

Prometheus as Founder of the Arts

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IN EACH of the two great speeches in which Prometheus expounds his gifts to man (*PV* 442–71; 476–506), a series of practical arts is enumerated in ascending order. The first list concerns shelter (at least by implication) and agriculture; calculation and writing; the adaptation of animals (first for practical, then for ‘luxurious’ purposes, 446); finally, sailing, as the first stage in commerce with people across the seas. In the second speech (476ff), Prometheus begins his catalogue (perhaps in ironic response to the Chorus-Leader’s comment about his being a bad doctor, who cannot cure himself, 472–75) with medicine (by which one cures afflictions) and augury (by which one may forestall them). Last comes the discovery of metals (bronze, iron, silver and gold, in that order) beneath the earth. Once again, the ascending order is observed: as in the first list chariot-horses, “an adornment of wealthy luxury” (466), and ships for commerce were mentioned only after the more basic essentials of civilized living, so here metals (especially silver and gold, the last ones mentioned) as *ᾠφελήματα*, ‘aids to living’ (501), will be relevant only to a more advanced stage in civilization.

There are several interesting features of this account of Prometheus’ gift of the arts. First, the ascending order (though not consistent in all details) suggests an evolutionary sequence, as if each new art were discovered in response to the new needs of a higher level of civilization, once the needs at the lower, more pressing level had been met. Such a sequence (we shall see) is normally descriptive of man’s own ingenuity in meeting each new challenge. One is reminded, for example, of Sophocles’ *secular* account of man’s ascending series of accomplishments in the so-called “Ode to Man” in *Antigone* 332ff.

Next we may note what may appear to be merely stylistic variations (which do, indeed, relieve the account of tedium) but which may reflect something else as well. In Prometheus’ first speech on the arts, after his general claim to have made men intelligent when, previously, they had been witless, we find the following introductory passage (447–58):

In the beginning, then, men had eyes but saw not, and hearing did not really hear; rather, like shapes of dreams, all their life long they confused all things at random. They knew nothing about building houses of brick, facing the sun; they knew nothing of wood-working; rather, like little ants, they lived underground in sunless caves. Nor did they know any sure boundary mark of the seasons, neither of winter nor of blossom-bringing spring nor fruitful summer but kept doing everything without thought or plan *till I showed them the risings and the settings of the stars*, so hard to understand.

Thus Prometheus' first list of his gifts-of-the-arts is introduced by a description of man's *state of need* (e.g., of proper housing, of knowledge of the agricultural seasons), which goes on for some dozen verses before Prometheus mentions any contribution from himself—and this despite the fact that at least one art (house-building) and the beginnings of a second (field-husbandry) are implied before Prometheus comes in with his claim to have indicated the seasons to men by teaching them the difficult art of astronomy. We *infer*, of course, that Prometheus taught them what they needed to supply these earlier lacks, but stylistically the passage is quite different from what follows: from here on (with one slight exception), Prometheus stakes his claim immediately and emphatically, with no preliminary description of the state of *need*, as soon as each successive art is mentioned. Thus (459ff):

And further, *counting* (*ἀριθμὸν*) I discovered for them and the putting together of letters And I first yoked monsters . . . etc.

The other slight exception to this procedure comes at the beginning of the second speech on Prometheus' 'gifts-of-the-arts'. Here again, before his claim to the invention of medicine, there is another description (this time much briefer) of the 'state of need' preceding the discovery (478–82):

. . . if anyone were to fall ill, there was no alleviation, no herb nor ointment, no trusty cure, but rather, in the lack of any drugs, men kept perishing until I showed them the mixings of gentle remedies . . .

Now the description of 'the state of need' (of which we have here suggested two vestiges in Prometheus' account of his gifts-of-the-arts) is, as we shall see, another feature of ancient 'evolutionary' accounts

of civilization in which *man* (sometimes with a vague initial reference to divine guidance) gradually discovers the arts in order to meet the successive exigencies of life.

Another stylistic feature of Prometheus' speeches on the arts is the *selection*, in each of the two lists, of one art for more detailed treatment. The second of these two selections (the description of various kinds of augury, vv.484–500) is, perhaps, a reasonable one in view of the 'promethean' attribute of the speaker (though it is not, of course, by these routes that Prometheus knows the future). But in the case of the first selection for some detailed treatment, the art of adapting animals to man's use (462–66), I know of no particular reason why this should be given prominence. *Conversely*, two arts which are given particular preeminence, number (*ἔξοχον σοφισμάτων* 459) and writing (*μουσομήτωρ' ἐργάνην*, 'Muse-mothering worker' 461), are given the briefest possible descriptions. One is tempted to explain both features (the extended description of two of the arts and the apparently truncated description of arts rather ill-suited to Prometheus) in the same way: perhaps Aeschylus is adapting material from some other (evolutionary?) account of the origin of the arts which provided a fairly extended treatment of each of them. One would not wish to press this evidence too far, however. It may be that no explanation except that of stylistic variation is necessary.

Finally, there is the question, how well is this account of the origin of the arts (and particularly this *selection* of the arts treated) suited to Prometheus, even as he is presented elsewhere in this play? First of all there is the complete omission of any reference to the gift of fire, which, though it can be 'explained' in a variety of ways, still remains odd in view of the emphasis earlier in the play on fire as the gift essential to all the arts and as the essential breach of the divine prerogative (see vv.7, 30, 109–11, 252–54). Then, again, why this particular *selection* of arts? Some are reasonably 'Promethean'—but why, for example, describe sailing and omit the potter's art? One might say that Prometheus claims all the arts and that some selection has to be made in the detailed treatment. But the selection seems to fit some independent 'evolutionary' account better than it fits the individual culture-hero Prometheus.

It seems probable, then, that in these two speeches Aeschylus is excerpting and adapting other more extensive accounts about the origin of the arts. Were these 'traditional accounts' in circulation from the

archaic period onwards, or more recent formulations, belonging perhaps to early sophistic thought on these matters? Or does Prometheus' account, with its curious selectivity and more curious variations in style and emphasis, reflect some kind of compromise between the two? Here we run into considerable difference of opinion among scholars as to the kind (and the date) of anthropological speculation which Aeschylus is here reflecting—and indeed not all scholars agree about the evidence for the kind of adaptation at which I have been hinting.

Reinhardt and Dodds are both firm in their conviction that there is nothing properly speaking 'evolutionary' or 'sophistic' in the Aeschylean Prometheus' account of the origin of the arts. Indeed, for Reinhardt the striking feature is the lack of suggestion (as he claims) of any natural development, e.g., "'With seeing eyes, they saw not—until *I* showed them the rising and the setting of the stars'. There is no change here which does not manifest itself in the contrast between intelligence and stupidity. The idea of reversal belongs to old myth and not to the sophistic idea of gradual development."¹ E. R. Dodds agrees with Reinhardt in describing Prometheus' anthropological speeches as "decidedly archaic and pre-sophistic."² To the point that there are no *stages* of evolution marked he adds that there is no recognition of the decisive influence of food-producing techniques (cattle-herding and agriculture) and no reference to the origins of communal life: technology takes a minor place, and the Aeschylean emphasis is on intellectual progress rather than economic necessity.

Dodds' observation of the limitations of Aeschylean anthropology provides a useful warning against linking it too closely with the more extensive accounts of cultural evolution that we find in Diodorus and other late sources, which some scholars trace back to fifth century influences.³ Nevertheless, both Reinhardt and Dodds seem too conservative in their estimate of Prometheus' account. In the first place,

¹ Karl Reinhardt, *Aischylos als Regisseur und Theolog* (Bern 1949) 50–51.

² E. R. Dodds, *The Ancient Concept of Progress and Other Essays on Greek Literature and Belief* (Oxford 1973) 5.

³ See Thomas Cole, *Democritus and the Sources of Greek Anthropology* (APA Monograph 25, Cleveland 1967), who develops and extends the arguments of K. Reinhardt, "Hekataios von Abdera und Demokrit," *Hermes* 47 (1912) 492–513. Neither Cole (cf. 50 n.8) nor Reinhardt, to be sure, regards the passages on the arts in the *PV* as having any systematic connection with Diodorus and the other later anthropological accounts; as we shall see, however, Diod. 1.8 is sometimes cited for comparison with the Aeschylean passages.

their denial of any hint of evolution is perhaps belied by the ascending order which we have observed in men's acquisition of the arts as Prometheus describes it. Granted the lack of any clear-cut stages in technological evolution, there is at least a hint of a specific advance from cave-dwelling to house-dwelling, with the implied discovery of brick-building and wood-working (449–53) and of a like advance from random livelihood (449–50) to the implied discovery of the seasons (essential for agricultural lore) through Prometheus' lessons in astronomy (454–58). So, too, the yoking of beasts for heavy labours is specifically mentioned among Prometheus' discoveries for men (462–65), and, indeed, mention of this technological advance is the only one which happens to be supplemented by a similar claim (now extended to horses, asses and bulls) on Prometheus' part at fr.108 of the *Luomenos*. Finally, Dodds seems to regard Prometheus as too purely "the symbol of reason,"⁴ when one considers the specific gifts of this passage; indeed, the significant omission of "communal life" (elsewhere—e.g., *Soph. Ant.* 354ff—regarded as a sort of pinnacle of intellectual advance) rather underlines the limitation of Prometheus' claims (for reasons yet to be discussed).

Dodds does mention Xenophanes (whom Aeschylus could have known as an old man in Sicily) as a possible influence on this passage but considers that no particular source or special knowledge was really needed for its contents. If (as seems reasonable) we do think of Xenophanes in this connection, however, we must also think of him as marking the division (as Edelstein has observed)⁵ between the depiction, in the old cult legends, of the arts and crafts as 'presided over by the gods' and 'co-eval with the world', and the idea of progress which began to develop in pre-Socratic literature. Xenophanes (B18 D–K) tells us, "Not all things, by any means, did the gods show to mortals; rather, as time went on, men found improvement by constant searching." This is admittedly a far cry from the way in which Prometheus puts the matter. Nevertheless, the conglomerate and yet curiously selective list of arts which he produces is not one which (leaving aside his final generic claim at 506–07) one would expect to find attributed to any individual culture-*daimon*.

W. K. C. Guthrie also sees 'the idea of progress' as originating with

⁴ Dodds, *op.cit.* (*supra* n2.) 6–7.

⁵ See Ludwig Edelstein, *The Idea of Progress in Classical Antiquity* (Baltimore 1967) 3ff, esp. 6.

Xenophanes and adds, "By the mid-fifth century we find scattered hints that a rationalistic view of man's development was being taught by the natural philosophers."⁶ Aeschylus Guthrie finds to be very much part of this development: though Aeschylus gives credit for human progress to Prometheus, Guthrie thinks that to a Greek ear Aeschylus is describing, through the name of Prometheus, the benefits that men owe to Forethought: "the poet knew that he was using mythological terms to describe a natural and purely human process." This seems to me to put the truth the wrong way around. Aeschylus seems here very much *au fait* with the evolutionary views which replaced the conception of a 'golden age' followed by a period of degeneracy. But for Aeschylus, it is the dramatic concept of *Prometheus*, what Prometheus *does* in his relations with man and with Zeus, which is primary, both here and throughout the trilogy (as far as we can know it). Thus I would rather suggest that Aeschylus was using contemporary 'evolutionary' material, in which the rôle of the gods and even of culture-heroes was (as we shall see) gradually being phased out, but adapting it, in some places imperfectly, to the dramatic claims of Prometheus at which we have been looking.

The tentative conclusions so far advanced find some general support in E. A. Havelock's discussion of pre-Socratic anthropological speculation and of the Greek dramatists' relation to it. It may be useful, therefore, to indicate certain points both of agreement and of difficulty which I find with Professor Havelock's treatment. First of all, Havelock does, in my view, succeed in establishing that there was, at least by the mid-fifth century, a strong 'scientific' tradition which treated the history of civilization in rationalistic and evolutionary, as opposed to mythological and theistic, terms.⁷ Furthermore, Havelock

⁶ W. K. C. Guthrie, *In the Beginning* (London 1957) 84. For the comments cited on Xenophanes and Aeschylus, see 82-83.

⁷ See E. A. Havelock, *The Liberal Temper in Greek Politics* (London 1957) ch.V. That "the main outline of this design" (for a 'scientific' anthropology) had already been sketched by the end of the sixth century, as Havelock also suggests (106), seems less certain. The slender evidence concerning Anaximander's and Xenophanes' views on the matter (quoted by Havelock, 104-06) does not really support this, even as a "tentative conclusion," though there are hints (as we have already seen in the case of Xenophanes) of preliminary speculation along these lines. Havelock's strongest and best-supported statements on pre-Socratic anthropology, however, are based on fragments quoted from Anaxagoras, particularly 59 B4 (D-K), which, he declares, "certainly establishes as the doctrine of Anaxagoras the naturalist and genetic conception of civilization and its institutions, including the city-state, as part of the continuous cosmic development" (111).

also argues (as I do) for a close relation between this 'scientific' tradition and the account of the origin of the arts in *Prometheus Bound*.⁸ Havelock, however, does not distinguish between the treatment of this subject in Prometheus' two great speeches at 442ff and 476ff and in his other claims about the gift of fire and the arts made elsewhere in the play. Secondly, Havelock regards the historical process presented in *Prometheus Bound* as complete and fails to notice the significant omission of the civic arts from Prometheus' list⁹—an omission which (as I shall suggest below) may have implications for the subsequent development of the trilogy. Finally (and herein lies my major disagreement) Havelock seeks to identify Prometheus with man himself or at least with human intelligence, although he is careful to indicate that this identification cannot be made too explicit in the dramatic context.¹⁰ That "the dramatist's scientific source did not utilize a divine apparatus at all . . ." is indeed possible, but to suggest that Prometheus is merely "equivalent to the fire he gives and . . . his instruction only a concrete symbolization of the process of self-instruction employed by men" is to import into the play a humanism alien to its theme. Nor (for there is no 'poet's view' beyond what the poet allows to appear in the play) can Prometheus be reduced to such a symbol: there are indications throughout the play and the fragments of the trilogy that the struggle between the gods is as thematically important as the fate of man over which that struggle began.

Among the scattered hints of a fifth-century view of progress in civilization, 'theistic' and 'rationalistic' explanations appear to have existed side by side. As we shall see, various similarities in these accounts, however elliptical because of the often fragmentary nature of our sources, suggest that most of them were influenced, in their form if not always in their conclusions, by some common tradition on the matter which gained increasing currency during the latter half of the century. Sometimes the gods are prominent in these explanations of human progress; sometimes they are not. Is there any reason, then, for suggesting that the underlying doctrine is

⁸ *Ibid.*, 52–81.

⁹ *Ibid.*, 60–61. Indeed, Havelock seems rather to overstress (62) the social aspects of Prometheus' gifts to man. So also he argues later (79–81) from very slender evidence in Prometheus' speeches that the social cohesion and cooperation which are so much a part of the development of the arts in the later anthropologies (e.g., in Diodorus) are reflected in Prometheus' account as well.

¹⁰ *Ibid.*, 63–66. (For the two quotations which follow, see 64 and 65, respectively.)

rationalistic and secular and that when gods are mentioned in such accounts, they are being inserted (whether for pietistic or dramatic reasons, or for both) into alien soil; that, in effect, an incipient secular tradition is being 're-mythologized'? There are no infallible guidelines by which we can establish this, but I would suggest (as I have already ventured to do in the case of *Prometheus Bound* 442–506) that when there are signs in the account of an ascending sequence of arts or of other means (social as well as technological) to civilized living, then we are in the shadow, as it were, of the 'scientific', evolutionary approach, even if the gods (or some one of them) are given credit. Among the earlier philosophers, it is in the fragments of Anaxagoras that we catch the clearest glimpse of a 'scientific', evolutionary sequence involving first plant, vegetable and animal life¹¹ and later the use of human as distinct from animal intelligence in the various skills and techniques required for civilized existence.¹² The reason for regarding such 'ladder' sequences, in histories of man's acquisition of the arts, as primarily scientific and secular in nature is twofold. First, they continue in the same vein the scientific accounts of man's physical evolution; second, they suggest the laborious human process of fulfilling each need or lack (*χρεία*) as it occurs and as it becomes, in turn, most pressing, at each successive stage. (The essentially *human* process of inventive activity in response to need becomes, as we shall see, much clearer when it is spelt out more fully in later cultural anthropologies such as that of Diodorus). Other signs of specific adaptations of originally secular accounts may well appear (as I have suggested in the case of the *Prometheus* passages) in various individual descriptions. But it is this general feature—*some* sign of an ascending sequence and of successive needs successively fulfilled—which seem, from the evidence of accounts sustained enough to illustrate them, to indicate the 'scientific', secular nature of the common tradition for which I have been arguing.

We may now proceed to examine the various passages which bear some comparison, from one aspect or another, with the Aeschylean Prometheus' account of his gift of the arts to men.¹³ In the Homeric

¹¹ See passages selected from the accounts and fragments of Anaxagoras by Havelock (*ibid.*, 107–09) for illustration of this and the following point.

¹² See especially 59 A101, 59 B21b, 59 B4 (D–K).

¹³ Of the passages discussed below for comparison or contrast with the account of the Aeschylean Prometheus, all except Soph. *Ant.* 332–55 and Pl. *Prt.* 321c ff are cited by George

Hymn to Hephaestus (20.3–7) it is Hephaestus who is credited with transforming men's lot by his teaching of the arts; the account is brief but the reference to the improvement of man's beast-like and cave-dwelling existence reminds us of *PV* 447–52. (The date of this hymn is unknown, but the similarity with this and other tragic passages to be cited suggests the mid fifth century.) More purely rationalistic (like the approach of Xenophanes) are hints in Anaxagoras B21 (where men are said to make use of experience, memory, wisdom [σοφία] and skill [τέχνη] in taking things such as milk and honey from beasts and insects), and in Democritus B154 (where men's imitation of other creatures—spiders for spinning, swallows for building, nightingales for singing—is stressed) and, indeed, in the 'evolutionary' passage in Sophocles' *Antigone* 332–75. In the latter passage as in *Prometheus*, men's achievements are detailed in an ascending order (though the sequence itself is not the same), and several of the achievements selected are identical or nearly identical: sea-crossing, use of animals as beasts of burden,¹⁴ discovery of speech (it is writing, γραμμάτων . . . συνθέσεις, in the case of Prometheus) and, most significantly, the mastery of diseases. The significant differences are the inclusion in the Sophoclean passage of the 'civilizing dispositions' (ἀστυνόμους ὀργὰς 355, which, apparently, enable man to accept νόμοι and δίκη, 368–69) and the omission in the same passage of any credit to the gods in these achievements of man, with the possible exception of the last.¹⁵

Thomson in his edition of *Prometheus Bound* (Cambridge 1932) in his note to vv. 452–87 (436–71 OCT), though without detailed comparisons; all except the Homeric *Hymn to Hephaestus* (20.3–7) and the tragic fragments *fr. adesp.* 470 (N) and *Eur. fr.* 578 (N) are cited by Guthrie, though not in specific comparison with the *Prometheus* passage. Cf. also Havellock, *op.cit.* (*supra* n.7) chs. III–V, where at least the major passages concerned are discussed.

¹⁴ The animals mentioned in this connection in the *Antigone* passage are the mule (so understanding ἰππέϊω γένει of 341, with Jebb) and some "free-ranging mountain beast," the horse and the mountain bull (349–51). At *PV* 462ff such beasts "enslaved to the yoke" are described simply as κνώδαλα (a vague term for large beasts), while the training of horses is restricted to more refined employment with chariots (465–66). In a fragment of the *Luomenos*, however, horses, asses and bulls are all mentioned as the relievers of πόνοι supplied by Prometheus' gift. Democritus (A151) also draws attention to the way in which men came to breed mules from horses and asses. These and other coincidences are all suggestive of a common tradition, drawn on by poets from at least the 450's onwards, concerning the evolution of the arts.

¹⁵ The expression θεῶν τ' ἔνορκον δίκαν (which, as Jebb has rightly pointed out, means "justice sworn to in the name of the gods") brings the gods into the picture, albeit indirectly.

In Euripides' *Supplikes* 195–213 Theseus outlines the basis of man's civilized survival. With regard to the source of these 'goods', the passage may be said to stand half-way between the Aeschylean and the Sophoclean passages and indeed to epitomize that ambiguity between (and, in some instances, blending of) mythological and humanistic explanations of man's development which seems characteristic of this period. In contrast to the Sophoclean passage, the divine provenance of man's civilization is insisted on, but, unlike the Aeschylean catalogue of the arts, that provenance is kept vague in the extreme: *αἰνῶ δ' ὅς . . . θεῶν* 201–02, "I praise whichever of the gods regulated our life" (in the way now to be described). Several features of King Theseus' list repeat, in somewhat different terms, the endowments of Prometheus, e.g., the divine gifts of intelligence (203; compare *PV* 444); of speech (203–04; compare and contrast *PV* 460–61); of nourishment (*τροφή*) from the earth, and of shelter (205–08; compare and contrast *PV* 450–58); of ships, specifically for trade in the Euripidean passage (209–10; compare *PV* 467–68); of augury by fire, by sacrificial entrail and by flight of birds (211–13; compare *PV* 484–500, where there are both similarities and differences). Moreover, the basis of Theseus' optimistic claim that "There are more good things than bad for mortals," namely that "we would have perished otherwise," may be compared with Prometheus' claim to have saved men from extinction (*PV* 231–36), for both claims are later substantiated by the gifts of intelligence and the arts.

The tone of Theseus' speech is admittedly much more optimistic than that of the Aeschylean Prometheus, implying a sort of generalized divine benevolence in this world, where *τὰ χρηῆστα* abound if only men will take advantage of them. But this feature may be explained, at least in part, by the requirements of the dramatic theme, just as for Aeschylus the championship of man *against* the divine rulers of the world is a special requirement of the theme of *PV*. Nevertheless, the context which Theseus provides for his optimistic statement ("more good than bad for mortals," 199), namely that it has arisen out of debates with those holding the opposite view (195–199), is itself of some interest for our discussion. Since this is not the sort of circumstance readily attributable to the legendary King Theseus, we may perhaps infer that the debates alluded to (*i.e.*, debates on 'civilization', 'the sources of the arts' and so on) were contemporary fifth-century ones. And this is just the sort of cultural

climate we would expect for the conflicting and often paradoxical comments on the subject which we have been reviewing.¹⁶

One further, rather minor, similarity worth noting between the Euripidean and the Aeschylean passages is the mild coincidence of language and conception concerning man's early existence. Theseus speaks of the god changing man's life ἐκ πεφυρμένου (*sc.* βίотου), "from a confused and bestial existence" (201–02); Prometheus says men . . . τὸν μακρὸν βίον | ἔφυρον εἰκῆ πάντα, "confused all things at random throughout their long life" (*PV* 449–50), and he too goes on to make a subhuman comparison of early (cave-)men with ants living underground (*PV* 452–53). Before dismissing the verbal similarities as accidental, one should note also the curious fact that the same word φύρω, 'confuse', and the same context of living a life that was confused and beastlike before the arts were established occurs in another tragic passage, *fr. adesp.* 470 (N.): "Then he took in hand (or 'directed', 'managed') the way of life of all Greece and its allies, a life which was formerly confused (πεφυρμένον) and beastlike. First, he discovered allwise number, most excellent of the arts (ἔξοχον σοφισμάτων) . . ." The subject of the sentence is almost certainly Palamedes, and the fact that some scholars attribute the fragment to Euripides' *Palamedes*, others, with more probability, to Aeschylus' *Palamedes*, underlines

¹⁶ Cf. Guthrie, *op.cit.* (*supra* n.6) 83 and n.6, who also compares "the progressive scheme of civilization" in the three tragic passages we have mentioned. Guthrie also notes that "as with Prometheus in Aeschylus, the first thing he ('the god' in the Euripidean passage) bestowed was σύνεσις, intelligence (line 203)." He also regards the Euripidean passage (presumably because of the vague 'background' nature of the anonymous god's rôle) as "not more religious" than that of Sophocles. Guthrie does tend to rationalize the Aeschylean and particularly the Euripidean passages rather more than their expression warrants. After all, Theseus' description of "the well-ordered universe" is expressed at least formally as a theodicy, despite the fact that there is (as in the Aeschylean and Sophoclean accounts) a strong suggestion of that 'ascending order' in the list of divine gifts which elsewhere reflects the sequence of human accomplishments. Havelock, *op.cit.* (*supra* n.7) 73, goes so far as to call the Euripidean passage "a skilful re-write" . . . an "attempt to stand anthropology on its head" and goes on to compare this device by which "average orthodoxy tried to come to terms with the new teaching" with modern pietistic attempts to place Darwinian evolution under providential control. This formulation of the matter does perhaps polarize the theistic and the humanistic (or 'scientific') approaches rather more sharply than suits the cultural context (nor need we regard Theseus as expressing Euripides' views), but I think that both Guthrie and Havelock are right in suspecting that the progressive scheme of civilization here attributed to the god's gifts does reflect accounts in which the principal emphasis was on the gradual and increasing mastery of the environment by human intelligence.

the verbal similarities between all three passages.¹⁷ *ἔξοχον σοφισμάτων* as a description of number occurs also at *PV* 459 (and a form of *εὐρίσκω* is used in both cases), another indication that the *Prometheus* passage is perhaps based on some current or traditional account of the discovery of the arts. And before concluding that most of the similarities concerned are limited to the two Aeschylean passages, we should also consider Euripides fr.578 (N.)—this time certainly from Euripides' *Palamedes*—where the claim by Palamedes of the discovery of writing for men as a cure for forgetfulness is reminiscent of the Aeschylean Prometheus' claim at *PV* 460–61.¹⁸

To return to the philosophers, the Platonic Protagoras states that Prometheus (after Epimetheus had used up on the beasts of creation the various powers, *δυνάμεις*, requisite for their survival) stole from Athena and Hephaestus “the technical skill along with fire” (*τὴν ἔντεχνον σοφίαν σὺν πυρί* 321D) and gave this to man. “Once man shared in this divine lot (*θείας . . . μοίρας*), he soon articulated through his art (*τέχνη*) speech and names for things and discovered for himself houses and clothes and footwear and beds and nourishment from the earth” (322A). The language of 321D makes it clear that fire is regarded in both a symbolic and a practical sense as the prerequisite of the arts. Protagoras says that one needs it for both the attainment and the use of *ἡ ἔντεχνος σοφία*; but it would seem that, beyond its application to the practical arts, fire is also the physical symbol of the divine lot of which man is now partaking: though fire is obviously needed for *ἡ δημιουργικὴ τέχνη* (322B) in general, it is not needed in any practical sense for *all* of the skills (e.g., speech) that are presented as the results of the new dispensation. Fire is also, of course, treated in a similar way in the *PV*, at 7, 30, 109–11, 252–54, though not in the two great speeches at 442ff and 476ff. Indeed, it is this very ambiguity about fire as a physical requirement for the practical arts *and* as a symbol of the divine prerogative (*θεία μοῖρα* in the *Protagoras*; cf. *PV* 30 *τίμας . . . πέρα δίκης* of Prometheus' gift of fire to *man*) which marks the blend of the rationalistic and of the mythological in “Protagoras'” account, for once man has the gift of fire, *his own*

¹⁷ See the note *ad loc.* in Nauck, *TGF*. In addition to the comparisons between this fragment and Aesch. *PV* 454–59 and Eur. *Suppl.* 201, Nauck notes Hermann's less apt comparison of our fragment with Eur. fr.578 (N) which I consider below.

¹⁸ Compare Eur. fr.578.1–3: *τὰ τῆς γε λήθης φάρμακ' ὀρθώσας μόνος, | ἄφωνα φωνήεντα συλλαβάς τιθεῖς | ἐξηῦρον ἀνθρώποισι γράμματ' εἰδέναι . . .*, and Aesch. *PV* 460–61: *. . . ἐξηῦρον αὐτοῖς, γραμμάτων τε συνθέσεις | μνήμην ἀπάντων . . .*

discovery of the individual practical arts follows. In other, quite secular accounts of the origin of the arts, fire, now treated as a discovery not a gift, has the same primacy.

This feature of the 'myth of Protagoras' gives a certain internal justification, in terms of the passage itself, to Guthrie's claim that, since elsewhere (fr. B4) Protagoras appears as a self-confessed agnostic, we may discount the 'divine elements' in the Protagoras myth. "Protagoras," Guthrie claims, "one of the greatest of all fifth century rationalists, [constructs] a rationalistic account . . . of human civilization and grafts it on to the tale of Prometheus and Epimetheus."¹⁹ Similarly (as I have argued) Aeschylus, not as a rationalist but as a dramatist, may be adapting an essentially rationalistic account of the origins of civilization to mythological expression.

The 'Protagoras myth' now goes on to expound in the same way the origin of 'the civic art' (ἡ πολιτικὴ τέχνη 322B, presumably the equivalent to the ἀστυνόμους ὀργάνους of *Antigone* 355); indeed it is here that the adaptation of the naturalistic to the theistic or mythological explanation seems most transparent. In response to the danger from wild beasts, 'Protagoras' tells us, men banded together by founding cities but, lacking the civic art, kept perishing in internecine strife until Zeus, through Hermes, distributed mutual respect (αἰδώς) and justice (δίκη) to each of them (322B–C). It is this most necessary crown to the civilizing arts that is conspicuously absent from the Aeschylean Prometheus' catalogue of gifts. Thus the grandiose claim to all the arts at the end of the speech (505–06) means all the *practical* arts, a limitation which Prometheus may not wish to make too explicit at this point. And this major difference (among, of course, many others) between the accounts in the *PV* and in the *Protagoras* makes particularly attractive the conjecture of Professor Lloyd-Jones that the trilogy may have ended with Zeus' gift of δίκη to man, as a *quid pro quo* for the revelation of the secret by which Prometheus, the champion of men, saves Zeus' rule.²⁰

In addition to the classical sources which we have cited, Diodorus

¹⁹ Guthrie, *op.cit.* (*supra* n.6) 88. Cf. also J. S. Morrison, "The Place of Protagoras in Athenian Public Life," *CQ* 35 (1941) 1–16, esp. 9–10, who seems to hold a similar view concerning the essentially rationalistic basis of the evolutionary theory of human society (at *Prt.* 321c ff), which he regards as "probably inherited by him [Protagoras] from the materialistic thought of the Ionian cities."

²⁰ See H. Lloyd-Jones, *The Justice of Zeus* (Berkeley 1971) 100ff, and further references there given.

1.8.1ff is often cited by scholars (though usually without comment) for comparison with the account of the arts at *PV* 442ff.²¹ Much has been written concerning the possible fifth-century Greek sources of this and similar late accounts of the origins of civilization. However, if one studies Thomas Cole's excellent presentation of comparable passages from five such accounts (those of Diodorus, Vitruvius, Tzetzes, Lucretius and Posidonius), one may well be convinced of their common origin, but one sees also their marked difference from the more restricted, less organized and less 'evolutionary' account in our *Prometheus* passage.²² This, as we have seen, is substantially Cole's view of the matter also. Nevertheless, since these accounts do provide us with our first complete examples of ancient 'histories of civilization' which are for the most part anthropological, *i.e.*, 'secular' in the proper sense of the word, it may be useful to note a few general features in them which appear to support the suggestion that Prometheus' two speeches reflect the influence of embryonic 'scientific' accounts already current in Aeschylus' time.

²¹ Friedrich Solmsen, *Hesiod and Aeschylus* (Cornell 1949) 143 n.92, in connection with Werner Jaeger's view (*Paideia*, I.337) that Prometheus' account reflects progressive Ionian thought, suggests that this view may find support in the fact that these "later philosophical descriptions (*i.e.*, in Diodorus and Lucretius) of the growth of human civilization . . . treat the evolution of civilization as the sequel to a *κοσμογονία* and *ζωογονία* which are indeed subjects of long standing among the Ionian physicists." Solmsen, however, is undecided whether such evolutionary accounts of the origin of civilization stem from the Ionian physicists or were developed by the tragic poets of Athens; he adds ". . . the absence of a definite pattern of gradual evolution in Aeschylus may favor the view that Aeschylus is not influenced by Ionian systems but is thinking in terms of the *πρωτοι εὑρηται* of human *τέχναι*". . . For a different view of the fifth-century origins (and one with which Solmsen disagrees) of these late evolutionary accounts, see the following note.

²² See Cole, *op.cit.* (*supra* n.3), esp. ch.2, 26ff, on whose quotations and references my subsequent discussion, except for my own comparisons with the *PV* passage, is based. Cole argues (ch.3, 56ff; *cf.* ch.9) that the common source of all these passages is Democritus; in this he develops Reinhardt's argument for the Democritean source of *Diod.* 1.7ff through Hecataeus. As Cole and Solmsen (*supra* n.21) both note, Reinhardt's view has been resisted ("refuted," according to Solmsen) by Dahlmann, who does, however, believe in pre-Socratic sources of these later evolutionary accounts of civilization. The Democritean fragments which Cole adduces do show Democritus' interest in the origin of one or other of 'the arts' and in technology in general. The evidence from direct quotations from Democritus, however, seems a bit slender for the weight which Professor Cole's view of Democritus' influence would put upon them. Since (as I have indicated above) no *close* relation seems discernible between the later 'civilization accounts' which Cole would relate to Democritean thought and the *PV* passage under discussion, detailed discussion of the unresolved dispute over the sources of the late accounts seems uncalled for here. For other interesting discussions of the problem, see also Morrison, *op.cit.* (*supra* n.19), and Gregory Vlastos, "On the Pre-History in Diodorus," *AJP* 67 (1946) 51-59.

Diodorus' account begins with a description in some detail of the beast-like, random existence of man before the discovery of the arts; so, too, in Diodorus (and to some degree in the other anthropologies quoted by Cole), we find repeated examples of men learning to improve their lot by bitter experience or by their need of these successive improvements. (See, for example, Diodorus 1.8.2, 1.14.1 and, especially, 1.8.9 where need, *χρεία*, is clearly stated to be men's teacher; compare also Democritus B144, where it seems to be implied that Necessity, *τἀναγκαῖον*, created the earliest, *i.e.*, the practical arts.) We have seen these features in two passages of Prometheus' speeches, at *PV* 447–53 and in more truncated form at 476–81. Secondly, in all of the late accounts we find the familiar 'ascending sequence' of arts, often (in the case of the more primitive ones) with the same 'stages' (cave-dwelling in four accounts; housing in two; crop-cultivation in four)²³ as those marked or implied in the early part of Prometheus' account (*PV* 450–58). Agriculture is the only practical art which, in Diodorus' account, is attributed to divine intervention: to Isis, the discovery of wheat and barley; to Osiris, their first cultivation.

Next, we may note a difference from the sequence of discoveries listed by Prometheus in the two great speeches: in four of the late anthropologies, the discovery of fire (by natural means) appears as an essential feature of the civilizing process; it comes in early, after the devising of shelter and clothing, and is marked by Diodorus (1.8.8) as a discovery which led to the various useful arts. This, as we have noted, is true of Prometheus' statements elsewhere in the play, *e.g.*, at vv.109–11, 252–54, but is curiously absent from Prometheus' present account. Moreover, it is at the stage when fire is introduced in the late accounts that their difference from Prometheus' sequence becomes most marked. In three, it is after the discovery of fire that the definite *social* civilizing of men begins. In two of these (Lucr. 5.1011–27 and Vitruv. 3.28–34.2) a specific connection is made between the discovery of fire and the beginnings of social covenants. In Diodorus, on the other hand, while the discovery of fire ensured the establishment of the practical arts, it requires the divine establishment of law and justice (as we have noted in the case of the *Protagoras*

²³ For detailed references, see Cole, *op.cit.* (*supra* n.3) ch.2, 26ff. The passages there cited are from Diod. 1.8ff; Tzetzes as quoted in Diels-Kranz II, 68 B5 (Democritus); Lucr. 5.932ff; Vitruv. 3.4.6ff; Posidonius *ap. Sen. Ep.* 90.

myth as well)²⁴ to ensure successful communal living. In either case, the discovery of fire seems to mark a significant water-shed, either (as in Diodorus and the *Protagoras* myth) as indicating the potential for the merely practical as opposed to the civic arts, or (as in Lucretius and Vitruvius) as providing new circumstances propitious for the development of the civic arts as well. This division is, of course, lacking in Prometheus' two speeches on the arts, where we have noted the omission of any claim on Prometheus' part to the civic arts, although his list, while it might be called practical, is by no means exclusively technological (note, for example, the brief references to calculation and writing). Once again we may ask whether the reason may be that the civic arts (*i.e.*, specifically 'justice') are being saved as the gift of Zeus in the third play of the trilogy, as a possible conciliation to Prometheus, champion of men, after the earth has been rid of the dangers of monstrous beasts by Heracles.²⁵ It is possible, though one would not wish to press the point, that this explanation may also explain the absence of any mention of fire in Prometheus' present speeches on the arts, for in the current accounts the introduction of fire and technology may always have been followed by the next stage, the civilizing virtues of justice and mutual respect.

For the rest, while there are, to be sure, several agreements (or coincidences) in the arts named by Prometheus and in those named in one or another of the late anthropologies (*e.g.*, mining, astronomy, animal training and sailing), the contexts and sequence in which these arts are mentioned are so different that one can claim from these

²⁴ The striking similarity between Diodorus and the *Protagoras* myth on these points and the difference to be noted in Lucretius (see 5.1011–27) seem the best arguments for regarding (with Morrison, *op.cit.* [*supra* n.19]) *Protagoras* and not the Greek atomists as a possible source of Diodorus. Not only are fire and the technological arts separated in both from the *divine* gifts of *δίκη* and *αἰδώς* needed for the civic arts; in both, also, the cause of men attempting the communal life in the first place is the same: the depredations of wild beasts (*cf. Prt.* 332bff and *Diod.* 1.8.2; contrast *Lucret.* 5.982–87, where the fear of wild beasts is mentioned but not in connection with the first social covenants, which are described at 1011–27). Morrison (10 n.3) also cites a few similarities in language between the passages concerned in Diodorus and in the *Protagoras*, though these may be merely coincidental. In all of this, of course, the major question, how accurately Plato represents the historical *Protagoras* on these matters, must remain unanswered.

²⁵ On this conjecture of Professor Lloyd-Jones, *cf. supra* p. 201 and n.20. For evidence that the wanderings and, presumably, the monster-destroying labours of Heracles were treated later in the trilogy, see frs.195–99 (N.) of *Luomenos*. Fear of marauding beasts is, at *Diod.* 1.8.2, the immediate cause of men's communal association for mutual protection.

coincidences no similarity at all in 'evolutionary' treatment. Once again, the lack of any mention of fire in Prometheus' account *could* help to account for some of the differences. In Prometheus' account we miss, for example, any enumeration of practical arts such as metal-working and tool-making, and when the discovery of metals is mentioned by Prometheus (*PV* 500–02), it comes right at the end of his list (after medicine and augury) and not, as in several of the late anthropologies, in sequence with other practical arts related to the discovery of fire.

In sum, certain features of Prometheus' speeches on the arts seem, for one reason or another, odd or anomalous, and I have sought an explanation of these anomalies in the possibility that Aeschylus was adapting other material on the origins of civilization not completely congenial to his drama or to the dramatic personality of his Prometheus. Lacking any clear evidence on these matters from the mid 450's (which with Herington and others I take to be the date of the *PV*'s composition),²⁶ I have reviewed various shreds of evidence of what poets and philosophers—some earlier, most a bit later—were saying along the same lines. Xenophanes, it was suggested, marked the beginning (as far as our evidence goes) of secular evolutionary ideas on civilization (without, however, cutting out the gods altogether), and Aeschylus could well have known Xenophanes in Sicily before the philosopher's death *ca* 460 B.C. In Protagoras' 'civilization myth' are clear indications of evolutionary stages (*e.g.* the technological stage followed by the social or civic stage) and the same blend of the evolutionary and the mythological as we find in Aeschylus' and in other, later accounts. Protagoras may have begun teaching about 460 B.C.²⁷—though not at Athens until some fifteen years later—and it is quite possible that Aeschylus in his later years was aware of some of the intellectual currents begun by the early sophists. The same evolutionary strain appears in the Sophoclean and Euripidean pas-

²⁶ For arguments in favour of dating *PV* between the *Oresteia* in 458 and Aeschylus' death, 456/5, see C. J. Herington, *The Author of the Prometheus Bound* (Austin 1970); *CR* 14 (1964) 239–40; and Herington's Introduction to *Aeschylus: Prometheus Bound*, transl. James Scully and C. J. Herington (New York 1975) 7. Among earlier scholars, Thomson, Rose and Méautis have all agreed on this approximate dating of *PV*. For a summary of their arguments and of other, differing, ones, see A. J. Podlecki, *The Political Background of Aeschylean Tragedy* (Ann Arbor 1966) App.B, 142–47.

²⁷ Protagoras' exact dates are subject to some uncertainty; see the useful summary of conflicting evidence in Kathleen Freeman, *The Pre-Socratic Philosophers*³ (Oxford 1953) 343ff. If he really was old enough to be Socrates' father (*Prt.* 317c), then he cannot have been born much later than 490 B.C.

sages reviewed: more markedly secular in *Antigone's* "Ode to Man" (ca 441 B.C.), but returning, in the passage from Euripides' *Suppliants* (ca 420 B.C.), to the familiar blend of the evolutionary and the vaguely mythological which here happens to suit the dramatic context. Most interestingly, in these and other (fragmentary) passages of tragedy compared with the *Prometheus* passage, the marked coincidence of specific human accomplishments mentioned and the occasional coincidence of vocabulary employed render particularly attractive the view that the Euripidean reference to disputes on these matters (*Suppl.* 195ff) reflects, in a general and characteristically anachronistic way, recurrent discussions which had been going on among the wise since at least the time of Aeschylus.

Finally I have indicated that the late accounts of the arts are indeed of a different order from that given, or even reflected, in the *Prometheus Vincetus*. Nevertheless, one or two features in Diodorus' account do suggest that if the arguments for its fifth-century sources be sound, the Aeschylean account, in that it reflects similar features, may too have been influenced by secular evolutionary accounts of the origin of the arts. These features were the descriptions of the early state of man and the early stages of his gradual civilization, the intrusion (though limited, in Diodorus) of divine provision into the sequence of human self-help and the clear distinction (similar to that found in the *Protagoras* myth) between the practical and the civic arts.

These considerations nudge us, I think, toward a choice between two conclusions with regard to the cultural climate dimly reflected behind Prometheus' account of his gifts-of-the-arts. One is that rationalistic, 'evolutionary' views of man's gradual rise to civilization were already being worked out in some detail in the mid-fifth century, and that Aeschylus had already become familiar with them before composing the *Prometheus Bound* within the last few years of his life. The other is the (to my mind much less palatable) view that Wilhelm Schmid was right at least in his denial of Aeschylean authorship to the *Prometheus Vincetus*²⁸ and that the play is the work of an unknown fifth-century poet more familiar than Aeschylus would have been with the new currents of sophistic social thought.

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²⁸ W. Schmid, *Untersuchungen zum Gefesselten Prometheus* (Stuttgart 1929) *passim*, esp. 96-97, arguing for a mid-fifth-century imitator of Aeschylus.