self-consciously modern than the fifth. Not only did it carry on the battle between the ancients and the moderns that the fifth century had initiated, but it took a much more aggressive stand. Instead of merely claiming the right to be themselves, men rejected the inherited tradition as obsolete. It had forfeited its right to exist and had been supplanted by the new science. On the whole, such was also the outcome of the Querelle that began in the seventeenth century. One cannot fail to notice, in fact, how much more radical and in a way more modern were the moderns of ancient times than those of the “battle of the books.” The ancients whom the seventeenth and eighteenth centuries were intent on driving from the scene were authors who had lived two thousand years earlier or more; but the criticism of the fourth century B.C. did not spare even the works of those great men of the

fifth century who only recently had wrought a transformation of all intellectual life. Plato's Eleatic, beginning his refutation of his spiritual father Parmenides, fears that he will appear to be a "parricide." (Sophist, 249 D.) It is, indeed, an epithet suitable to all the moderns in the fourth century. 38

Their claim to superiority will seem to be pretentious, of course, to the devotee of the fifth century, for whom that age is the classical century par excellence. Yet with regard to the sciences their attitude was certainly justified, and so it was regarded by ancient historians until their judgment of the past was perverted by classicistic prejudices and all discoveries began to be attributed to a few great individuals who lived at the beginning of the scientific enterprise, while the names of those who came afterwards were condemned to oblivion. In the older accounts of mathematical discoveries not Pythagoras but Theaetetus and Eudoxus, Plato's contemporaries, are given preeminence. The early Alexandrian tradition still ranked Praxagoras and Chrysippus with their predecessor, Hippocrates; and Diocles was "second in fame as well as in time" to Hippocrates. (Pliny XXVI, 10 = Fr. 5 [Wellmann].) 39

One cannot quarrel with this judgment if one considers Theaetetus' theory of irrational numbers, his "invention" of stereometry, Eudoxus' astronomical investigations, or the achievements of the three physicians, which can still be gleaned from the fragments, scanty though they are; and, if one adds the hypothesis of the rotation of the earth on its axis and its revolution around the sun, Aristotle's creation of biology, the mathematical studies of the so-called Pythagoreans, and Euclid's establishment of mathematics

38 I need hardly add that the passages quoted refute Bury's assertion that the people of Plato's age were not "self-consciously modern" (The Idea of Progress, p. 8). They were, if anything, even more conscious of their modernity than were those of the seventeenth century, for which see Lynn Thorndike, "Newness and Novelty in Seventeenth Century Science and Medicine," The Roots of Scientific Thought, ed. P.P. Wiener and A. Noland (New York, 1958), pp. 443 ff.

as a systematic science, the modern verdict too must be that the progress achieved in the fourth century or from the time of Anaxagoras to that of Aristotle was incomparably greater than was that of the period from Anaximander to Anaxagoras and that the work done in the late fifth century only hinted at the beginning of things to come.\textsuperscript{40}

The ancient critics and a strictly historical point of view can help one to understand the pride of the historians, artists, and rhetoricians of the fourth century, also. Ephorus composed the first universal history, which Polybius did not hesitate to praise. (\textit{V}, 33, 2 = T. 7 [Jacoby]; \textit{XII}, 28, 10 = T. 23 [Jacoby].) The replacement of the annalistic scheme by treatment according to subject matter required a more sophisticated technique of narration, and understanding of the individual was immeasurably enhanced by the new genre of historical biography. As Dionysius of Halicarnassus says (\textit{Epistula ad Pompeium}, 6, 7), Theopompus in his analysis of human motives excelled all who had come before him and all who wrote later. His bold appraisal of earlier historians and of his own contemporaries is therefore not without foundation. One can recognize Herodotus and Thucydides as peerless in their insight into the objective forces determining the fate of states and individuals without for that reason decrying as mere oratory or declamation the work of their successors in the fourth century who greatly refined the methods of historiography.\textsuperscript{41}

As for sculpture, when Lysippus contrasted his art of lifelike representation to the older art and claimed to have done what


\textsuperscript{41} Jacoby in his commentary on Ephorus, T 11, has drawn attention to some of the work on historiography done between the time of Thucydides and that of Ephorus (p. 37, 19–23), material often overlooked by modern interpreters. Concerning Theopompus' verdict he says: "Die Polemik gegen die Vorgänger war von ruhiger, von Standpunkt seiner Zeit selbstverständlicher Überlegenheit" (p. 360, 6–9; cf. 360, 3; \textit{Nachweis der befähigung [Prototyp Thuk.], V, 26, 5]). J.B. Bury (\textit{The Ancient Greek Historians} [New York, 1909], pp. 160 ff., esp. p. 165) exaggerates the pernicious influence of rhetoric on history, though naturally he too stresses the "limitations" of Thucydides' work (pp. 146 ff.). The ancient discussion concerning the relative merit of Thucydides and Theopompus is sketched by H. Bloch, \textit{Harvard Studies in Classical Philology}, Suppl. I (1940), 311 ff. For the Peripatetic historical writings and the beginnings of biographical writing cf. below, pp. 94 ff.
earlier artists never did, it is clear from the context in which Pliny quotes the statement (XXXIV, 65) that he spoke as one who had increased the potentialities of his craft by the invention of new means, illusory representation. The wonder at the conquest of illusion—the ability of "sculptors or painters whose works are of colossal size" to reproduce not "the true proportions of a well-made figure" but "those that will appear beautiful"—is echoed in Plato's analysis of the art of the imitator. (Sophist, 235 E ff.) In other words, the fine arts were still preeminently techniques. A technological theory of art being still predominant, art was judged in technological terms. The day had not yet come for assuming that different art-forms represent different ways of seeing the world and that the genius of the artist is decisive for the greatness of his accomplishment, which itself is timeless. In fact, a technological history of art prevailed down to the first century after Christ; and even then the development of sculpture was viewed in the main as a development of techniques, and Lysippus was accordingly assigned his place within it. (Cf. Quintilian, XII, 10, 3–6.) The same is true of the development of painting. The work of the fourth-

42 See Plato, Hippias Major 281 D—282 A, where it is said that today the statues of old are ridiculed. The Ps.-Aristotelian Problemata pass a similar judgment in stating that among the "old painters and sculptors there was no excellent painting or statue anywhere, but many inferior," for, as has been said before, "the full realization is not the first step, but it is hard to achieve," and "the same principle applies to works of nature as to works of art" (X, 45). Incidentally, E.H. Gombrich, who explains the importance of the conception of mimesis for ancient art by the interest in the correct representation of illusion, maintains that progress towards the conquest of illusion was to the ancients what technical progress is to the moderns, "the model of progress as such." (Art and Illusion [New York, 1960], p. 11.) In view of the material on progress referred to in my analysis this would seem to be an exaggeration. (I owe to Charles Singleton my knowledge of Gombrich's view.)

43 For the term "technological theory of art," taken from A. Riegl (Stilfragen [Berlin, 1893]), see E. Rothacker, Logik und Systematik der Geisteswissenschaften (Bonn, 1926), p. 32. There is no need here to discuss the opposite view, according to which the past is to be understood in categories such as classical or romantic. For the "romanticism" of fourth-century art, see e.g., L. Curtius, Die Antike Kunst (Berlin, 1923–39) II, 1, pp. 326 ff. I should, however, observe that B. Schweitzer, emphasizing the fact that the fine arts down to the fourth century were considered as crafts, i.e., as mastery of the technical rules ("Der bildende Künstler und der Begriff des Künstlerischen in der Antike," Neue Heidelberger jahrbücher [1925], pp. 63 ff.) ascribes to Lysippus the rejection of rēxēn as artistic tradition because he is said to have imitated not artists but nature (Pliny, XXXIV, 61). Even if the story is not an invention of Duris, the pupil of Theophrastus, it does not contradict the interpretation that I have given of the other anecdote, which is certainly genuine.
century painter Apelles marks the high point of portraiture after the small beginnings made in that genre in the fifth century. Isocrates' rhetoric was to the ancients an art comparable with poetry. Even Plato and Aristotle paid him the compliment of regarding him as an extraordinary stylist, although they recognized that his new prose, which replaced the prose of Protagoras and Gorgias as a model of writing, was merely the vehicle of his "pragmatism" and that this in the form of rhetorical education was the one kind of intellectual training that competed with their philosophical instruction. Throughout antiquity and in many phases of later European history there was to be rivalry between rhetoric and philosophy, a bitter struggle over the question whether the Isocritean or the Platonic ideal was the better guide to right living; and this not without reason, for Isocrates too believed in reforming human nature by training in the art of words that transcends the boundaries of nationality as do philosophical and scientific training and maintained that participation in Greek culture made everyone, even barbarians, Greek. (Panath., 26.)

In fields where the practitioners do not themselves testify to their feeling of superiority there is at least evidence of the opinion that their contemporaries had of these innovators. At the hands of Philoxenus the dithyramb underwent changes similar to those that Timotheus had introduced into cithara-playing, and Antiphanes considered this to be the "true music." (Athenaeus, XIV, 613 c–f = II, p. 102 [Kock].) In general, the chromatic mode was now

44 Polygnotus and Aglaophon were the first painters whose works deserve to be looked at "not merely for the sake of antiquity"; Zeuxis and Parrhasius added a great deal (the former invented the art of light and shade, and the latter improved the art of delineation); and in the age of Philip painting reached its climax (Quintilian, XII, 10, 3–6). Apelles' "inventions" helped all other artists (97; cf. 79). Through the doors opened by Apollodorus Zeuxis entered into the sanctuary of art (Pliny, XXXV, 60 ff.). In these late authors the conception of the fine arts as techniques is already combined with other criteria of historical development, for example that the fourth century was the climax of ancient art. (The Mausoleum, the tomb erected for Mausolus who died in 351 B.C., was in their opinion "among the Seven Wonders" [Pliny, XXXVI, 30].)

45 For the conflict between rhetoric and philosophy see H. von Arnim, Leben und Werke des Dion von Prusa (Berlin, 1898), pp. 4 ff.; and for Isocrates see W. Jaeger (Paideia III, 46 ff.), who stresses the difference between his teaching and that of the sophists and his claim to being considered the forerunner of the humanistic movement.
preferred to the enharmonic one. The "sweet" music so-called, which originated with Agathon and in its passionate pathos and sensual charm was parallel to the style of Praxiteles and Scopas, provoked Plato's violent censure (Rep. 396 B), though even he had to admit that the musicians of his time were gifted. (Laws III, 700 D.)

The drama developed new forms, not displeasing at least to Aristotle. (Poetics VI, 1450 a 25 f. and Rhetoric III, 12, 1413 b 12 f.) Comedy of the fourth century, in the opinion of later critics, was far superior to that of the fifth, which they denounced as indecent as well as aesthetically imperfect. The middle comedy renounced the foul language of "obscenity" (Aristotle, Eth. Nic. IV, 14, 1128 a 22 ff.); and there is no reason to doubt that the public thought this an improvement, as did Isocrates (Ad Nicoclem II, 44 ff.; On the Peace 14), Plato (Laws XI, 935 E–936 A), and Aristotle. (Politics VII, 17, 1336 b 3–5 ff.)

That Plato and Aristotle, the idols of many ages, did not sway their own age is clear from the contemporary criticism still extant. It also follows from the fact that most of their students thought themselves able to devise new systems superior to those of their scholarch. Still, although for them as "modern thinkers" philosophy "became mathematics" (Aristotle, Metaphysics I, 9, 982 a 32 ff.), they took their start from the advances made by Plato and Aristotle; and so they cannot have accorded the Pre-Socratics the admiration that in recent times it has become customary to pay them but must have thought of them instead as their teachers had done. The reason for this is not far to seek. Whether materialism or idealism provides the true answer to the philosophical riddle, the Platonic and Aristotelian systems obviously integrated the novel scientific knowledge and were more in accord with the data of experience then available and with mathematical research as it had been developed than were the pictures of the world drawn by Anaximander or by Anaxagoras or even by Democritus, all of which

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46 For the development of music, cf. Frank, Plato und die sogenannten Pythagoreer, pp. 6–10.

47 The later criticism of the old comedy is preserved in Plutarch's Comparison of Aristophanes and Menander and in Aristides' Oration XIX. For an interpretation of its aesthetic principles, cf. Schmid–Stahlin, op. cit., I, 4, 447 ff., and for the general character of the Middle Comedy ibid., pp. 445 ff.
must have looked naive compared with those of Plato and of Aristotle. Moreover, Platonic and Aristotelian philosophy is imbued with a power of abstract reasoning and logic unknown to the Pre-Socratics. The interpreter who tries to understand early Greek speculation in categories suited to the time of its origin and not borrowed from Plato or Aristotle can hardly contradict the latter's verdict that the chief cause for the difficulties encountered by his predecessors in discussing philosophical issues was "their putting the matter in an archaic manner." (Metaphysics XIV, 2, 1089 a 1–2; cf. XIV, 6, 1093 a 26–28.)

So much for the intellectuals and their progressivism, but to understand the attitude of the fourth century it is important to recognize also that, whatever the decline in the political power of the city-states, archaism was overcome in daily life too by a rationalization and control of the environment hitherto unknown. The number of large factories and industries increased; division of labor was intensified; a banking system was developed; export and import trade was greatly expanded with improvement of shipping facilities and technical devices that made seafaring at all times of the year more secure than it had ever been. In short, the economy was refined and modernized. Reforms of the tax system and of military training made the administration of public affairs more effective. Most important, governmental offices began to be entrusted to specialists, and it was no longer considered feasible for every citizen regardless of training to be entrusted with any and every state function. The professional military leader of an army of citizens or of a standing army of professional soldiers, the financial expert, and the diplomatist made their appearance.

48 It is the merit of E. Frank to have stressed the "modernity" of Plato's and Aristotle's picture of the world and to have explained it by the influence exercised by scientific mathematics on philosophical thought, Logos, IX (1920–21), 243 f.

49 One example of the progress in logical analysis is Plato's recognition of the immaterial substantiality of qualities; cf. H. Cherniss, Aristotle's Criticism of Pre-Socratic Philosophy, pp. 369 f. In general see W.A. Heidel, "The Logic of the Pre-Socratic Philosophy," in Studies in Logical Theory, Decennial Publications of the University of Chicago, (2d. series; Chicago, 1903), XI, 203–226; also Ernst Hoffmann, "Die Sprache und die archaische Logik," Heidelberger Abhandlungen zur Philosophie und ihrer Geschichte, III (1925), an analysis of Pre-Socratic logic from the point of view of its archaism.

By accident the evidence preserved most clearly illustrates the trend toward modernization and its effects in matters of warfare. New weapons and new artillery had made obsolete the old method of conquering cities. Instead of laying siege to a stronghold one could now take it by storm. Archidamus, the King of Sparta, confronted by the Sicilian catapults, is said to have exclaimed: “By Heracles, human courage has gone.” (Plutarch, *Moralia* 191 D and 219 A.)

The invention and improvement of such instruments was not haphazard either. When Dionysius of Sicily prepared for the war with Carthage, he summoned specialists from all over Greece to construct new machines for him and to strengthen the resources of his power by land and sea. He himself supervised their work, and the citizens were drawn into it too. Philistus, the historian who reports the events (Diodorus, XIV, 41-43), insists that, had Dionysius not mobilized this army of scientific experts, his enterprise might have ended in disaster almost at the beginning. (51, 7.)

That such an attitude, such consciousness of the manageability of things, was not restricted to individuals, whether political reformers or enlightened tyrants, is proved by the general rationalization of the environment just mentioned. It shows that the expert had begun to find a place in daily life. This itself would not have been possible, had there not been an increasingly large number of people willing to forgo political responsibility and renown and to become specialists. Politics no longer held men in bondage. Withdrawal from the life of the city had been rare in the fifth century even among philosophers, but it now became quite common. Plato assumed that anyone who had seen the realm of Ideas would enter into the service of the state only if forced to do so. Whether or not the philosopher ought to be concerned with politics, the growing individualism did benefit research in philosophy no less than in

53 The new belief in experts as contrasted to the ideal of the citizen is well illustrated by Aristotle’s discussion of the question whether in the matter of elections the decision should not be left in the hands of experts (Polit. III, 1282 a 7 ff.).
54 For the philosopher’s withdrawal from politics and for the individualism of the fourth century see Burckhardt (Griechische Kulturgeschichte IV, 286, 348, and 366), to whose analysis of the period I am much indebted.
the humanities and sciences. Freed from their old loyalties and no longer primarily citizens, men sought private occupations and made their own chosen interests their main concern. If the Cynics denied the value of culture altogether, there also arose a class of intellectuals whose lives were centered in cultural activities. Undoubtedly, it was still a small group, consisting mainly of the rich or men of independent means, for there were no “positions” to be had. The relation between student and teacher was a voluntary one. Support was given by the state rarely and only if need arose.⁵⁵ One was no longer an outcast or socially condemned as useless, however, if one transferred one’s desire for distinction and applied one’s gifts to the pursuits of the mind. A human ideal not inferior to the ideal of citizenship began to be established. The place of the homo politicus was taken over not only by the homo economicus but also by the homo intellectualis. Thus the political decay by giving men free rein prepared the way for further progress.⁵⁶

It is time to turn from this attempt to explain the self-assurance of the age of Plato and Aristotle and its condescension towards earlier generations to its conception of the process of advance itself. Xenophanes had expressed his notion of progress almost in the form of an aphorism. The Pre-Socratics had discovered the laws of progress. Isocrates, Plato, and Aristotle made the general conception specific and elaborated a theory of progress, which is most fully expressed in the Aristotelian writings.

The framework of the theories of these three writers was provided by the teaching of Democritus. Hence the acknowledgment by all of the rôle played at first by human need and later by superabundance in the creation of the arts and crafts.⁵⁷ There are certain refinements, however. According to Plato and Aristotle “lei-

⁵⁵ The rise of an intellectual class was observed by Burckhardt, op. cit., IV, 391 ff. The body politic reacted to scientific work just as it had in the fifth century (see L. Edelstein, J.H.I., XIII [1952], 597). It is true that schools were now coming into existence, but they were private organizations and were maintained by the contributions of their members.

⁵⁶ For the importance of the concept of culture in evaluating the fourth century, see below, p. 130.

sure” gives birth to the disinterested regard for truth and theoretical knowledge. Plato, Aristotle, and Isocrates agree that progress comes about “little by little” (ἐπί μικρὸν) or “bit by bit.” Things do not happen “suddenly” but “over a very long period of time” (Plato, Laws III, 678 B); they do not become “immediately” what they are “now.” (Isocrates, Panegyricus, 32.) The forward movement is slow and gradual; and from problems that “lie near at hand” one ascends to those that have “broader implications.” (Aristotle, Metaphysics I, 2, 982 b 13–15.)

No explanation for the adoption of this latter thesis is ever offered; but it is unlikely that the greater emphasis on the gradualness of progress came from research into what had happened in earlier times, for the analysis of prehistory always remained in antiquity a philosophical construction based on analogies, studies of proverbs that were taken to be relics of prior wisdom, and similar data and never became historical in the modern sense. Perhaps, as in the seventeenth century, the interdependence of the sciences strengthened the conviction that in the process of advance each step is indispensable for the next. For Aristotle the working of Nature may have afforded a significant parallel, for Nature too “progresses little by little from things lifeless to animal life.” (History of Animals VIII, 1, 588 b 4 ff.) Whatever the origin of the conception common to Plato, Aristotle, and Isocrates, they recognized the organic character of the development. It did not have to wait for recognition by Lucretius, whose famous pedetemptin (V,

58 Plato (Republic II, 373 A) distinguishes between what is necessary and what is the superadditamentum of pleasure and luxury. In Critias 110 A he speaks of interests that come with leisure, as Shorey has noted (ad Rep. II, 373 A). The Aristotelian theory of leisure as the origin of disinterested investigation is found e.g., in Metaphysics I, 1, 981 b 23 ff.; for him, of course, “wonder” is the origin of knowledge.

59 Aristotle uses the phrase ἐκτὸς μικρῶν in his analysis of the development of specific arts also; cf. Poetics IV, 1449 a 13.

60 See Jacoby, Atthis, pp. 133 ff.

61 Meteorology I, 14, 351 b 8–38 speaks of the gradual changes in the configuration of the earth. That “certain stages of theoretical knowledge and practical skills must have been reached before the next higher step could be taken” was clearly recognized by Hobbes, and the idea was fully developed by Comte; cf. E. Frank, Philosophical Understanding and Religious Truth (London/New York, 1945), p. 136 and note 10.
533 and 1453) merely rephrases an insight gained in the fourth century.\textsuperscript{62}

Beyond this the several theories differ. The essential of Isocrates' opinion can be stated briefly. Faithful to Democritus' belief that life was initially savage (Antidosis, 254; Busiris, 25), he deviates from atomistic philosophy in attributing decisive importance to the power of speech. It is in fact speech that distinguishes man from the animals and allows for the growth of civilized life. Through persuasion reasoned discourse unites men in cities; it constitutes moral values; it produces arguments convincing to others and to oneself. (Antidosis, 253–57; cf. Panegyricus, 47 ff.; Nicocles, 5–9.)\textsuperscript{63}

Plato's view is more circumstantial. According to him the human race has always existed. When he discusses its beginnings it is, as in the case of the beginning of the world, in categories of mythology; and then he assumes that men, "bereft of the guardian care of the Daemon who had governed and reared them," lacked "all tools and all crafts in the early years." (Politicus 274 B–C.)\textsuperscript{64} This, of course, is mere poetical fancy. In those beginnings that follow upon one of the periodic destructions of mankind (Laws III, 677 A; cf. Timaeus 22 C, 23 A–B and Critias 109 D) the few survivors, "the scanty embers of humanity," lead the life of mountain shepherds (Laws III, 677 B) and possess only some primitive

\textsuperscript{62} Shorey explained Isocrates, Paneg. 40—the only passage he considered—as rhetorical amplification (Class. Philol., VI [1911], 89) and believed Lucretius to be the first for whom the concept of gradual progress is attested, for he thought the presumptions against ascribing it to an early Greek writer. It is possible, however, that the principle given expression by Plato, Aristotle, and Isocrates is derived from Democritus, to whom they are indebted in other respects (cf. above, note 57), for Democritus (Fr. 5 [Diels–Kranz = Diodorus, I, 8] spoke of progress κατὰ διάγενις (7) and κατὰ μετάφρασιν (8). It is true that Diodorus' account is influenced by later sources, and it therefore remains uncertain whether the idea of a gradual ascent can be traced to Democritus; but it should be observed that the author of the Ps.-Hippocratic treatise On Ancient Medicine had already assumed the necessity of beginning from earlier discoveries in order to make further advances in science (chap. 2).

\textsuperscript{63} The same notion is expressed by Aristotle, Politics I, 2, 1253 a 7–18. Isocrates sometimes attributes all inventions to one person, an Egyptian (Busiris), sometimes to one city, Athens (Paneg., 32–50). Such different representations of the topic are determined by different rhetorical aims, as was the case with the earlier sophists; cf. above, chap. II, note 10.

\textsuperscript{64} The evidence for the assertion that according to Plato the human race had always existed is discussed by F.M. Cornford, Plato's Cosmology (London, 1937), pp. 145 f.
crafts such as pottery and weaving (679 A); but then conditions change as the result of time and an increase of population, for initially there was a "frightful and widespread depopulation." (677 E–678 B.) "Nomadic" existence is superseded by the stage of agriculture (680 D), which is in turn replaced by the founding of cities. (681 C.) In the first phase of this development men, ignorant of wars and conflicts but also of the art of writing and of laws and of all forms of legal government, live like the Cyclops of Homer under a patriarchical system. (679 D–680 B.) In the agricultural stage groups are organized with particular customs and laws (680 D ff.); and in the "third type of polity" the process of legislation goes even farther, and society exhibits "all varieties of form and fortunes." (681 D.)

The Epinomis elaborates Plato's scheme of the rise of culture. In this work there are among the arts those demanded by necessity (974 D), and next the imitative arts providing pleasure (975 D), and finally "the arts that ward off evil" (975 E) such as generalship, medicine, navigation, and jurisprudence. Undoubtedly, the necessary arts, invented first, were once of greatest importance, for they humanized life, and consequently men who were skilled in them were considered "wise." (974 E.) Today, this is no longer true (974 B; 976 A); and it is rather abstract science or theoretical speculation that constitutes true wisdom. (976 C ff.) In other words, history brings about a reversal of values. What comes first in time and, being necessary, is at first prized loses status when conditions improve; its dignity and worth fade in the light of goods discovered later. Furthermore, not only in material progress but in enlightenment also there are distinct stages. At first a mythical explanation of the data of experience was given; next the Pre-

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65 Plato's recognition of nomadic life as the first stage of human existence continues and improves upon the speculations of Protagoras and Hippias; cf. above, chap. II, note 7. His whole construction is determined by the question concerning "the first beginnings of a State" (676 A), or "how laws came to be needed" (679 E). Like Thucydides he draws inferences from primitive conditions still obtaining within and without Greece (680 B). His notion that the increase of population and the rise of culture are interrelated is a kind of inverted Malthusianism and quite different from later ancient theories. I restrict myself here to Plato's theory in the Laws because his Republic does not purport to give an historical account; see above, note 11.
Socrates gave a rational account but one that was still far removed from truth (988 C–D); and finally certain sciences arose in countries favorable to their development. So astronomical observations began in Egypt and Syria because there the stars are almost always visible, the skies being clear and cloudless. (987 A.) This knowledge then spread to other countries; and the Greeks too learned from the Orient, but the geographical position of their land enabled them successfully to bring everything to the point of perfection, so that whatever they received from the barbarians “they completed and improved upon.” (987 D–E.)

The Epinomis abandons some of Plato’s presuppositions but gives more concreteness to his picture of the past in its relation to the present. At the same time, it answers questions which the fifth century had raised but had failed to answer satisfactorily. It overcomes the externalization of history by restating the diffusion theory of Herodotus in terms that do more justice to the give and take in the interdependence of the various nations that have contributed to the rise of civilization. The Greeks, the latecomers in the development, finally appear in the rôle of masters of “the art of fruitful borrowing from others,” to express the opinion of the Platonists in the language of one of the most penetrating modern interpreters of the Greek mind.

Aristotle unlike Plato or the author of the Epinomis does not give even a brief sketch of the whole development of civilization but merely touches upon a few of its outstanding features. He also notices the fact that the first discoveries seemed to be not only useful but also the work of wisdom, while later the epithet “wise” was given to those who developed knowledge not concerned with

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66 In this account of the Epinomis Plato’s general position and Aristotle’s criticism of earlier philosophers seem to have been systematized in a form similar to that of Comte’s law of the three stages.

67 Nietzsche, “Philosophie im tragischen Zeitalter der Griechen,” p. 155. The author of the Epinomis despite his general agreement with Plato seems to deviate from him in at least two points. The dialogues never imply that in the beginning men lived like animals and even resorted to cannibalism (975 A), nor do they mention a reversal of value-judgments. Plato, though extolling the theoretical life, shows no contempt for the practical life, and instead of separating the arts from wisdom he tries to infuse them with wisdom. The interest of the Epinomis in the Orient may be Academic, but see Jula Kerschensteiner, Platon und der Orient (Stuttgart, 1945), p. 196.
usefulness; and he too traces some of the sciences to the Orient, where a whole class of people had leisure for research. (*Metaphysics* I, 981 b 13–25.)

Nevertheless, he insists that at least in social institutions “inventions” are made independently in different places and at different times. The diffusion theory does not provide a full explanation of all phenomena, for that which is indispensable for life necessity produces in all places and at all times. On the other hand, it would be foolish to duplicate inventions, which should rather be adopted, when discovered, and improved upon. (*Polit.*, VII, 10, 1329 b 25–35.)

Having dealt cursorily with these general points, Aristotle carefully considers the way in which the arts and sciences are established and perfected. The beginnings, he thinks, must be clearly distinguished from the later development. Everything new advances slowly and with difficulty, but first steps forward are the most important: “The first beginning is the main thing, as the saying goes.” Afterwards, it is easier to make additions and to attain considerable knowledge or skill (*Soph. Ref.* 34, 183 b 17–28), for, once a project has been well-outlined, anyone can promote it, and at this stage time itself becomes “the inventor or [at least] a good partner in the enterprise; it is in such a way that the arts and crafts grow in perfection.” (*Nic. Eth.* I, 7, 1098 a 22–25.) Time, which for the Sophists was the essential condition of progress, for Moschion the true inventor, and even for Plato one of the two basic factors responsible for the transformation of human life, was for Aristotle less important. He like Xenophanes emphasizes instead

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69 E. Barker (trans.), *The Politics of Aristotle* (Oxford, 1946), p. 306, note DDD, drew attention to the importance of this passage and considers it possible that the section at the end of which it occurs (1–8) is “an antiquarian interpolation”; but, since he admits that “it has certainly an Aristotelian flavor,” I have not hesitated to attribute to Aristotle the theory that it proposes. (With Barker and others I read *εὐρημενος* [1329 b 34] instead of the *εὐρηκτορος* adopted by Becker and Newman).
the significance of the individual especially at the inception of the arts and crafts. It is as if he had tried to distinguish between the genius of the true or "first" inventor and the talent of the mere improver.\textsuperscript{70}

On the other hand, in Aristotle's opinion he who comes first is in some ways inferior to those who come later. Those who first tried to search for truth and the nature of all things were diverted from the right path and followed another because of their "lack of experience." (\textit{Physics} I, 8, 191 a 25-27; cf. 191 b 30-34.) Previous ages failed because the earlier philosophers behaved "like untrained men in fights, rushing around and often striking smart blows but not fighting on scientific principles; and similarly these thinkers do not seem to know what they are saying, for it is clear that as a rule they make little if any use of their own principles." (\textit{Metaphysics} I, 4, 985 a 14 ff.)\textsuperscript{71} When Aristotle after having surveyed the philosophy of the Pre-Socratics says that with them knowledge was "young," "in its infancy," and "only in its beginnings" (\textit{Metaphysics} I, 10, 993 a 16 ff.), one is reminded of Bacon's paradoxical assertion: \textit{antiquitas saeculi iuventus mundi.} (\textit{Novum Organum}, I, 84.) For Aristotle too the truly "old" were those living in his time.

Yet, had the present effort not been preceded by that of others, today's generation would not have the knowledge that it actually possesses. "No one," says Aristotle, "is able to attain the truth adequately, while on the other hand we do not collectively fail; but each one says something true about the nature of things, and, while individually we contribute little or nothing to the truth, by all of us together a considerable amount is amassed." (\textit{Metaphysics} II, 1, 993 a 31-b 4.)\textsuperscript{72} In fact, the present is indebted not only to the

\textsuperscript{70} The conception of genius became important only later in ancient historiography.

\textsuperscript{71} In the same way Aristotle distinguishes between the unscientific attempts to deal with a subject, which necessarily precede the establishment of an art, and the true foundation of the art; cf. e.g., \textit{Soph. Refut.} 34, 184 a 3 (\textit{τὰ ἄξονα τῆς τέχνης}). That any kind of perfection presupposes long effort for many generations is implied also in \textit{Poetics} 4, 1448 b 27-30, on which cf. A Gudeman, \textit{Aristoteles, Ποίησις σοφιστικής} (Berlin, 1934), pp. 122 ff. This assumption that there must have been poets before Homer reappears in the assumption of Theophrastus that Thales cannot have been the first philosopher (\textit{Physic. Opinion}, Fr. 1 [Diehl]).

\textsuperscript{72} \textit{Metaphysics} a, from which this quotation and the following are taken, may be a later addition to the Aristotelian work by Pasicles; but its thought and language are "thoroughly Aristotelian." See W.D. Ross (ed.), \textit{Aristotle's Metaphysics} (Oxford, 1924), I, xxv. Its tenor is certainly the same as that of \textit{Sophistic Refutations}, chap.
correct solutions of the past but to its mistakes as well; and there­
fore “it is fair that we should be grateful not only to those with
whose views we may agree but also to those who have expressed
more superficial views, for these also contributed something by
developing before us the power of thought.” (993 b 11–14.) Using
as an example the work of Timotheus, whose claim to originality
and novelty and whose blunt rejection of the old typify the attitude
of the fifth century and that of many authors of the fourth also,
Aristotle concludes: “It is true that, had there been no Timotheus,
we should be without much of our lyric poetry; but, had there been
no Phrynis, there would have been no Timotheus. The same holds
for those who have expressed views about the truth, for from some
thinkers we have inherited certain opinions, while others were
responsible for the appearance of the former.” (993 b 15–19.)

How, then, do things develop and reach greater perfection? As
regards men, the agents of progress, their knowledge is not merely
additive but cumulative. Great individuals start out on the way but
do not advance very far. Subsequent generations go farther not only
because they follow their predecessors but because they are their
heirs; their strength is in part the strength of those who lived
earlier, for the past with its truths as well as its falsehoods makes
the present what it is. Civilization is the work neither of god nor of
heroes, half-human and half-divine, but of men cooperating
throughout the course of history, helping one another, and bound
to one another like the links in a chain. In Aristotle’s grandiose
metaphor “those who are now renowned have taken over as if in a
relay race (from hand to hand; relieving one another [ἐκ
διαδοχῆς]) from many predecessors who on their part progressed,

34, where Aristotle gives an historical appreciation of his own “invention” and of the
process of discovery in general (cf. above, pp. 72, 88; and below, pp. 90 f.).
35 This chapter of the Metaphysics prompted Dilthey to say that “die Alten
besassen) schon ein klares Bewusstsein des geschichtlichen Fortschritts der Mensch­
heit in Bezug auf Wissenschaften und Künste” (Gesammelte Schriften I [1922],
281).
36 G. Simmel showed that the alternative of god or hero still haunted the
eighteenth century and was overcome only when a third possible explanation of
inventions was found in the modern concepts of society and history. See The
12 ff. In my analysis of Aristotle’s discovery that history accounts for progress, I have
made use of some of Simmel’s categories.
and thus have made progress themselves.” (Soph. Refut. chap. 34, 183 b 29–31.) The “torch of learning” is passed on from one generation to the next succeeding one; and that is why its brightness always increases. It is the insight embodied in the “immortal aphorism” of Pascal: “The entire succession of men through the whole course of ages must be regarded as one man, always living and incessantly learning.”

If this is so, the time and place in which the individual finds himself are important factors of his accomplishment and limits of what he can accomplish. When a new civilization begins—and, though for Aristotle as for Plato the human race is eternal and strictly speaking there is no beginning of culture, individual civilizations do rise and fall and are destroyed by natural catastrophes—there are “benefactors of the people in connection with the invention of arts or with regard to warfare,” the founders of heroic kingships. (Politics III, 14, 1285 b 6; cf. 1286 b 10.) With the gradual rise of civilization the general intellectual level also rises (II, 8, 1269 a 4–6). While in the beginning few men of outstanding merit, few benefactors, are found, later their number increases greatly. (III, 15, 1286 b 8–13.) Moreover, the discoveries made are enlarged and perfected. No matter how great the accomplishment of the first inventor, his successors are bound to excel him. The different positions men occupy in the development of the arts and sciences determine the value and rate of their achievement.

70 Traité de vide (the translation is taken from Teggart, The Idea of Progress, p. 167). This is the aphorism which, according to Comte, was the “first ray of light” in the modern debate (Introduction, note 17). (Dilthey [see above, note 73] observed the general similarity of Aristotle’s concept of progress and that of Pascal, who he thought followed Bacon.) The usual translation of the expression ἐκ διάδοχίας is “in a succession of learning,” but in Physics 228 a 28 Aristotle exemplifies the consecutive by “a torch passed from hand to hand” (στὸν ἤ λαμπυρὰς ἐκ διάδοχίας); see also the Ps.-Aristotelian On the Cosmos 398 a 33, where the unity of the cosmos is likened to a relay race; and last but not least, Plato, Laws VI, 776 B, where it is said that the torch of life is handed from one generation to another to perpetuate the service of God.

71 That in speaking here of the repeated destruction (and reinvention) of the arts and sciences Aristotle is thinking of their disappearance because of sudden natural catastrophes was shown by J. Bernays, op. cit., p. 48, and note 27. For the conception of recurrence see below, p. 121. Other passages referring to the survival of ancient views are cited above, note 35.

72 I take the Aristotelian “benefactor” as corresponding to Plato’s “god or divine man,” which is used in the same context (Laws II, 657 A).
Within the realm of progress a certain law of historical relativity obtains.\(^78\)

Neither the notion that knowledge is cumulative rather than additive nor the contention that the individual is subject to historical determination is quite original with Aristotle. As to the former, the common assertion that development takes place "step by step" itself implies awareness of the interdependence of discoveries and inventions, and further evidence that this truth was generally accepted is to be found in the language that Aristotle like Plato, Isocrates, and Xenophon uses when dealing with the ascent of the arts and sciences. While earlier authors had no term that corresponds to the word progress and the various phases of the historical process, these writers of the fourth century speak of the "growth" or "the increase" (εἰκόνας) of the arts and sciences, or say that they themselves "grow" or "increase" (τρισδόνα).\(^79\) Such an expres-

\(^78\) R. McKeon ("Plato and Aristotle as Historians," International Journal of Ethics LI [1940–41], 97) denies that Aristotle had a conception of the historical relativity of knowledge; and Bury, on principle denying that the Greeks had any such notion, says "the judgment of a wise man at any time might be final or absolutely valid" (The Ancient Greek Historians, 251, 1 [although he exempts Thucydides and Eratosthenes from this verdict, 252, 2]). The passages that I have quoted from Aristotle appear to prove that he was an historical relativist; and it is probably as such that he condemned the naivety of the Pre-Socratics, who thought that they had found the whole truth (see above, chap. II, p. 26). How this relativism goes with Aristotle's eternalism will be discussed presently.

\(^79\) Cf. Plato, Hippias Major 281 D and 282 B; Aristotle, Nic. Eth. I, 7, 1098 a 24 f. and Soph. Ref. chap. 34, 183 b 19, 21; Isocrates, Paneg., 10; Theopompos, Fr. 25, 1, 28 (Jacoby); Xenophon, Hiero IX, 7. τρισδόνα in the sense of "to grow" is to be found even in the literature of the fifth century but there usually with a prepositional phrase (e.g., Herodotus, II, 13; Thucydides, VI, 60; VIII, 24 and 83) whereas in Plato Comicus, Fr. 213 (Kock) it is used absolutely. In the Protagoras (318 A) Plato applies the word to the improvement of man's inner faculties, his soul (cf. Laws III, 694 B; Aristotle, On the Soul II, 5, 417 b 6 ff.; Isocrates, Antidosis 267). In Hippocrates, Aphorisms I, 3 it refers to bodily states (cf. also Ps.-Aristotle, Problematas XX, 7, 623 a 37; Plato, Laws III, 679 B). In short, it appears in almost as many senses as does the term progress in modern usage (cf. Baillie, op. cit., pp. 1 ff.). Synonymous with τρισδόνα and τρισθοις are αὐξάνεις and ἀπαύγασις, e.g., Aristotle, Politics VII, 10, 1329 b 29 f. and Soph. Ref. chap. 34, 183 b 23 and 31 (συγκινήσει [183 b 26]); Plato, Rep. IV, 424 A and VII, 528 C; and these too are words that occur in earlier literature in contexts similar to those of τρισδόνα and τρισθοις (e.g., Thucydides, I, 12, 1; 16; Heraclitus, Fr. 115 [Diels–Kranz]), but the latter seem the more typical and the more generally accepted. Προσαγωγὴ "is the transitive verb corresponding to τρισθοις," cf. J. Burnet (ed.), The Ethics of Aristotle (London, 1900), p. 38 ad Nic. Eth. I, 7, 17, and the parallels collected there.
sion would not have been coined and have found favor if the continuous character of the forward movement, the concatenation of events, that aspect of the temporal progress which turns it into an organic whole, had not been visualized, for that which increases or grows is something that is at once the same and not the same, something that exhibits persistence and change, identity and difference.\textsuperscript{80}

There was also a growing awareness of the fact that the individuals, who were thought by Xenophanes and the other Pre-Socratics to act as isolated personalities, creating out of nothing or simply taking over and adapting to their purposes what others equally isolated had created, are in fact contributors to a common cause, each doing his own particular share. The so-called Pythagoreans ascribed to their master their new-found insight and remained anonymous because they believed that they were only carrying out the intentions of the founder of their school and that therefore their knowledge was in truth his. The Platonic dialogue drew the great men of the past into the conversation of the day and in examining their views carried the inquiry further.\textsuperscript{81} Earlier inventions and inventors were made the subject of special investigations in the fourth century and were no longer merely mentioned by general historians within a broader context or in passing references. Monographs on ancient poets and musicians had been written from the end of the fifth century; and by 380 B.C., as is clear from a speech

\textsuperscript{80} For the later Greek term “progress” and its difference from the term here discussed see below, chap. IV, p. 146. At any rate, it is not true even of the fourth century that the Greek language had no word “which really corresponds to our word Progress” (above, Introduction, note 54).

\textsuperscript{81} For the Pythagoreans’ ascription of their own theories to their master and the significance of this for the idea of progress, see Edelstein, “Platonic Anonymity,” A.J.P., LXXXIII (1962), 12 f. Aristotle’s debt to Plato for his conception of history was noticed by W. Jaeger (Aristoteles, p. 387); but his dependence is not restricted to his acceptance of certain data or to his wish “to include [earlier Greek speculations] in the construction of his own system,” as Jaeger formulated it later (“Review of H. Chemiss, Aristotle’s Criticism of Pre-Socratic Philosophy,” A.J.P., LVIII [1937], 354). Plato, by turning away from the direct study of phenomena to the scrutiny of human opinions and insisting that the dialogue is the only right method of philosophizing, gave the authors of the theories greater dignity and value than they had ever had before. They were made partners in a great conversation in which Plato tried to ferret out their opinions and thereby to ascertain the truth. This represents the beginning of historical consciousness and is therefore the starting-point of Aristotle’s approach to the past. See also below, pp. 96 f.
of Isocrates (Pan., 10), a literature of inventions had already been well established. Indeed, the past had become an object of scholarly interest and study more than it had ever been before; and this was only natural in an age that was proud of its own advance and yet conscious that it was not making a beginning altogether new, an age that measured its own achievement by constantly comparing it with that of its predecessors, an age that was, in fact, not merely revolutionary but truly progressive.  

Aristotle, then, can be said to have progressed in his understanding of progress because others before him and contemporary with him had progressed in their understanding of progress. Aspiring to be the arbiter of thought (Physics, III, 6, 206 a 13), he analyzed with his usual lucidity the issues raised, giving a full hearing to each party and eventually passing a balanced judgment on the case under consideration. Past and present are given their just deserts, and pride and humility assigned their right places. No one carries off the full prize, but each receives the share that is his.

It is in this spirit that Aristotle had others make large collections of historical material, such as the collection of old constitutions, and inspired his pupils to write the history of culture as a whole and that of the various arts and sciences. In the Peripatetic analyses of the various civilizations the evolutionistic point of view prevailed. The "life" of each particular culture was regarded as a unit stretching from its early beginnings to the present. Customs and institutions were not enumerated or represented as details to be remarked with astonishment, admiration, or disdain but were recorded as having come to be one after the other by human decision and action depending largely on geographical and physical factors.

82 Collingwood observed that without comparing two ways of life and judging one to be better than the other there can be "no conception of the change as a progress" (see above, Introduction, note 22), and that the revolutionary "can only regard his revolution as a progress in so far as he is also an historian, genuinely re-enacting in his own historical thought the life he nevertheless rejects" (The Idea of History, p. 326).

83 Cf. K. Trüdinger, op. cit., pp. 47 ff. Dicaearchus' Life of Greece, the outstanding example of this type of history, will be discussed below, chap. IV, p. 134. (Pausanias' account of the history of Arcadia [VIII, 1 ff.] may show Peripatetic influence; see Trüdinger, p. 51 and Nestle, Vom Mythos zum Logos, pp. 145 ff.). In connection with these studies should also be mentioned Aristotle's own analysis in the Politics of the sequence of social organizations; cf. Lovejoy and Boas, op. cit., pp. 174-177.
In the historical accounts of the various sciences compiled by Aristotle's pupils the development of the intellectual achievement was presented in accordance with the belief in continuous progress. Few as the extant fragments are, they suffice to show that the contributions of the outstanding scientists were arranged chronologically and that the whole achievement was represented as a steady advance from an incomplete and limited understanding to a wider mastery of the respective subjects, i.e., to a greater perfection.

It may be objected that there is another Aristotle much less given to historical objectivity, and that in what has been said above too much emphasis has been put upon his thoughts about progress. It is true that through his writings are scattered remarks about previous discoveries and that there are frequent historical surveys written with the fairness of the critical observer and made the starting-point of his investigations; but just as often in his systematic works and especially in the famous introductory book of his *Metaphysics* he uses or misuses historical data for the purpose of proving that his own insight was already implied by earlier philosophers, who are in this way suborned witnesses to the truth of his own theories. This dialectical method, it has been argued, is the antithesis of a true historical appreciation, which gives to each age its peculiar truth, and it tends to place Aristotle alongside Plato in his intention "of eliciting the typical or universal aspects from these imperfect particular manifestations (of the thought of the past)."

There is no gainsaying the assertion that Aristotle was inclined to

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84 Cf. Eudemus, Frs. 133–150 (Wehrli), and Wehrli's general introduction to his commentary on the various passages (*Die Schule des Aristoteles* [Basle, 1944–1959] VIII, 113 ff.) Frs. 133 and 145 are characteristic of Eudemus' procedure. In general, see F. Leo, *Die griechisch-römische Biographie* (Leipzig, 1901), p. 100 and Jaeger, *Aristoteles*, pp. 358 f. Cf. also Strato, Fr. 144–47 (Wehrli), who wrote against the Isocratean Ephorus from the point of view of the Peripatos. Jacoby correctly observed that it is no longer possible to determine the principles followed by the Isocrateans and Aristotelians respectively (the former may have stressed the share of the barbarians, the latter that of the Greeks [on Ephorus, Frs. 2–5, p. 41, 39–41]).

85 *The Constitution of Athens* 9, 2, illustrates Aristotle's willingness to interpret earlier views according to the intention or position of their authors.

86 H. Chemiss, "The History of Ideas . . .," p. 45. How often Aristotle distorts historical data or gives a correct interpretation, a problem with which the article by W.K.C. Guthrie, "Aristotle as a Historian of Philosophy," is mainly concerned (*J.H.S.*, LXXVII [1957], 35 ff.), is not here relevant, for in this context it is important only that both distortions and correct interpretations do occur.
look at the past as the repository of that same insight, though imperfectly expressed, that is elaborated in the present. It was only natural for him to do so, especially with regard to philosophical truth, for truth in his opinion exists irrespective of the individuals who find it. They do not make it but merely come to discover it. Every investigation, therefore, has an objective as well as a subjective aspect. If a question is considered from the latter point of view, it is men who in the course of time and “little by little” bring about the realization of the truth; and, if looked at from the objective point of view, it is “Truth itself” that drives the philosopher to pose further problems. *(Metaphysics I, 984 b 9–11; cf. 984 a 18 ff.)*

This does not mean, however, that the truth now accessible to everyone was accessible at all times.

Consequently, it is wrong to maintain that for Aristotle as well as for Plato ideas have no history. Their history is the history of their discovery. Still less can it be assumed that by Aristotle, as by Hegel, with whom he has much in common in his interpretation or misinterpretation of the past, the temporal sequence of philosophical systems was taken to be identical with the logical sequence or deployment of concepts. Aristotle held that the truth comes into sight gradually, is purified in the act of being visualized, or is hewn out like a statue and emerges slowly in its fullness. He certainly would not have said that “what the spirit is in itself, it has always been,” that “the difference (in the formulations reached in pre-

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87 See also 984 a 18; 1091 a 9; 188 b 30; 642 a 19. Eucken, *Die Methode der Aristotelischen Forschung*, p. 1, note 3 and G. Teichmüller, *Aristotelische Forschungen* (Halle, 1867–73), II, 377 ff. and 383 (for examples in the history of art and for the development of the arts). Here too Aristotle followed a Platonic lead, for Plato held that the investigation constrains *διδασκόν* the investigator to raise certain problems and imposes upon him certain solutions *(Republic* 518 ff.; 523 D; 524 C–E; 525 D).

88 Cherniss (“The History of Ideas . . .,” p. 45) says that “to Aristotle as well as to Plato the very possibility of what we call a history of ideas would have seemed incompatible with philosophy.” This is undoubtedly true if one has in mind, as Cherniss does, the modern conception of a history of ideas (as defined by Lovejoy), i.e., a historical synthesis in which implicit assumptions, dialectical motives, susceptibilities to diverse kinds of metaphysical pathos, philosophical semantics, and so forth are categories of interpretation. Plato as well as Aristotle was concerned with the truth of past ideas; but that their philosophy “implied an objective and eternal truth discernible by each human mind directly” *(ibid.)* does not mean, as I have attempted to show for Aristotle, that the truth was always equally accessible to all men.
vious ages) is but the unfolding of this essence.\textsuperscript{89} How much more of an historian Aristotle was than Hegel, how conscious of history he remained throughout, is symbolized by the fact that when he called earlier philosophy the "stammering expression of his insight," he remembered that the men of the past could not yet have known what he knew. It is, after all, at the end of his survey of Pre-Socratic thought that he speaks of their beginnings as "the youth of mankind."\textsuperscript{90}

The only charge one can bring against him is that despite his progressivism he did not abandon the idea of an objective and common truth; but progressivism and relativism are not necessarily identical, and an historical approach need not turn into historicism. Aristotle's standards of criticism, though to be sure they do not satisfy the modern historian, would have been acceptable even to the greatest writers on history in the eighteenth century; and,

\textsuperscript{89} \textit{Vernunft in der Geschichte}, p. 165 [Lasson], quoted by E. Frank, \textit{Wissen, Wollen, Glauben} (Zürich, 1955), p. 240. A comparison of Aristotle's approach and Hegel's is made by Jaeger in his \textit{Aristoteles} (p. 396), who later stated that what Aristotle, at any rate in the \textit{Metaphysics}, "seeks in the historical process is the successive development of truth, a view which was renewed by Hegel in his \textit{History of Philosophy} (A.J.P., LVIII [1937], 333), whereas in his later period he took a more historical attitude (\textit{ibid.}, pp. 353-355). Yet, though according to both philosophers philosophical truth is progressively developed in the succession of various systems, the historical moment, which was important for Aristotle even in the \textit{Metaphysics} (cf. below, note 90), has no part in Hegel's discussion; and besides Hegel's conception of "subjective truth" differs from the Aristotelian notion of "objective truth" (Frank, \textit{op. cit.}, pp. 236-238), while the reconciliation of opposing opinions by Aristotle, the "arbiter" (cf. above, p. 94 and further passages in Eucken, \textit{Die Methode der Aristotelischen Forschung}, p. 10), is quite different from Hegel's reconciliation of thesis and antithesis in a "higher" synthesis. The evidence for Aristotle's "historicism" comes from "earlier" and "later" writings alike; and it is therefore unnecessary to speak of different stages in his understanding of history, even if it should prove to be true that historical statements occur more frequently in his "later" works, something that to prove would presuppose a soundly established chronology of the various treatises (cf. R. Weil, \textit{Aristote et l'histoire} [Paris, 1960], p. 89).

\textsuperscript{90} Cf. above, pp. 89 f. Moreover, in the first book of the \textit{Metaphysics} Aristotle repeatedly touches upon the question of the first to formulate a specific insight (984 b 31 f.; 985 a 9 ff.; b 24; 986 b 21; 987 b 4) and tries to determine how his predecessors came to formulate their opinions (983 b 22 and 985 b 32; passages to which Eucken \textit{[Die Methode der Aristotelischen Forschung}, p. 10, note 3] draws attention, citing also from later books 1010 a 1 f., 1012 a 17, 1062 b 20, 1078 b 13; 1084 b 24, 1090 a 20 f.; and besides he observes some historical periodizations (985 a 10 f.; 987 a 29 and b 32; 992 a 33). He says himself that \textit{Metaphysics} I is not intended to be a straight "history of philosophy" (983 b 4-6; 988 b 16-19; 993 a 11-13), but this does not mean that he is innocent of an historical approach.
whatever qualification may be found necessary, it still was he who
definitely refuted the “naive” belief of the Pre-Socratics that one
man by himself could achieve the truth.\footnote{1}

But what about development in the future? The evidence thus
far examined testifies to so much concern with an historical assess­
ment of the past and to such certainty that the present had moved
far ahead of the past that one almost expects to find little interest
in the future or at least little ambition for it. What Bacon says with
regard to progress in the mechanical arts could well be said with
regard to all progress: “When a man looks at the variety and the
beauty of the provisions . . . brought together . . . he will certainly
be more inclined to admire the wealth of man than to feel his
wants.” (Novum Organum, I, 85, cf. 88.)\footnote{2} In fact, the situation
was quite different. Further advance was so much taken for granted
and assumed to be possible as well as desirable that the discussion
seems to have been largely concerned with the ways in which it
could be consciously assured. This is especially clear in the writings
of Isocrates and Xenophon, who certainly reflect the general situa­
tion or at least the attitude of the intellectuals to these matters.\footnote{3}

Isocrates puts the case in his usual personal manner, saying that
despite the general unwillingness to reward progress he has not
been disheartened and has not relaxed his efforts. (Panegyr. 3.) He
asks for public rewards, however, for all who labor for the common

\footnote{1} A similar combination of historicism and eternalism occurs in Kant, for
whom—though for reasons different from Aristotle’s—“contingency and the charac­
ter of having a history” belong “not to the doctrines themselves but to their
appearance at a particular time and as a result of favorable conditions.” Kant’s
position is rightly stated by E. Bréhier (“The Formation of Our History of
165); the parallel is not a perfect one, however, because Kant would have to assume
that the historical characteristics “do not really concern the philosopher at all” since
the diversity of philosophical systems rests on “the a priori possibilities of thought”
and could “in the last resort have [been] discovered without history, since they arise
from the natural laws of the mind” [Bréhier, ibid.].

\footnote{2} It is not without interest that Bacon, thinking of Aristotle, adds, “the thought
that nothing or nothing much can be done naturally presents itself to grave men and
of great judgment.” Aristotle, I think, would not have agreed, for the hero of
scholasticism was not a scholastic.

\footnote{3} The poetry of the fifth century tells a good deal about the common attitude to
the dreams concerning the future (cf. above, chap. II, pp. 42 f.), but that of the
fourth is silent on the matter. This makes the testimony of Isocrates and Xenophon
even more important.
good because then and only then will progress be made (Panegyr. 1 f. and 10 f.); and he censures the Athenians for failing to acknowledge this truism. (Cf. Aristotle, Rhetoric III, 14, 1414 b 33–35.) Xenophon takes up the issue quite objectively in an essay on government and argues that rewards be offered for inventions, since honor (τιμή), praise (ἐπαυγός), and love of distinction (φιλοσυμία) are the characteristics that distinguish men from animals (Hiero VII, 2–3) and, if men are encouraged by the ruler and many people are induced to ponder what may be useful, more things will be discovered and more will be accomplished. (IX, 10.)

The suggestion made by Isocrates and Xenophon was not new. Xenophanes had asked to be rewarded; and Hippodamus too had demanded that innovators in the political field be honored in recognition of their public merit and their contributions to the welfare of the community. 94 Nevertheless, the remarks of these writers of the fourth century have different overtones. Their predecessors asked for the reward that by right belongs to the inventor and the withholding of which may disappoint the individual. For both Isocrates and Xenophon, however, reward is not so much an honor due after the effort has been made as an incentive to do what should be done. Recognizing the individualism of their period and the doubt about any obligation to the community, they wished to harness self-interest to common interest. Thus the contest is no longer one for victory alone, no longer one fought in the cause of good Eris that “stirs up even the shiftless to toil,” no longer the wholesome strife in which “potter is angry with potter, and craftsman with craftsman, and beggar is jealous of beggar, and minstrel of minstrel.” (Hesiod, Works, 20–26.) Instead, “the spring of action” is love of honor or pride, that passion which in the later seventeenth and eighteenth centuries, in a somewhat similar intellectual climate, came to be called “the craving for distinction,” the fureur de se distinguer. 95

95 Cf. A.O. Lovejoy, Essays in the History of Ideas, p. 62. Burckhardt, who first spoke of the agonistic type and its significance for Greek culture, characterized the victory in the agon as a noble victory without passion (Griechische Kulturgeschichte IV, 94). He based this interpretation on a late anecdote in which Pythagoras asked that all rivalry be like that of the stadium, where those who fight do not harm one
Xenophon also envisaged to some extent the scope of inventions and their influence on life. Not unnaturally, military matters were uppermost in his mind. In this regard he knew that it is not enough for a political leader to acquaint himself with all there is to learn and to rely upon knowledge hitherto accumulated. In warfare new things must be invented also just as musicians do not merely repeat what they have been taught but create melodies of their own, for, as in music the new and the original are highly esteemed, so even more highly esteemed are new inventions in warfare (Cyropæideia I, 6, 38) no doubt because, as Thucydides had said, the new wins out over the old. Xenophon himself suggested reforms of the Athenian cavalry (Hipparchus III, 5); but he also proposed a new system of taxation and a novel distribution of state income, which would eliminate the poverty of the Athenian citizenry, poverty that was held responsible by some for the sad state of current affairs. (On Revenues, chap. 1.) Acceptance of such a program, he hoped, would make the city safe and ensure the happiness of its inhabitants (6, 1); and, should the measures to be taken find the approval of the Oracles, he added in his typical fashion, the city should grow “forever in a more desirable and better way.” (6, 2.) The language but not the import of his message is altered when he addresses not his fellow citizens but a tyrant. Improvements to be made will in the first place be of practical usefulness, for example in commerce (Hiero, IX, 9–10) or in agriculture (X, 7); but indirectly they will have some moral effects also, for, if an individual’s income

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96 Cf. above, chap. II, p. 31. In the closing chapter of Xenophon’s book, which deals with the decay of the Persian monarchy but which may not be genuine, new inventions that serve only the increase of luxury and injustice are described (VIII, 8, 15–18).

97 The need for divine sanction is expressed by other writers too, though not because of the conventional piety that motivates Xenophon. When the author of the Epinomis expresses his confidence that with the support of the Delphic Oracle and the traditional cults the Greeks will one day arrive at a proper worship of the divine (987 E—988 A), he expects a reform of the traditional religion along the lines of his proposals; and, when Plato, in the Laws (VI, 772 D), makes the future changes in the constitution dependent on the confirmation of the oracles of all the gods, it is most probably because he wishes to avoid any rash alteration of the prevailing state of affairs; cf. below, pp. 103 f.
rises, he will have more leisure, and consequently will improve by gaining in judgment and moderation (IX, 8). Poverty, Xenophon seems to think, is the mother of immorality. Banish the one and be rid of the other.98

Not everyone would have agreed with Xenophon that the pursuit of happiness and of ever more happiness depends so exclusively upon the development of efficient technological devices and the improvement of social conditions; but, though less sanguine in this respect, most people must have shared his basic optimism, for the plans outlined in his political pamphlets, which were written for the public of his day, and in theoretical works embodying the principles of statecraft only expatriate and project into the future the rationalization of human existence that the fourth century had brought about.99 It is also likely that most progressivists were willing to follow Xenophon and Isocrates in their endorsement of a system of rewards as an incentive to greater advance. Even Plato in the Republic suggested that scientific studies would be accelerated if they were supervised and held in esteem by the state (VII, 528 B–C), and in the Laws proposed to establish prizes for discoveries.100 Aristotle seems alone to emphasize the fact that the great forward movement of the recent past had come about “although there was no reward in sight” (Proclus, In Eucl., p. 28, 13 [Friedlein] = Fr. 52 [Rose]), and he seems nowhere to consider rewards necessary. In the Problemata (XXX, 11) it is asked who

98 Xenophon’s programme is cast in the form of a dialogue between Simonides and Hiero, the tyrant of Sicily. He may have been thinking in reality of the tyrant Dionysius, with whose policies the proposals may agree (cf. above, pp. 82 f.) and with whom he may have been acquainted, for according to ancient tradition Xenophon visited Sicily and was a guest at the court of the tyrant (Athenaeus, X, 427 f.); but what he says and especially his notion of the spring of human actions is surely not determined by the fact that it is addressed to a tyrant whose subjects are all the enemies of their master (Hiero VI, 14), for the remarks of Isocrates show that even in a democratic regime the self-interest of the citizen had come to be regarded as predominant.

99 Cf. above, pp. 81 f.

100 To explain Plato’s statement by the dramatic date of the dialogue, i.e., by assuming that when the Republic was composed the studies mentioned had not yet been far developed (J.B. Skemp, Plato’s Statesman, a translation of the Politicus of Plato [London, 1952] p. 207, note 1), hardly does justice to Plato’s words; but, on the other hand, the evidence cited above refutes the notion that Plato’s is “perhaps the earliest demand in literature for the State-encouragement—we might almost say the State-endowment—of pure science.” (Adam, op. cit., ad 528 C.)
the judge would be if the wise were competing in wisdom and what prize could be better than wisdom itself.

The proposals made by Xenophon and Isocrates remain within the realm of generalities; they take the fact of progress at face value and assume that progress is unquestionably for the better. It is different with Plato and Aristotle, who analyze, distinguish, and weigh arguments, dealing not only with principles but also with concrete issues; but they give their opinions almost incidentally when in the movement of the dialogue or in the course of the lecture the occasion arises, and it is consequently not immediately obvious where they stand themselves. Nevertheless, the attempt to ascertain this must be made, not because their answers were those of the fourth century but because their discussions clarify many problems at which the other evidence available only hints and because their thoughts had a decisive influence on later generations.

The dialogues concerned with political theory contain the main evidence for this part of Plato’s doctrine. In the Republic, which provides the outlines of “the best state,” he has a good deal to say about progress; he discusses it in principle in the Statesman, where he gives an abstract analysis of politics; but he speaks about it most concretely and in the greatest detail in his description of the “second-best state,” which gives flesh and blood to the picture of the constitution that he had in mind. It is easiest to exhibit this part of his doctrine, therefore, by beginning with what is said in the Laws.

Improvements of the constitution after the state has been founded are not only to be expected, Plato thinks, but to be sought. The existing laws are meant to be permanent, but selected observers must be sent abroad to travel “with a view to the confirmation of such practices as are sound and the amendment of any that are

101 For this reason in what follows I depart from my principle of interpretation (cf. above, Introduction, p. xxvii), and deal with the Platonic and Aristotelian material for the purpose of reconstructing the teaching of Plato and Aristotle.

102 According to the opinion now prevalent the Republic and the Laws reflect two different stages of Plato’s political thinking. I believe that the two works form a unit, the later supplementing the earlier; but for the purpose of the present analysis the question of the unity of Plato’s thought is not important, and I treat the two dialogues as two different discussions of the same subject, which they certainly are.
defective in their own community.” (Laws, XII, 951 B–C; 953 C–D; cf. 961 A [εἰντὶ ἡμεῖς].) The observations or personal reflections (952 B) of these emissaries must then be submitted to the official ruling body; and, if accepted as useful, their authors are to be rewarded during their lifetime and after their death as are the rulers of the best state (Rep., VII, 540 C). Similarly selected observers from foreign states are to be brought together with the magistrates or outstanding citizens of the Platonic community for the purpose of “impacting and acquiring knowledge” and are to be dismissed at the end of their stay “with suitable parting gifts and distinctions” (953 D), for, as Plato solemnly declares before laying down this ordinance, “a state unacquainted with mankind, bad or good, will never in its isolation attain an adequate level of civilization and maturity, nor will it succeed in preserving its own laws permanently so long as its grasp of them depends on mere habituation without comprehension.” (951 A–B.) Plato, then, thought that future improvements are desirable and necessary, and he would reward “inventors” for valuable suggestions approved by the state.

The principle by which Plato is guided in prescribing such supervision of the progress he expects is somewhat clarified in The Statesman. It embodies the “second-best method of government” (300 C), obviously chosen for the second-best state, and is based on the assumption that the first requirement is the preservation of the existing laws; but, Plato hastens to add, the true statesman or “man with real knowledge” will and must always follow “the dictates of his art,” i.e., be free to do “what seems better to him, to try to achieve something different with a view to something ‘better’”

103 Cf. above, p. 101. Barker (Greek Political Theory, p. 304) speaks of a “retouching” of the code of laws and says that in Laws XII, 951 E—952 A a power of revision “seems to be implied” (p. 305, note 1), but in fact such revision is required rather than implied, and it is not restricted to any particular part of the constitution or its ordinances. According to Jaeger (Paideia III, 260) Plato in the Laws “is endeavoring to avoid the danger of allowing his state to become fossilized and to combine authoritative regulation of life within it with the power freely to adopt valuable suggestions from outside.” Such a statement minimizes the significance of the law that requires further search and “amendment” (ἀναθροπομενον) of what is defective (951 C) in a community recognizing the need “for the presence of loyalty to law in the soul, or rather for the abiding preservation of its law” (960 D).
(300 C–D), and “an individual or a group in possession of a code of laws and trying to introduce a change in it because they consider this to be an improvement are doing the same thing according to their light as the true statesman” (D). They do it “scientifically” as long as they copy “the true original,” but no “large group of men” is capable of doing this (D). The provision in the constitution of the Laws, according to which improvements are decided upon by the small gremium of the nocturnal council, is a provision for the “scientific” way of making progress.104

At this point, one attuned to the modern concept of progress may object that progress as envisaged by Plato can be called progress only by courtesy. He will observe that Plato even when discussing improvements that may become necessary (VI, 769–773; esp. 772 A–D) makes change extremely difficult and goes out of his way to plead for the stability of political institutions, and he will cite the inflexibility of the rules laid down in the Laws for all human pursuits, whether gymnastics or music, whether poetry or sculpture. In short, he is likely to feel that Plato, though he endorsed progress in principle, was in fact the arch-enemy of what has lately come to be called “the open society,” a society that permits or favors unbridled progress.105

To such a society Plato was certainly opposed but not because he was opposed to all progress. As the passages already quoted show, he was far from thinking that the arrangements which he advocated would need no further improvement. The only question is why he felt bound to set limits to progress; and this does at first seem to be a puzzling question because in the very dialogue in which he expounds “the second-best method”—in fact, immediately before this exposition—he speaks of progress in a manner that would lead one to expect from him a full and unqualified endorsement of progressiveism.

104 This solution is not given in the Politicus, where the second-best method described is really the second worst, the worst being that of having the arts and sciences supervised by one individual elected by lot, for he could never be impartial (300 A–B). Obviously the Laws avoids the difficulty by the stipulation that new proposals must be submitted to the council.

105 K.R. Popper, The Open Society and Its Enemies (London, 1945), passim. Plato’s insistence in his “political” writings on an unchanging order of society has always been recognized; cf. e.g., Barker, Greek Political Theory, pp. 205 and 304.
He assumes for argument's sake that an ordinance has been introduced requiring that "for all future time" (Politicus 298 B. ff.) medicine and navigation be practised according to written—that is, fixed—rules (298 E) and forbidding any "searching further" (299 B) or "theorizing on one's own" in defiance of such rules. Then, extending this assumption to the practice of all other pursuits, he asks what the consequences would be. "Suppose," he says, "that all the arts are treated likewise, generalship, hunting, painting, and the imitative arts in general, building and the manufacture of all types of implements, farming or any cultivation whatever, the rearing of horses and other animals, divination and similarly ministerial functions, draught-playing, simple arithmetic, plane geometry, stereometry, kinematics—what would happen?" (299 D-E.)\textsuperscript{106} The answer is: "Clearly, the arts would be annihilated and could never be resurrected because of this law which puts an embargo on further search; and the result would be that life, which is hard enough as it is, would be quite impossible then and intolerable." (299 E.)

There can be no doubt of Plato's assertion here that inquiry should continue for all future time and that there is no limit to be established for it. The search is infinite, although it cannot be "infinite" in exactly the sense in which this word is used in modern times. For Plato all the works of men, though not men themselves, are destroyed by recurrent natural catastrophes. Infinite advance, then, means advance without end within the several cultures that come into being; but, on the other hand, in each of these it is a unique process. The statement that time "revolves according to number" (Timaeus 30 A) implies merely that it comprises within itself a "cycle of becoming" through which life moves, passing from birth to death and rebirth and exhibiting the inevitable coming-into-being and passing-away of everything. Plato's conception of time is not cyclical. Even the end of the "great year" or the "perfect year" (39 D), the moment when the planets return to their original configuration, does not mark the complete destruction of the

\textsuperscript{106}I have quoted the passage in full to illustrate the extent of the conception of the arts and sciences, for it shows that such a treatise as On the Equestrian Art would be classified as a "scientific" treatise along with essays on stereometry for instance.
natural or human world and the recommencement of another identical with the former one.\textsuperscript{107}

The verdict of \textit{The Statesman}, then, marks a decisive turn in the thought of the ancients about the arts and sciences. The Pre-Socratics had held that human inventiveness could not go very far. For them, the horizon of the future was limited.\textsuperscript{108} Plato revealed that the task is one without end; and he also recognized that freedom and independence are indispensable to the development of the arts and sciences, for, as he says, they must be practised not “according to written rules” but “according to [the rules of] the art itself.” (299 E.) The decision as to good or bad in the performance of the respective arts depends solely upon “the nature of the mean” (283 E; cf. 284 A–B), by which excess and deficiency can be measured objectively and the existence of which is a postulate inherent in the very existence of the arts. (284 B–C, D.)\textsuperscript{109} In other words, the arts and sciences have their own standards to which alone they are subject \textit{qua} arts; and, rightly practised, they themselves “guard against exceeding the due measure or falling short of

\textsuperscript{107} As is assumed e.g., by Bury, \textit{The Idea of Progress}, pp. 9 f. For the interpretation of the “Platonic Year,” see A.E. Taylor, \textit{A Commentary on Plato’s Timaeus} (Oxford, 1928) pp. 216 ff., especially p. 217, whose view is substantially accepted by F.M. Cornford, \textit{Plato’s Cosmology}, p. 117. I follow the latter for Plato’s conception of time (ibid., pp. 103 ff.). Adam (\textit{The Republic of Plato}, Appendices to Book VIII, pp. 295–302) tries to identify the “two harmonies” of the \textit{Republic} with the two periods of world history distinguished in the \textit{Politicus} and attributes to Plato the belief that his age falls into the age of dissolution (p. 297, note 4); but the \textit{Politicus} myth is not evidence for Plato’s adherence to the dogma of a Golden Age (see above, p. 63), and Book VIII of the \textit{Republic} does not contain a theory of history; cf. below, note 113.

\textsuperscript{108} Cf. above, chap. II, pp. 28 f.

\textsuperscript{109} The exposition of “excess and deficiency” is prefaced by the assertion that what turns out to be the right kind of measurement operates κατὰ τὴν τῆς γενεσίας ἀρχαίας ἀκολουθίας (283 D). These words, “meant to be enigmatical” (L. Campbell, \textit{The Sophistes and Politics of Plato} [Oxford, 1867], \textit{ad loc.}), have been variously translated. Whatever rendering is accepted (Schleiermachers “des Werdens notwendiges Wesen” is rightly favored, I think, by Friedländer, \textit{Platon} II, 547, note 2), the later discussion is concerned with “the nature of the Meet” (283 E), as Campbell translates (\textit{ad loc.}), or “the just proportionate in estimating excess and defect,” as Taylor puts it (Plato, p. 399), i.e., the artist or scientist must avoid the “too much” as well as the “too little,” and this he does by observing “the right mean,” “the appropriate,” “the seasonable,” and “the needful” (284 E). I depart from Taylor’s translation of the fourth and last of these terms as “the morally necessary” (Plato, p. 399); στόχος is the “Seinsollende” (Friedländer, \textit{op. cit.}, p. 548). In the \textit{Politicus} the conception of value, whether aesthetic or moral, is consciously left aside; cf. 257 B with 266 C; also \textit{Sophist} 227 B.
it” and achieve “effectiveness and beauty in all they produce.” (286 A.) That they do so is evidently to their interest as well as to that of society, for, as The Statesman so emphatically puts it, the arts and sciences must be left to their own devices and they must go on forever without any restraint, not only because otherwise there would be no possibility of their survival, but also because life itself would no longer be possible or livable.

If this is true, one wonders how it can be reconciled with the position that Plato takes as political reformer. It is surely paradoxical to assert that the freedom of the arts and sciences is indispensable to their survival and to a tolerable life for men and at the same time to ask that they be restricted by written laws. The statement in The Statesman is unique. May Plato here have given expression to a passing thought, the consequences of which he did not fully see? Indeed, is this statement not contradicted by others? At least for the fine arts, which The Statesman includes in the demand for freedom of growth (299 D), the Republic and the Laws, it has been argued, implicitly or explicitly assume a high point of development that can never be surpassed; and in the last analysis the arts and sciences, like all other human efforts, are in Plato’s opinion subject to an inexorable law of rise and fall.

Now the latter contention is undoubtedly in conflict with Plato’s assertion that “the scanty embers of humanity,” from which the

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110 Only in this passage of the Politicus does Plato, so far as I know, speak of infinite progress. Taylor in his commentary on the Timaeus (ad 27 D 5–29 D 3; cf. also Taylor, Plato, pp. 440 f.) finds in that dialogue the recognition that “all natural science is ‘provisional,” whereas arithmetic for instance is ‘final,” or to put it in a more complimentary way . . . natural science is ‘progressive’ in a sense in which pure mathematics is not” (p. 60). I do not believe that Timaeus’ characterization of natural science as ‘mythos’ is open to such an interpretation (for the myth in Plato’s natural philosophy, cf. Edelstein, “The Function of the Myth in Plato’s Philosophy,” J.H.I., X (1949), 467 ff.). Aristotle’s proposition that physical theories must change in accordance with newly observed facts (cf. below, p. 120) seems to me to be the first formulation of the modern concept of progress in the physical sciences. However that may be, the Timaeus certainly does not imply that progress is necessary in all the arts and sciences. On Republic IV, 424 A, see below, note 120. B. Schweitzer (Plato und die Bildende Kunst der Griechen [Tübingen, 1953], p. 87, note, finds that Politicus 298 C–300 E grants a “certain freedom” to the arts and sciences, but this formulation does not do justice to the passage.

111 J. Stenzel, Platon der Erzieher (Leipzig, 1928), p. 133. In a general way, Plato’s opposition to the idea of perpetual progress is asserted by F.M. Cornford, The Republic of Plato, p. 112, note 2 (ad Rep. 424 C). Bury connects it with “the tendency characteristic of Greek philosophical thinkers to idealize the immutable as possessing a higher value than that which varies” (The Idea of Progress, p. 11).
fire of civilization is rekindled after one of the periodic natural
catastrophes, have views which Plato approves about “things called
fair or foul,” just as he is in sympathy with their belief in the tales
inherited from their ancestors. (Laws III, 679 D.) So, even though
men at the beginning of the new era are “bound by comparison
with the age before the Deluge or with our own to be rude and
ignorant in the various arts” (679 D), not everything can have been
debased at the end of the previous civilization. Nor does Plato in
his analysis of the various forms of government (Republic VIII,
545 ff.) presuppose a theory of general decline. The “decline” that
he there describes concerns “divergencies from an ideal rather than
an historical process,” and no philosophy of history is intended.

On the other hand, the Republic provides no warrant for assum­
ing that Plato believed in the superiority of certain forms of poetry
or music that can at best be retrieved after having been lost. As in
the Laws so here too he passes judgment and makes his selection
according to moral and educational effects rather than according to
the principles of the arts. The effect of such restrictions on the arts
he does not discuss and need not discuss, for he is concerned not
with the highest development of poetry and music but with their
greatest usefulness for his purposes. Even the admiration ex­
pressed in the Laws for Egyptian art and music on the ground that

112 Cf. above, pp. 63 and 85 f. The chief passages are Timaeus 22 C and 23 A–B;
Critias 108 E–109 A; Laws III, 677 A–B.
113 Shorey, ad Rep. VIII, 545 B. The impossibility of reconstructing Plato’s
historical views from Republic VIII and IX (they are to be found in Laws III
instead) is recognized by G. Rohr, Platos Stellung zur Geschichte (Berlin, 1932), p.
84. Barker concedes that “it would be a mistake to claim an historical intention for
this sketch,” but he nevertheless refuses to “deny its historical bearing” (Greek
Political Theory, p. 245). The analysis considers real states, however, merely as
“perversions of the right polity,” to use Aristotle’s terms (Politics IV, 7, 1293 b
25 ff.), and depicts their relations genetically, just as Book II characterizes the nature
of the state by showing its development from small beginnings. More recently R.G.
Bury in “Plato and History” (Classical Quarterly, XLV [1951], 86 ff.), in agreement
with A.E. Taylor and J. Adam, has again tried to make a case for a Platonic
philosophy of history that “condemns all that is mundane, all that is phenomenal,
however seemingly perfect, however temporarily stable, to ultimate decay and trans­
formation if not actual destruction.” (p. 88)
114 In the Politicus, however, which investigates the art of politics as one art among
many, an analysis of the arts and sciences and their own laws is appropriate. The
different statements do not reveal a difference of opinion but a difference in the
subjects investigated.
Egyptian artists were forbidden to deviate from the models, the inventory of standard types drawn up in that nation (II, 656 D–E), does not prove that Plato intended to establish a canon of artistic perfection. What interested him, the “thought-provoking fact,” as he expresses it, was not the aesthetic value of Egyptian art (even the Egyptians had made their choice for the benefit of the young, recognizing “the truth we are now affirming” [656 D]) but rather “that it has actually proved possible in such a sphere to canonize melodies which exhibit an intrinsic rightness permanently by law”; and so he feels himself encouraged in his own legislation to reduce the arts “to law and system without misgivings” according to “the intrinsically right in such matters,” i.e., according to their educational value. The Egyptians’ example proves that it can be done. (657 A–B.)

Nowhere, then, does Plato contradict the assertion that the arts and sciences considered by themselves should proceed in their search “for all future time.” In fact, the passage last mentioned incidentally affirms not only the possibility of this in the case of the fine arts but also its actual occurrence to the satisfaction of everyone, for the daring venture of canonizing one kind of music is to be undertaken against the admittedly natural instinct to deride it as “archaic,” as “the cravings of pleasure and pain inspire a continual chase after new forms of music.” (657 B.) Moreover, Plato the philosopher, if not Plato the political reformer, always admits that the possession of truth is beyond human reach. Except for that rare moment of exalted vision in which the mind beholds the Idea of the Good any understanding of Being is dialectical, i.e., partial and incomplete. Philosophy is love of wisdom, search for that which in a sense one has but in a sense has not and certainly will never entirely have Here and Now. God alone is wise. (Phaedrus 278 D.) Insight, even if clearly caught, cannot be confined adequately in written words, because dead letters do not take account of particular circumstances and individual situations; and it is the fate of men

115 That this is the meaning of the passage in question was briefly explained by A.E. Taylor, Plato, the Man and his Work (4th ed.; London, 1937), p. 469; but I have argued it in more detail because the contrary view is still defended in recent literature (e.g., Schweitzer, Plato und die Bildende Kunst der Griechen, p. 87).
in their attempt to translate the archetype of truth and perfection into human deeds always to fall short of the goal. Fitting the ideal pattern of the state to the phenomenal world, the lawgiver must reduce its size, as it were, in order that it may assume more of that likeness of humanity (ἀνθρώπεικα) that Homer also called, when it appears in men, the image and likeness of god. (θεοεικα República VI, 501 B.) The best, as reason envisages it, cannot be realized, for it is impossible that anything be realized in deed as it is spoken in words, and the only state that can be constituted in fact is the one “most nearly answering our description.” (V, 473 A.) This “second-best state,” when it is described in the Laws, does provide for future progress, as has been shown. It does fulfill the prescription of The Statesman for the second-best method, to have written laws and yet to permit the true statesman to follow “the dictates of his art.”

All the evidence, therefore, seems to support the conclusion that Plato is very much in earnest when he argues that the end of search would mean the virtual death of the arts and sciences. It cannot be imagined that he should have ascribed to them the power denied to reason itself, the power to translate into permanent form the model of truth, the Ideas that they imitate. Like all imitations—those of reason, and even those of nature—the imitations of the arts and sciences can never represent their models adequately. Why, then, should they not be permitted to continue their quest, create values ever new, and make life endurable and livable? Why should the political reformer Plato wish to place them under constant supervision? The answer must be that in his opinion the arts and sciences,

110 Cf. above, pp. 103 f. For the Platonic conceptions of knowledge and learning and of philosophy it is superfluous to specify the evidence of particular passages in the Symposium and the Phaedrus. For Plato’s conception of dialectic cf. E. Frank, Wissen, Wollen, Glauben, pp. 90 ff., and for instruction as a process of “begetting,” ibid., pp. 229 ff., esp. p. 232. The Platonic insistence on eternal search for truth is not adequately taken into account by those who ascribe to the Greeks in general and to Plato in particular a “veneration for the past and the ever-present” and from this infer that the Greeks could not conceive the idea of progress. Cf. Löwith, op. cit., pp. 111 and 238 with reference to H. Weiss, Philosophy and Phenomenological Research, II (1941–1942), 173 ff. Cf. also the writers mentioned above, notes 78 and 86.
though, if rightly practiced, they will not destroy themselves, may well become destructive of the "just life" that political leadership is designed to provide.

That the several arts shape man's character and that discoveries in the sciences determine his actions, these observations had been made long before Plato. The Querelle des anciens et des modernes in the fifth century was a dispute about two ways of life. The new was asked to justify itself before the old, to show cause why it should be preferred and considered "better." Some modernists contended that the new is better because it is the new, or the necessary, or the stronger. Others, though aware of the fact that the arts and sciences had transformed man's originally brutish existence into human existence, still doubted that mankind had become happier or morally better by advancing ever further in all fields. The Cynics, insisting that civilization is irreconcilable with a moral life, opted for morality and sacrificed culture. Plato was obviously not satisfied to welcome the new as a brute fact or merely to record the outcome of the development, just as he was unwilling to adopt a radical nihilism that would destroy the precious work of man's hand and mind. Instead, he attempted to save both culture and morality by placing the arts and sciences under the guidance of moral consciousness.

If such guidance is needed, however, whence can it come? In Plato's time the various human activities were becoming independent and autonomous. In the pursuit of artistic or scientific ends all other ends were obliterated, while, as the incipient rationalization of life clearly shows, society was becoming more and more dependent on the expert's competence and advice. The expert or the specialist, however, in Plato's opinion knows only what is good for his art and does not know what is good for men (Charmides, 169 D ff.; cf. Laches, 195 C-D), so that in order to assign each particular discipline and each particular skill its appropriate place within the scheme of the whole another art is needed (Euthydemus.

117 For the Cynics, cf. above, pp. 60 f.; for the fifth century, cf. above, chap. II, pp. 52 f.
118 Cf. above, pp. 81 f.
286 ff.), a “kingly” or “political” art. (291 B.) Otherwise, there will be no fixed values, truth will be unobtainable, and there will be chaos instead of a cosmos.119

This art, without which the just life is impossible, is provided by philosophy and embodied in political theory. To distinguish between the philosopher Plato and the political theorist Plato is in the last analysis otiose and even invidious. It is, then, only natural that as a lawgiver too he should be concerned not merely with the routine questions of so-called politics but also with the issue between morality and the arts and sciences. So he condemns the “advance” that pays no attention to value and endorses that which keeps an eye upon changing circumstances and increases skill and knowledge to create and maintain “the good life.” It is as if he were to say that the “new” as such has no specific meaning and that to know whether it is better one must first ask in what respect it is supposed to be better and for whom, for man or for the arts and sciences themselves, since what is better for the latter may prove to be worse for the former. If this should be the case, one must decide in favor of human improvement, for in the larger view progress is “growth in virtue.” Therefore, the new, although valuable in its way, might have to be abandoned, for it might turn out not to be an improvement in the true sense of the ambiguous word “better,” which is to be defined by the ultimate aim of life, that of becoming a morally responsible agent and of achieving the insight of the mind. Advance need be true improvement no more than change need be true advance. This is the truth to be acknowledged; and, if it is not, one may well say with a play on Plato’s own words that the point will soon be reached where life, which without “progress” in the arts and sciences is not “livable” (ἀθιώτος), will no longer be “worth living” (οὐ βιώτος).120

Now, the degree of supervision depends on the situation. In ideal conditions, in the best state, all citizens would be “artisans of

120 Skemp, whose translation I have followed in my quotations from the Statesman, renders ἀθιώτος (299 E) “not to be endured.” I have rendered the word “not livable” in order to bring out the contrast to the famous remark of Socrates (Apology 38 A), which is noticed by Skemp also and which Plato must have intended to be noticed.
virtue.” The lawgiver could be sure of their constant moral progress because a development, “if it once starts well, proceeds, as it were, in a cycle of growth” (Republic IV, 424 A) and thus has a cumulative effect. It is necessary merely to preserve the framework that has been erected for education, to guard against any changes in the principles of gymnastics and music, so that the moral fibre of men will remain uncorrupted, to have “new songs but (not) a new way of song.” (C.) The rest can be left to the citizenry. Being good men, they will do what is right. (425 D–E.)\textsuperscript{121} It is a different matter in the “second-best” state, the state nearer to reality, for this is open to a “double progressive development of a city in virtue and vice” and which tendency will prevail depends on the course followed by the arts and sciences in their growth and development. (Laws III 676 A.) Here the lawgiver must not only prescribe for all activities in his legislation but must approve the changes to be made and all the innovations to be expected, deciding each case on the basis of its bearing on the purpose of human existence.\textsuperscript{122}

The progressivism advocated by Plato would not have been called such at all in the nineteenth century. Even today it is anath-

\textsuperscript{121} I follow Shorey, ad 424 A. (Adam’s explanation [ad loc.] is unconvincing, for Books VIII and IX, to which he refers, do not prove or imply that the circle “narrows to the inevitable end” [see above, note 113].) The passage, which is neglected by those who deny that Plato envisaged any kind of progress, is amusingly illustrated by Socrates’ contention that his citizens, if properly educated, will easily discover by themselves all the principles that he is to propose and others that he passes over (423 E–424 A). On the other hand, E.O. Bassett, “Plato’s Theory of Social Progress,” International Journal of Ethics, XXXVIII (1927–28), 476, goes too far in concluding from the statement in question that according to Plato “society executes an infinite progression,” that “progress must be perpetual.” The Republic is not a blueprint for reality. For progressing “little by little” see above, p. 84.

\textsuperscript{122} Cf. above, p. 63. Commenting on Laws 678 A 9, F.B. England (The Laws of Plato I [Manchester, 1921]), remarks: “He means, as he explains immediately, that virtue and vice, like the details of civilization, take time to develop and can only develop in their company. How this applies to vice is explained at E 6 ff. He does not give a corresponding explanation of the rise of virtue, because a virtuous development (the ἐν ὁμολογίᾳ ἔκπτωσις ἀπὸ τοῦ ὕμνου) is natural. The object of the whole treatise (sc. on the emergence of laws and constitutions) is to show how to avoid and obviate the accidents which give rise to vice,” (p. 348) I am not sure that England’s use of the terms ‘natural’ and ‘accidental’ fits Plato, but essentially his explanation is surely correct and may be extended to the Laws in general. In the Republic too, vices and virtues grow with the growth of the civilization, with the development from the “healthy” to the “fevered” city; and it is Plato’s main aim to secure for his city a truly moral life.
ema to the defenders of the open society. In practice, however, no modern statesman, no “third” lawgiver charged with framing the constitution of the city of reality, can afford to neglect the problem that Plato poses\textsuperscript{123}; and there may now be a growing understanding of Plato’s attitude and of the need that he felt, when confronted with the alternatives, “better for science” and “better for man,” to decide for man. It will be the more important not to misinterpret his proposals or to take them in a spirit contrary to that in which he made them. Having discovered the infinity of the human task, he not only counseled caution and restraint but also asked for constant change and was eager to apply the spur to man, a sluggish horse by nature (Apology, 30 E), and to drive him on. He wanted him to do his utmost to improve himself and his environment for evermore.

It is true that the contemplative life, which Democritus and others had sanctioned, was given the highest rank by Plato too. It makes the soul invulnerable and brings eudaemonia, which can never be gained in the active life where pain and pleasure are inextricably interwoven. (Phaedo, 60 B.) In theoretical speculation the philosopher is transported to the “Islands of the Blest” (Republic, VII, 519 B), where he finds the true and timeless Golden Age, the state of felicity that many of Plato’s predecessors had hoped to find and some of his contemporaries still hoped to find at the ends of the oecumene or among the primitives.\textsuperscript{124} The Platonist is constrained to return, however, from the realm of Ideas to the realm of Becoming (519 D) and to toil “in the service of the state and [hold] office for the city’s sake, regarding the task not as a fine thing, but as a necessity” (540 B). He must reshape the world in the light of the new knowledge. Plato’s own writings, to use an

\textsuperscript{123} As already stated (above, note 102), the Republic and the Laws are in my opinion complementary and not contradictory. Moreover, both outline a theory of the constitution; but even the Laws does not give a blueprint for an actual city, which will have to be provided by the third lawgiver, who must reduce the theory of the Laws to what is possible under the circumstances, just as the Laws reduces the construction of reason in the Republic to the humanly possible.

\textsuperscript{124} Cf. above, note 26 and chap. II, p. 50 for the primitives; Boll (op. cit., p. 33 [ad p. 16]) emphasized the importance of the passage in the Republic in which Plato identifies the state of knowledge with life on the isles of the blessed.

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expression of Aristotle’s, are distinguished by “novelty of view” (Politics 1265 a 12; cf. 1266 a 35); but whether the realization of his proposed reforms or of any reform is possible, this question too Plato anticipated and answered by analyzing human possibilities just as he had analyzed the possibilities of the arts and sciences. In doing so he brought to light another and equally important aspect of progressivism. 125

His first concern in his investigation is what may be called a psychological prejudice. As he puts it in the Republic, any true craftsman “feels the difference between impossibilities (τὰ ἄδια) and possibilities (τὰ δυνατά) in his art and attempts the one and lets the other go” (II, 360 E). For the philosopher and his art feeling would of course not be enough. He must define the possible, which is not necessarily identical with the best, “for one might doubt whether what is proposed is possible and, even conceding the possibility, one might still be skeptical whether it is best” (V, 450 C). On the other hand, one must not think that the best is impossible just because it seems to be ridiculous in the present conditions (452 B). So people often do think; but experience shows that the ridiculous, which seemed better or the best to reason, is accepted by everyone when once it has become a fact. The criterion of a serious evaluation of the possible is nothing other than the good. (C–E; cf. 457 B.) 126

Bacon thought that “lack of hope is the greatest obstacle to the progress of science,” greater than veneration of the ancients or false planning; and so in his “plan for preparing man’s mind” for the task of progress “preparation to give hope is no unimportant part,” for the most serious despondency is due to the fact that “men despair and think things impossible.” (Novum Organum, I, 92.) 127

The hopes of the fifth century had been dimmed not only by its conception of the nature of the arts and sciences but also by its

125 I leave aside the question whether Plato ever engaged in political activities; but, even if he did not advise Dionysius and counsel reforms, it was still appropriate for him to deal with the problems of human possibilities in his theoretical writings. For the question of the Seventh Letter see below, note 130.

126 These remarks of Plato’s are reflected, I think, in the history of Tacitus.

127 The passage follows immediately upon the one quoted above, chap. II, p. 28.
conception of human nature. To avoid the impossible and to cling to the possible had been the teaching that it cherished. Plato tried to raise man's hopes by showing that in all too many cases what is regarded as impossible is simply the unaccustomed, which for that reason alone is ridiculed as unrealistic. He felt about the wits of his time the way the author of the History of the Royal Society did about those of the Restoration: "I believe the New Philosophy need not (as Caesar) fear the pale or melancholy as much as the humorous and merry."

After having prepared the ground for his argument, Plato could proceed to "the chief topic of contention" (457 D), the possible itself. Complete realization of the best must be recognized to be beyond human power. (472 E–473 D.) Man can achieve it only "in the measure of the possible" (VI, 501 B) or "as far as it is possible for man," to quote the famous Platonic phrase (cf. Theaetetus 176 B and Timaeus 90 B–C). This is not a phrase of meek humility, for, granting the difficulties involved in doing even the possible (VII, 540 C), it must be assumed that, if there is the wish to achieve it, "it has been, is, or will be achieved." (VI, 499 D.) "In all the course of time" it can happen (502 A–B), or in the words of the Laws time is "vast and incalculable," and infinite changes have taken place during infinite ages in the past. (III, 676 A–B; cf. VI, 781 E–782 A; also Republic VI, 499 C.) Customs and especially sexual mores have during the course of history been altered to an almost incredible degree under the impact of social institutions, which subjugate the instincts. (Laws VIII, 838 C–D.) Men are readily inclined to deem further changes impossible (839 C), but in fact they are not "beyond human nature." (D.)

So Platonic idealism was not so niggardly in drawing the limits imposed upon man as were the Pre-Socratics. The Beyond, the new dimension of the realm of Ideas which it added to the world of phenomena, showed human nature to be stronger than does the experience of what men call reality. Reference to what is is there-

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fore not an argument against what could be. *De non esse ad non posse non valeat consequentia.* Man is free to make an ever greater effort to gain knowledge and to produce ever more beautiful and useful things. Perfection is denied to him, but to strive for it continually is his prerogative. Perfectibility is his from his birth and dies only with his death.\footnote{130}

In the light of this Plato’s position with regard to progress should be clear. The constant change to which man’s views are subjected by the endless progress of the arts and sciences is matched by the changeability of his own nature, which of itself offers no resistance to the novel but is malleable and like society in need of receiving shape and form. Both man and society must use whatever knowledge may be available as an instrument with which to model themselves; and, since knowledge progresses, this process will necessarily go on forever. It will take the right direction only if time is allowed for criticism and for careful consideration of the new. That is why one must supervise progress and transform unconscious adaptation to what is new into conscious acceptance; or, in Plato’s words, just as the individual must mould himself so the legislator must “practice stamping on the plastic matter of human nature in public and private the pattern that he visions there” (*Rep.* VI, 500 D). Nothing can be left to chance, for otherwise what could be a beautiful work of art might become ugly and distorted;\footnote{131} but, if man uses reason, if in human affairs he does not feel himself to be at the mercy of chance and opportunity or leave everything to god,

\begin{footnotes}
\item[130] The peculiar nature of Plato’s interpretation of the humanly or objectively possible and of his ethico-practical conception of the possible is clearly recognized by A. Faust (*op. cit.*, I, 47 ff.) and is contrasted to his concept of ontological possibility, which acknowledges the really existent as a limit in the explanation of the world of sense-phenomena (pp. 56 ff.). J. Stenzel (s.v. Speusippos, *R.-E.*, III A, 2, col. 1651, 11 ff.) finds in the seventh Platonic Letter “the infinity of paideia”; but I do not believe that the letter is genuine (cf. Edelstein, “Plato’s Seventh Letter,” *Philosophia Antiqua*, XIV (Leiden, 1966)).
\item[131] This activity of the legislator in the end includes the true education by which the little soul, if it is “hammered from childhood,” is “struck free of the leaden weights, so to speak, of our birth and becoming, which attaching themselves to it by food and similar pleasures and gluttonies turn downwards the vision of the soul” (*Republic* VII, 519 A). Adam in his commentary on 518 C aptly compares Plato’s theory of education to the thought frequently expressed by Michelangelo “that every block of marble contains a statue and that the sculptor brings it to light by cutting away the encumbrances by which the ‘human face divine’ is concealed.”
\end{footnotes}
“if there is art as well,” things will get better. (Laws IV, 709 B ff.) With the Platonic ethos of infinity comes a measured optimism, a tragic optimism, as it were, superseding the tragic pessimism of the Pre-Socratics. In terms of human time men are “the playthings of the gods”; but in terms of “everness” teleology prevails. This creed can issue in a shallow overconfidence and did; but this was not so in the beginning when Platonic “futurism” generated the hope that the further search first envisaged by Xenophanes would lead men to heights of which they had hardly dreamed.\footnote{132}

Aristotle’s initial approach to the problem of progress is very much in the Platonic vein, for like Plato he considered it in principle within the framework of political theory. When he discusses the law proposed by Hippodamus, he first makes a number of general objections: such a proposal to reward inventors might encourage informers; it might lead to political commotion; more important, it may be asked whether changes, even changes for the better, are not inexpedient for other reasons and in fact destructive of the constitution. (Politics II, 8, 1268 b 22–31.) He observes that something can be said for both sides of the case. It is certain, on the one hand, that in politics as well as in the arts and sciences changes have been advantageous, that the relics of ancient customs still in existence here and there are “utterly absurd” and illustrate the benefit of change from traditional usages to new practices, that further improvement of political institutions will be necessary if for no other reason than that the law in its universality cannot cover all the particular circumstances that may arise. (1268 b 31–1269 a 13.)\footnote{133} On the other hand, however, changing the laws light­heartedly may create distrust in the rulers, a disadvantage greater than the possible benefit, and also weakens the power of the law and obedience to it, which is grounded solely in the force of cus­tom, custom that takes a long time to establish itself. All this, he observes, is quite otherwise in the arts and sciences; and furthermore, if a change of laws is to be recommended, the questions arise whether all laws are to be altered and whether they are to be altered

\footnote{132} Cf. below, pp. 126 ff.

\footnote{133} This argument is Platonic in origin (cf. Politicus 294 A–C), and Plato himself makes use of it in his Laws in order to explain why in fixing penalties and fines the law must give some freedom to the courts (III, 875 D—876 A).
by anyone whomever or only by certain persons, for it makes quite a difference which alternative is chosen. (1269 a 13-27.)

At this point Aristotle breaks off the argument because, he says, it properly belongs to another occasion (1269 a 27 ff.); and unfortunately the discussion, the only continuous one of this kind preserved from the fourth century, is not taken up again in his works. The drift of his reasoning emerges clearly, however. The proposal of Hippodamus, “specious to the ear” (1268 b 24), is seen to be fallacious as soon as one recognizes the fact that the modus operandi of progress varies in the various fields of human activity. Politics, to be sure, is an art like other arts; and yet in political life the conditions are different from those that exist in medicine or other crafts and sciences. The analogy with other arts and sciences therefore is partly right (1268 b 34-38; 1269 b 8-10), and partly wrong (1269 b 19; cf. also III, 16, 1287 a 33).

This is Aristotle’s characteristic method of clarifying the vague comparisons made by the Pre-Socratics and thus of avoiding the errors that arise from their unrestricted use of analogies. It preserves the force of the analogy on which his predecessors had based their belief in progress but specifies it and delimits its use. Political advance thereby gains a certain autonomy, for here the particular exigencies of the art outweigh the advantages of improvement at least to some extent. Thus mainly by logical analysis Aristotle arrives at a conclusion not unlike that of the moralist Plato. The current economic system, he thinks, can and should be improved “through correction of human behavior and through the enactment of right laws”; and, ironically enough, only then will it be superior to the communism advocated by Plato. (II, 5, 1263 a 21-24.) The measures to be taken, however, will have to be adapted to the specific political conditions. Restraint is as essential here as is the will to make innovations.

124 Barker in his edition assumes that a few words of Aristotle’s discussion have been lost from the text, and this is not impossible.
125 For the Aristotelian conception of analogy and the way in which it differs from that of the Pre-Socratics cf. O. Regenhogen, Quellen und Studien zur Geschichte der Mathematik, B: I (1930), 150-152 and 148 ff. For the Pre-Socratics, see above, chap. II, p. 31.
126 Aristotle’s hesitation is due in part to his belief that the past can teach the present; see below, p. 123.
In matters other than politics Aristotle apparently saw no reason to warn against unchecked progress. After speaking of the circularity of the heavens and proposing his own views, he adds that “whenever anyone should succeed in finding proofs of greater precision, gratitude will be due him for his discovery; but for the moment, we must be content with a probable solution.” (On the Heavens II, 5, 287 b 34–288 a 2.) Anticipating the modern conviction that theories must change in accordance with new data, he also recognizes that regarding certain biological problems the facts “have not yet been sufficiently grasped: whenever they are, credence will have to be given to observation rather than to theories, and to theories only if what they affirm is in agreement with the observed facts.” (De Generatione Animal. III, 10, 760 B 30–31.) Elsewhere he expressed the conviction that in some fields not even the first steps had been taken. (Rhetoric, I, 2, 1358 a 6 ff.\textsuperscript{137}

Aristotle seems not to have agreed, however, with the belief of his friend and master that encouragement by the state is necessary for the advancement of scientific studies. In his opinion, as has been indicated, the sciences had recently progressed more than ever before, more even than the arts and crafts, and this despite the fact that scientists and philosophers were not rewarded by the community and were often discouraged rather than encouraged in their work. The gains made nevertheless were due to the greater worth of theoretical studies (Fr. 53 [Rose]= Iamblichus, De comm. math. scientia, 26; cf. Fr. 52 [Rose]= Proclus, In Euclid., p. 28, 13 [Friedlein]).\textsuperscript{138} No matter whether it is the approval of society or the personal initiative of the individual that is responsible for progress, however, there is much to be improved, and one must certainly go on without fear of possible disadvantages, for, as he says in defending himself and his attempt to turn rhetoric into an art: “If it is argued that one who makes an unfair use of such faculty of speech may do a great deal of harm, this objection

\textsuperscript{137} Other passages in which Aristotle deprecates the insufficient results thus far achieved in the solution of particular problems are collected by Eucken, Die Methode der Aristotelischen Forschung, p. 5, note 4; cf. also Meteorology II, 5, 362 b 12 ff.

\textsuperscript{138} Aristotle’s description of the situation is quite accurate: like the city-states of the fifth century those of the fourth, if not opposed to scientific studies, were at least disinterested in them; cf. Edelstein, J.H.I., XIII (1952), 596 ff.
applies equally to all good things except virtue and above all to those things which are most useful, such as strength, health, wealth, generalship, for as these, rightly used, may be of the greatest benefit so, wrongly used, they may do an equal amount of harm.” (Rhetoric I, 1355 b 1 ff.)

As for Plato this future progress for Aristotle is progress within a single civilization, for both of the founders of Greek idealism assumed the incidental destruction of human civilizations by the blind forces of nature and the rebuilding of cultures after nature had wrought its havoc and both believed that some of the insights gained in the earlier period survive into the later one. The wisdom of a former culture and its insights into the truth are reflected in the inspired sayings of the early poets. (Metaphysics XII, 8, 1074 a 38–b 14.) Not all knowledge can have become extinct or degenerate before the destruction of the people; and Aristotle did not believe either in an eternal recurrence of the same things. The metaphor of the cycle of time denoted for him, as it did for Plato, the mutability of all things or as he expresses it himself: “We say that human affairs and those of all other things that have natural movement and become and perish seem to be in a way circular because all these things come to pass in time and have their beginning and end as it were ‘periodically,’ for time itself is conceived as ‘coming round’: . . . to call the happenings of a thing a circle is to say that there is a sort of circle of time.” (Physics IV, 14, 223 b 24–29.) The theory of recurrent world-cycles he rejected; or rather, admitting an identity in kind but not in number, he believed in no more than “a continuous repetition of the same generic types of entities or states,” that is in what is called “theory of endless

139 A similar argument was later used by Seneca; cf. below, chap. IV, p. 172. Indirectly Aristotle’s remarks refute the Cynic position, of course.

140 Cf. Aristotle, Metaphysics XII, 1074 b 10, and the passages quoted by W.D. Ross, Aristotle’s Metaphysics II, 396 ad loc.; and in general cf. Jaeger, Aristoteles, pp. 138 ff. As Bernays showed (see above, note 76), one cannot conclude from the passage that the arts themselves were destroyed or that they decayed in the preceding civilizations; for the expression ἐν τῷ πολυτρόν cf. below, p. 125. Knowledge also survives from one civilization to the other in the form of proverbs (Bernays, op. cit., p. 49); and the Aristotelian theory on the whole goes well with that of Plato, as Bernays also noted, though Plato believed in destructions that affect the whole world, while Aristotle had in mind partial devastations.
undulation." If absolute decay has no place in cosmic history, it is absent also from the history of the arts and sciences and of political institutions. These too are mutable, no doubt; but the direction in which they change depends upon free human decisions. Aristotle did not favor any more than Plato did an absolute determinism or absolute causality which would prescribe an inexorable course of events.

Did he, then, also share Plato's expectation of endless progress as long as man is at work undisturbed by the threats of hostile nature? Surely Aristotelian philosophy, so much more involved in the study and explanation of natural and historical data than was that of Plato, ought to have been predisposed to give free reign to the inquiring mind; and its pathos of historicism and experience seems to call for unlimited progressivism. It has consequently been as-

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141 Lovejoy and Boas, op. cit., p. 173; cf. p. 172; and G. Boas, "Some Assumptions of Aristotle," Transactions of the American Philosophical Society, N.S. Vol. XLIX, Pt. 6, p. 55, note 10. On Aristotle's conception of time cf. W.D. Ross, Aristotle's Physics (Oxford, 1936), p. 612 (ad 224 a 2): "Aristotle here points out that the sayings which describe time as the motions of the heavenly sphere, or as a circle, are natural exaggerations due to the close relation between time and its primary measure, which is the circular motion of the heavens." In Physics IV, 13, 222 b 17-27 Aristotle says expressly that time is only incidentally the cause of things, that things are destroyed not by time itself but by changes that occur concurrently. E. Frank maintained that he understood time to imply world cycles similar to the cycles of Empedocles (cf. above, chap. II, p. 46 and note 54); cf. E. Frank, Philosophical Understanding and Religious Truth, p. 82, note 41 and Baillie, op cit., p. 47. The "Great Year" is mentioned by Aristotle perhaps once (Meteorology I, 14, 352 a 30) but without any reference to periodic destruction of the earth or of civilization. For the relation of these considerations to the problem of progress see above, Introduction, pp. xx ff.

142 I cannot agree with Lovejoy and Boas, who on the basis of Metaphysics XI, 1074 b 10 assume that there is "a process of development and decline in the case of each art" (op. cit., p. 173), for this passage like others refers to destruction by sudden catastrophes (above, note 76), which take place at any time. The same authors, having analyzed Aristotle's opinion concerning the sequence of the forms of social organization (pp. 174-177), conclude by saying that of constitutions "those which are faulty and perverted are necessarily subsequent to those which are perfect" (Politics III, 1275 b 1-3); but Aristotle's ideal state like Plato's has no existence in time and space, and his account of the changes that take place "is not really historical, but rather, like Plato's account, logical," or "rests . . . on ethical preconceptions" (Barker, Greek Political Theory, p. 245, note 3). Aristotle's and Plato's conceptions of freedom of action and of causality are hardly ever considered in connection with the law of decay attributed to them, and yet these conceptions seem to make it a priori unlikely that such a law could have been accepted by either one.

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serted that in the spheres of investigation and speculation at any rate Aristotle recognized "no end within the view of any man." 143

It is precisely in Aristotle's appreciation of the past and of experience, however, that there are indications of his having abandoned Plato's position. As he writes in a biting criticism of the latter's political dreams, "We are bound to pay some regard to the long past and the passage of the years in which things (advocated by Plato) would not have gone unnoticed if they had been really good. Almost everything has been discovered already, though some of the things discovered have not been coordinated, and some, though known, are not put into practice." (Politics II, 5, 1264 a 1-5.) In other words, here the pathos of human experience and of history becomes a hindrance to the extension of experience rather than a stimulus to further experience. 144

Again, in discussing the development of tragedy, Aristotle seems to imply that there is in fact also a high point in the development that cannot be surpassed. To be sure, this may not be the meaning of the famous statement that tragedy, having undergone many alterations, "stopped because it had found its natural form." (Poetics IV, 1449 a 14 ff.) In all skills and disciplines, Aristotle contends almost paradoxically, artistic or scientific products (τὰ ἀπὸ τῶν τεχνῶν) can be created even before the art itself has been acquired (Soph. Refut., chap. 34, 184 a 2-3), for the capacity to do things artistically, in the strict sense of the word, exists only when the reason for what is done by custom or chance has been recognized and understood. (Rhetoric I, 1, 1354 a 6-11.) Consequently, the passage of the Poetics may mean only that the great Attic poets established tragedy in its essentials, just as they eliminated from

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143 R. McKean, Ethics, I I (1940-41), 95; cf. 96. (I have been unable to consult W.R. Krug, Dissertatio de philosophia ex sententia Aristotelis plane absoluta, nec tamen unquam absolvenda, 1827.) The opposite view is taken e.g., by Eucken, Die Methode der Aristotelischen Forschung, p. 5 and H. Meyer, "Zur Lehre von der ewigen Wiederkunft aller Dinge," Beiträge zur Geschichte des christlichen Altertums und der Byzantinischen Literatur (Festgabe Albert Ehrhard [Bonn and Leipzig, 1922]), pp. 363 ff.

144 Only where observation has not yet yielded sufficient data does Aristotle expressly refer to the value of a more far-reaching exploration; cf. above, pp. 120 ff. Barker goes too far, however, when he speaks of Aristotle's "deep respect for the general wisdom of the ages" (The Politics of Aristotle, p. 72, note 1).
this art certain metres and other features not properly belonging to it though formerly part of it (1449 a 15-31); and so improvements may still be possible even after the right technique of composing tragedy and its appropriate subject matter have been discovered. In fact, Aristotle himself, before admitting that tragedy had reached its "natural form" in the fifth century, raises the question whether or not it is "fully developed by now in all its various species." (Poetics IV, 1449 a 7 f.) He does not answer this question, but the question itself shows that he reckoned with the possibility that such full development might be achieved at a particular moment.\[145\]

Warned by Aristotle himself that analogies must be used with caution and that what is true in one field of human activity need not be true in all, one should hesitate to regard these statements about the arts of politics and poetry as evidence for his general outlook on future progress; and yet they are confirmed by other statements of his that put the matter beyond any reasonable doubt.\[146\] Aristotle expected "philosophy to be completely worked

145 That the words ἡ ἀριστερή ἤ τον ἰσόπος φιλοσ συν (1449 a 15) refer to the constitution of the tragic art as art and not to its perfection was shown by M. Vahlen, "Beiträge zu Aristoteles' Poetik," Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Phil.-Hist. Classe (Wien), L (1865), 379 f., who rightly compared the definition of art in Physics II, 1, 193 a; cf. also Franz Susemühl, Aristoteles über die Dichtkunst (2. Auf.; Leipzig, 1874), p. 225, note 43. Contrary to Meyer, op. cit., p. 364, the passage does not show that for Aristotle all arts have a predestined end. A. Gudeman interpreted the sentence in question in its relation to the preceding statement concerning the possible completion of tragedy (op. cit., pp. 135 f.); and, believing that when it had found its natural form it had indeed been perfected, he says: "Sobald aber der Begriff der φιλοσ eines Sache eine Bereicherung erfährt, ist auch ihr φιλοσ gleichsam vorgeschoben. Deshalb konnte A. oben die Frage aufwenden, ob die Tragödie nicht dennoch einer weiteren Entwicklung, d. h. über Sophokles hinaus, fähig wäre" (ad 1449 a 15). Even though the φιλοσ of a thing is its φιλοσ (thus Gudeman, comparing Politics I, 2, 1252 b 32), it does not follow that, once this φιλοσ is apprehended, nothing further can be added. Thus Aristotle despite his conviction that he had founded the art of logic admits that his investigations remain incomplete (Soph. Refut. chap. 34, 184 b 6 ff.). On the other hand, no passage supports the assumption that the φιλοσ can ever be changed or extended. The brief characterization of the development of tragedy down to Sophocles describes, I take it, the constitution of tragedy as an art form rather than the supposedly final perfection of all its rules.

146 Parallels drawn from the development of the fine arts are especially dangerous, since the belief in absolute aesthetic standards is not at all irreconcilable with a belief in the endless advance of science. This is true of later centuries in antiquity and in modern times, for example, of the ardent progressivist Fontenelle (cf. Bury, The Idea of Progress, p. 105).
out within a few years." (Fr. 53 [Rose] = Cicero, Tusc. Disput. III, 28, 69.) Even if this prophecy was made by the youthful philosopher in a burst of exuberant enthusiasm befitting his age, in his later years looking back on past civilizations he maintained that the arts and philosophy had been developed many times "to the extent possible" or "to the utmost." (eis τὸ δύνατὸν; Metaphysics XII, 8, 1074 b 10 f.) Remarks on the manner in which advance is brought about in all arts and sciences also show that he foresaw an end to their possible improvement. Once the right approach has been determined, he says, "the remainder" can easily be added (Soph. Refut. chap. 34, 183 b 25 f.); or, as he puts it elsewhere, "anyone is capable of carrying on and articulating what has once been well outlined . . . anyone can add what is lacking [in the arts]." (Nic. Eth. I, 1, 1098 a 21–25.) As soon as the methodological problem has been solved and the aim established, the rest, he apparently thought, is child's play.148

As for infinity, there are three distinct kinds according to Aristotle. First, although the means by which the end of an art is reached are always limited by the end itself, the latter is indeed "infinite" (eis τὸ ἄπειρον) in so far as each art seeks to achieve of it "as much as it can" (ὅτι μάλιστα). The art of money-making, for example, recognizes no limit in the acquisition of wealth, just as medicine knows of no limit. (Politics I, 9, 1257 b 23–30; cf. 8, 1256 b 34–37.) To the technician or the expert the end of his specialty is the end of all ends, and he tries to produce it in infinite measure. This is obviously a specious infinity, for the positing of aims lies with philosophy and not with any art or science, the activity of which must be limited by values outside the art itself.149 Secondly,

147 For δύνατον in the sense of the limit to which one can go, cf. e.g., De Caelo II, 13, 294 b 7.
148 For the interpretation of these passages, cf. also above, pp. 70 and 121. Aristotle's only admission that research will continue in uncertainty is, so far as I know, his assertion that the fundamental questions of philosophy were raised long ago, are still being raised, and will always be raised (Metaphysics VII, 1, 1028 b 2–4; cf. above, chap. I, p. 5 on Xenophanes' similar statement); but even this statement hardly justifies the conclusion that he considered metaphysical problems to be insoluble, for questions do not necessarily cease to be asked even after the solutions have been found.
149 Aristotle mentions medicine among others as one of the arts for which "progress" is beneficial (cf. above, p. 118). The determination of the aim by
while men who are satisfied even "with a modicum of virtue" (VIII, 1, 1323 a 36) seek for external goods in infinitum (ēs ἀπειρον; 1323 a 38), all external goods are in fact limited, for they are nothing but instruments for achieving an end. It is men who "are never contented until they get to infinity, for it is the nature of the desire to be infinite" (II, 7, 1267 b 2-4). There is only one true kind of infinity: of the goods of the soul it can be asserted that the greater they are the more useful they become, "if indeed it is proper to predicate 'utility' at all here, and we ought not simply to predicate 'value.'" (τὸ καλὸν [1323 b 11-12].) In other words, while philosophy and ethics can be perfected, there is no quantitative limit to the individual's improvement in moral and intellectual virtues, contemplation and its "growth into itself [its own full nature and actuality]." (On the Soul II, 5, 417 b 6 ff.)

One must conclude, then, that in the development of every art and science there is for Aristotle a stage of excellence not to be surpassed. Since in earlier civilizations this was attained only "many times" (πολλὰκις; Metaphysics XII, 8, 1074 b 10), there obviously is no certainty about its being attained in every civilization. Once it is attained, men are privileged to maintain perfection in knowledge and to practice it throughout the time allotted to the flowering of their culture. Man's craving for infinity can be satisfied not by striving endlessly for more things and new insights but only within the confines of his inner life by thinking the truth, i.e., thinking immortal thoughts. (Nic. Eth. X, 7, 1177 b 31 ff.)

Why is it that Aristotle substituted for the Pre-Socratic pessimism concerning the future not Plato's expectation of ever further

philosophy is illustrated e.g., Eud. Eth. II, 12, 1227 b 25 ff. (see L. Edelstein, "The Relation of Ancient Philosophy to Medicine," Bulletin of the History of Medicine, XXVI [1952], 310.) Aristotle transfers to the individual the responsibility that Plato puts on the state (see above, pp. 112 f.).

150 For other aspects of Aristotle's thoughts on infinity (disregarding space and time) see J. Burnet, The Ethics of Aristotle, xvi, note 3.

151 As has been pointed out (above, p. 121 and note 141), Aristotle recognized a recurrence of generic and not numerical identity (so did his school, Ps.-Aristotle, Problematha XVII, 3). This is confirmed by the fact that, speaking in the Metaphysics of the possible perfection of philosophy and the arts, he uses the word πολλάκις, whereas the reestablishment of civilizations and of the same opinions he calls a phenomenon that occurs "not once or twice or rarely, but infinitely often" (Meteorology I, 3, 339 b 27-30).

152 Cf. below, p. 128 and note 155.
advance, an expectation audacious enough, but rather an even more daring anticipation of actual perfection in the arts and sciences? Some have found an explanation of this in his “empiricism,” in his reliance upon sense-perception, or in the fact that when the study of nature depends upon the naked eye instead of instruments like the microscope or the telescope, what is easily observed is likely to be taken for the complete nature of being and to satisfy the observer. Factors of this kind may have been responsible in part for Aristotle’s attitude; but the ancient scientists, for whom these factors were the same, were not influenced by them to draw the same conclusion. Moreover, even if science instead of creating such instruments as it needs is limited by those at its disposal, this would account at most for Aristotle’s attitude to the natural sciences, whereas the perfection that he envisaged is perfection in all fields. In the last analysis, therefore, his attitude must have been caused by his specific way of thinking, his metaphysics, and more especially its essential difference from Plato’s.

Aristotle rejected the notion that the Ideas exist in a Beyond and insisted instead that they are immanent in matter. The existence of particular things is in his language synonymous with that of the Ideas or rather of universals and separable only in thought. While for Plato “possibility” extends to that imitation of the true reality which can never be the latter’s adequate representation and for the Pre-Socratics is limited by the factual data, for Aristotle the “potential” is only the “actual” as yet unrealized. The latter, it is true, is not always realized completely, for failures occur in nature no less than in the arts and sciences (Physics II, 8, 199 a 15 ff.); but the actual, the universal, the essence of what is, preexists, as it were, for

153 Cf. Eucken, Die Methode der Aristotelischen Forschung, pp. 138 ff., especially p. 140 (also 6). Aristotle may have expressed his hope for the completion of philosophy in the Protrepticus; cf. Jaeger, Aristoteles, p. 97. Cicero, quoting Aristotle, implies that he did not see or expect to see the day when his prophecy would come true, for he did not complain about living in a state of “non-wisdom” (Tuscul. Disput. III, 28, 68). According to Lactantius (Inst. Div. III, 28), however, Aristotle thought that philosophy would be completed by his successors (a posterioribus), in which expectation, Lactantius adds, he was refuted by the facts. Lactantius said this in the light of later skepticism, whereas Cicero interpreted Aristotle’s statement in the light of Stoicism. Whatever Aristotle may have felt in his youth, however, he must have known as the head of his school that he was leaving some work to be done by his pupils.
it precedes the act of realization and, determining the development of things in time, shapes them towards their final goal.\textsuperscript{154}

Like any other potentiality, therefore, the potentiality of the arts and sciences moves towards a predestined end. Artisans and scientists “either on the basis of nature carry things further than nature can or they imitate nature.” Natural and artificial processes are both purposeful, “for the relation of antecedent to consequent is identical in art and in nature.” (\textit{Physics, ibid.}) Instead of being based on hypotheses for which they are incapable of giving a sufficient explanation, the sciences are securely grounded on self-evident axioms, and perfectibility after a prolonged struggle turns into perfection at a definite moment of time. Man is able to attain to the truth; and in such a universe as this of Aristotle’s “those who know will spend their time more pleasantly than those who inquire.” (\textit{Nic. Eth. X, 7, 1177 a 26 ff.})\textsuperscript{155} Thus the quest for knowledge ceases to be an endless search and comes to rest in its secure possession. The flight to the There is transformed into its contemplation in the Here. With the breakdown of the theory of Ideas the pathos of infinity vanishes, and is replaced by the \textit{non plus ultra}.\textsuperscript{156}

\textsuperscript{154} Concerning the Pre-Socratics and Plato, see above, pp. 116 f. and chap. II, pp. 27 ff. In my account of Aristotelian metaphysics I follow E. Frank (\textit{Wissen, Wollen, Glauben}, pp. 86 ff.). For the conception of possibility in particular, see Faust, \textit{op. cit.}, I, 83 ff.

\textsuperscript{155} While Plato does not allow the philosopher to stay on the “Islands of the Blest” (above, p. 114), the Aristotelian may dwell there (cf. Fr. 58, p. 68, 3; p. 69, 1 [Rose], and Boll, \textit{op. cit.}, note 34 ad p. 16). If Lessing’s God had offered Aristotle the choice between infinite search and possession of the truth, he would have chosen the latter.

\textsuperscript{156} This seems to be true also for other associates of Plato. So Xenocrates is said to have taken the same attitude as Aristotle (Cicero, \textit{De Finibus IV, 6, 15 ff. = Fr. 79 [Heinze]}), but too little is known about him to be sure that this assertion is correct and is not just part of the attempt to elaborate a common dogma for the generation after Plato. The system of Speusippus, who remained more faithful to the founder of the Academy, looks as if it had made room for Plato’s progressivism, for Speusippus held that “the more perfect forms are always produced from those which are indeterminate and imperfect” (Fr. 34 e [Lang] = \textit{Metaphysics XIV, 5, 1092 a 9}) and in such a cosmic evolutionism, based as it was on biological analogies, perfection might have been represented as an unattainable goal. In fact, however, Speusippus like the Pythagoreans merely asserted that “perfect beauty and goodness do not exist in the beginning” (Fr. 34 a [Lang] = \textit{Metaphysics XII, 7, 1072 b 30–34}) but contrary to Aristotle’s opinion are the outcome of development rather than its determining and limiting factors.
The same philosophy that deprived the arts and sciences of what was to be their greatest dignity in later centuries gave them, nevertheless, a new and honored place in the understanding of the world and of man. Isocrates had thought a little knowledge of the sciences to be a prerequisite for the cultured but that for the rest their worth is merely pragmatic. Plato had seen in certain sciences, if studied in the way that he proposed, the stepping-stones to the absolute; but he had not thought it to be their business to comprehend the phenomena, for this the philosopher does according to his own method, which integrates the data available into a unity. With Aristotle the arts and sciences acquired a value peculiarly their own. The philosopher does determine their limitations; and research itself cannot be separated from metaphysical considerations, so that the educated person can have a critical estimate of its principles. (On the Parts of Animals I, 639 a 1 ff.) Insight into the phenomena themselves, however, is given only by the arts and sciences, which must not shun any object "be it ever so mean" (645 a 8)—"the mean and even filthy things" of Bacon—for "there are gods even here." (645 a 22.)

This was to set a pattern for the further development of all scientific studies; and Aristotle’s endorsement of experience and insistence on the collection of data and the scrutiny of details lent him an importance for later progressivism almost equal to Plato’s, despite his rejection of those Platonic concepts which were to lend the movement its most daring aspirations.

This analysis of Plato’s thought and Aristotle’s must incidentally have made it clear that in the debate during the fourth century different aspects of progress were accentuated. While Isocrates thought of progress in terms of human culture and Xenophon in terms of social and economic improvement, Plato and Aristotle maintained that man by continually making greater efforts in all fields of activity reaches out for an objective realm of Being, the truth of metaphysics. It should also be noticed that the evidence

for the topic of progress in this century and especially the topic of future progress comes from books written by men who were reactionaries rather than liberals in politics. Plato and Aristotle and Isocrates and Xenophon, none of them shared the prevalent creed of their age, the trust in complete democracy. Their ideals were constitutions resembling the form of government that existed in Greece in the fifth century and earlier or even the monarchical rule of countries outside Greece. Nevertheless, they were not deluded into romanticism. They preferred political principles that had found recognition in the past, but they did not wish to revive the past. None of them preached or hoped for the return to a life that was gone forever. Intent on reviving values that they thought had been mistakenly discarded, they adapted those values to the requirements of their own day and fused them with values that were new.¹⁵⁸

That men of various political creeds all bowed to the idea of progress is the strongest proof of the fact that it was now the vogue. The saying of Aristotle’s that “all men as a rule seek to follow not the line of tradition (τὸ πατρὸν) but the good (τὸ ἀγαθὸν)” (Politics II, 8, 1269 a 3 ff.) seems to express a belief especially characteristic of his age. An amazing change had taken place since the time when Xenophanes had first spoken of progress and only a very few had been daring enough to trust in man’s strength against the almost solid opposition of the old. The transformation could not have come about had not the city-state broken down and men been set free to go their own ways and to cherish their individuality.¹⁵⁹

The progressivism of the intellectuals which expressed itself in works designed to surpass earlier achievements is, nevertheless, like a bright spot in an otherwise dark picture. Some of the new ideas,
to be sure, made their way into common life. People were no longer disturbed by philosophers who called the sun and moon material rather than divine bodies. (Plato, Laws XII, 967 A; cf. Epinomis 983 C.) Learning was disseminated far and wide. In Aeneas' book, On the Defense of Fortified Positions, it is stated as a matter of course that in cases of emergency "citizens of neighboring states residing in the city for the purpose of education" should be registered (X, 10.) The artists of the period created the most humane and refined types of divine statues ever to come from Greece. Yet on the whole, it appears that what was most cherished in the progressive rationalization of life was the greater economic gain, the principle of the division of labor, the improved chances for successful maritime trade. The life of the upper classes lost its simplicity; and luxury not only increased but became respectable. A man acquired fame, if not as an athlete or a citizen any longer then as a gourmand or, if not rich, as a parasite, as the man who went wherever he was given a free dinner and in exchange sang the praises of the host. Actors and hetaerae were as notorious as generals or kings.¹⁰⁰

Nor can it be denied that there was moral decay which was largely the result of the new individualism. Licentiousness prevailed despite the fact that there were exemplars of all "Panhellenic virtues," such as Epaminondas, Pelopidas, and Demosthenes. The recriminations of orators, statesmen, and philosophers may be tinged by partisanship; but, when one finds in Aeneas' book that "more than half his military admonitions are directed toward preventing treachery and forestalling revolution," and when one reads his reports of the horrible crimes that were committed (e.g., XVII, 2 ff.), one must admit that the poor and the rich lived together "always plotting against one another," as Plato says (Republic VIII, 551 E), and that because of lust for material gain internal enmity had become more threatening than all external perils.¹⁶¹ If

¹⁰⁰ Cf. in general Burckhardt, Griechische Kulturgeschichte IV, chap. IV ("Der Mensch des IV. Jahrhunderts").
¹⁶¹ The characterization of the book of Aeneas and the comparison of the pictures of contemporary life given by it and by Plato are borrowed from W.A. Oldfather's introduction to the translation by him and Pease, The Loeb Classical Library, pp. 16 ff.
later progressivism taught the “homo homini deus,” this progressivism of the fourth century proclaimed the “homo homini lupus.” This immoralism was not even the immoralism of strength and independence. The Olympian religion had lost its influence; but Oriental cults had made inroads (Demosthenes, 18, 259), and magic now was practiced. There were those who clung to the mysteries of Demeter, “whose initiates are blessed with sweeter hopes concerning the end of life as well as all eternity” (Isocrates, Paneg. 28); but the time was soon to come when men, whose ancestors had turned away from leaders aspiring to deification, would be lavish in deifying generals and rulers because their help was near at hand, while the gods—if they existed at all—were far away and did not give succor. (Athenaeus, VI, 253 d ff.)

It is difficult to say and perhaps even gratuitous to ask whether people were happier in their freedom from tradition than their fathers had been under the authority of the law. A verdict passed upon the happiness or unhappiness of past generations instead of being objective usually states the preferences of the judge; but, no matter how much the laudatores temporis acti said in the fourth century about the preceding age or how much may be said in its favor today, one could not wish away the change that had come about. A great world had come to its end; but a new world was being created, the greatness of which was to be open to all. Athens, the school of Hellas (Thucydides, II, 41, 1), was on its way to becoming the school of humanity; and the idea of progress was not the least of the teachings that men educated in this school were to receive.

162 For the interpretation of the passage from Athenaeus, the Athenian hymn to Demetrius Poliorketes, see V. Ehrenberg, “Athenischer Hymnus auf Demetrios Poliorketes,” Die Antike, VII (1931), 279 ff. Dodds (op. cit., p. 194) calls the revival of magic a phenomenon provoked by the Enlightenment. The practice of magic may have increased in the fourth century—more evidence of it is extant from this period than from the fifth century—; but I suspect that this happened because of a stronger emphasis on empiricism, for throughout antiquity it was the empiricists who favored acceptance of the experience of magical or sympathetic effects. See Edelstein, “Greek Medicine in Its Relation to Religion and Magic,” Bull. Instit. Hist. Med., V (1937), 229 ff. Concerning the Asclepius religion as “regression” see above, chap. II, note 75.