are Persephone's dogs'. ${ }^{10}$ Alcmeon noted that the planets move eastwards against the stars. ${ }^{11}$ This is a valid generalization only about the outer planets, so evidently it was understood by this time that there were more planets than Venus and Mesonyx. Clearly by soo some systematic observation has been taking place. Parmenides separated Venus from the other planets by placing it alone below the sun. ${ }^{12}$ The reason is that it never goes more than a certain distance from the sun. The same is true of Mercury, so it had presumably not yet been identified; it is notoriously difficult to see. Of Empedocles' doctrine on planets we hear only ' $E \mu \pi \epsilon \delta о \kappa \lambda \hat{\eta} s$ тov̀s $\mu \grave{\epsilon} \nu \dot{a} \pi \lambda \lambda \nu \epsilon i ̂ s$ à $\sigma \tau \epsilon ́ \rho a s ~ \sigma v v \delta \epsilon \delta \epsilon ́ \sigma \theta a \iota ~ \tau \hat{\varphi}$ крvaтád $\lambda \omega$, $\tau o v ̀ s ~ \delta \grave{~} \pi \lambda a ́ v \eta \tau a s$ à $\nu \epsilon i ̂ \sigma \theta a \iota .{ }^{13}$

Some systematic observation, then, but not yet a definitive register of planets, and no evidence that the name Mesonyx, after losing its credit, has been replaced by other individual names. A further element of uncertainty was contributed by the occasional appearance of comets. If they had not been taken into account before 467 B.C., the appearance of a large, fiery comet for 75 days in that year ${ }^{14}$ certainly brought them into the field of discussion. Anaxagoras explained them as a conjunction of planets. ${ }^{15}$ He can hardly have meant, of known planets: it would seem that he conceived there to be an indefinite number of planets in the sky, only a few of which were known. Hippocrates of Chios, his pupil Aeschylus, and certain Pythagoreans held that there was only one comet, and that it was a planet which only appeared at long intervals. ${ }^{16}$ Aristotle brings several counter-arguments, among which is that 'often there have been more than one comet at the same time' ('often' must be an exaggeration). The astrological writer Apollonius of Myndos (ap. Sen. QN vii ${ }_{17}$ ) argued from differences of size, shape, and colour that it is not the same comet that is seen on different occasions. I mention these arguments because one can imagine similar ones being used in earlier generations to establish that there was more than one 'Mesonyx'.

No further advance is detectable when we come to Democritus, who is said to have written $\pi \epsilon \rho i \quad \tau \hat{\omega} \nu$ $\pi \lambda a \nu \dot{\eta} \tau \omega \nu$ (D.L. ix 46). Like Parmenides, he had only Venus below the sun; and he adopted Anaxagoras' explanation of comets. ${ }^{17}$ So he would seem to have recognized one inner planet, Venus, and an indefinite number of outer ones, which were almost certainly still without names. The author of the Epinomis knows no names for planets other than Venus, only the $\dot{\epsilon} \pi \omega \nu v \mu i a \iota$ (as he calls them) derived from the Babylonian system,

[^0] mina must have come in together with the knowledge (or doctrine) that there were five planets, neither more nor less. They are first attested in Eudoxus and Plato, and it is Eudoxus whom Seneca credits with introducing (from Egypt) knowledge of the motions of the five planets. ${ }^{19}$ It is very credible that Eudoxus should have introduced the Babylonian system of names. ${ }^{20}$ The only difficulty is that if we accept Aëtius' ascription to Philolaus of the 'Pythagorean' cosmology described by Aristotle, ${ }^{21}$ we accept the existence of a pre-Eudoxan system in which exactly five visible planets are recognized. The ascription is, of course, the subject of a long-standing controversy, into which I do not propose to enter.

Whoever devised the 'Philolaic' system, it seems likely that he had individual names for his five planets-as he did for the central fire, and the invisible Antichthon-and we cannot say what these could have been if not $\Delta$ ios $\alpha \dot{a} \sigma \eta \eta^{\prime} \rho \kappa \tau \lambda$. In any case we may contrast the closed dogmatism of this system, and the Babylonian-Eudoxan system, with the uncertain empiricism of the Ionian tradition. Mesonyx represents the one early Greek attempt to pin down the wandering stars of the night. Once it was established that several of them qualified for the appellation, it became useless. The confidence to identify the various planets and provide new names for them did not return until exact knowledge, founded on centuries of observation, was brought from abroad.
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${ }^{18}$ 986e-7c. Cf. Gundel, RExx 2 (1950) 2025, 2029; Burkert (n. 8) 301 n . 9. The names $\Sigma \tau i \lambda \beta \omega \nu$, Пvoóєıs, $\Phi_{a} \hat{\epsilon} \theta \omega \nu, \Phi_{a i v} \nu \nu$ are Hellenistic, the earliest evidence for them being dated to 265 (Ptolemy Almagest 9. io p. 288 Heib.). See Cumont, Ant. Class. iv (1935) 19 ff.; Gundel, 2030 (where the date is wrongly given as 264).
${ }^{19}$ Eudoxus D 6, F 123 -4 Lasserre; Pl. Tim. 38d; Epin. loc. cit.; Sen. QN vii 3.2 .
${ }^{20}$ Cf. Cumont (n. 18) 12; Gundel 203 I. The Persians too at some date adopted the Babylonian system; see B. L. van der Waerden, Science Awakening ii (Leyden \& New York 1974) 86 ff.
${ }^{21}$ De caelo 293a18 ff. and fr. 204, DK 58 B 37; Aët. ii 7.7 $=$ DK 44 A 16; and other passages. See Guthrie, History of Greek Philosophy i (Cambridge 1962) 282 ff.; Burkert (n. 8) 231 ff., 337 ff.

## The Tribes of the Thirty Tyrants

Through the kindness of D. M. Lewis I was recently able to study a photocopy of R. Loeper, 'The Thirty Tyrants', Zhurnal Ministerstva Narodnago Prosveshcheniya (May 1896) 90-10I-an examination, principally, of the list of the Thirty in Xen. Hell. ii 3.2. ${ }^{1}$ It seems worthwhile to publicise the outcome of this scrutiny, for four reasons: (a) Since its first appearance 80 years ago Loeper's main thesis-albeit in simplified form: see (c), and below-has exerted enormous influence upon students of prosopography, of the political organisation of post-Kleisthenic Attika, and of the regime of the Thirty. ${ }^{2}$
${ }^{1}$ Hereafter 'Loeper'. D. M. Lewis and J. K. Davies were good enough to comment on earlier drafts of what follows, which naturally resulted in very substantial improvements; but I must exonerate them from responsibility for either the formation or the expression of my views.
${ }^{2}$ E.g. J. Kirchner, Prosopographica Attica (Berlin 1901-3) passim; Th. Lenschau, oi тpıáкovta, RE vi A. 2 (1937) 2364; C. Hignett, $A$ History of the Athenian Constitution (Oxford 1952) 288 n. I; D. M. Lewis, JHS lxxxi (1961) 121; J. K. Davies, Athenian Propertied Families 600-300 B.C. (Oxford 1971) passim (hereafter 'Davies').
(b) Despite this, it seems that few scholars, particularly in recent years, have actually read Loeper's paper-presumably because of problems in locating it. Hignett, for instance, cited Lenschau rather than Loeper himself; others refer to the Loeper thesis simply by name, without documentary citation.
(c) Failure to go back to Loeper's original paper has given rise to an oversimplification in what he is supposed to have argued. The opinio communis ${ }^{3}$ holds that, on Loeper's hypothesis, the list of the Thirty in Hell. ii 3.2 is in the official order of the ten Kleisthenic tribes, with groups of three representatives from each. ${ }^{4}$ It is true that this is what Loeper postulated-but only half the story: he went beyond that, to claim that the order of names was not merely tribal but trittyal.
(d) The hypothesis in that full form no longer fits the facts.

Loeper began by drawing attention to the number of boards of officials in democratic Athens, especially in the fifth century, with a membership of 30 (e.g. the pre-403
 Io $\epsilon \tilde{u} \theta v v o \iota$ with their $20 \pi \alpha ́ \rho \epsilon \delta \rho o \iota$, ibid. 48.4)-by no means as usual as boards of io, one man per tribe, but still common enough; and the explanation of the number 30 he saw as lying in the 30 trittyes, with one representative drawn from each. As to the Thirty Tyrants, he conceded that there is no hint in our sources that they were trittysrepresentatives, and that the idea seems prima facie implausible. ${ }^{5}$ This was, nonetheless, his hypothesis, based upon what he felt to be a significant measure of agreement between Xenophon's list and the known deme-, trittysand tribe-affiliations of various members of the Thirty:
(i) Theramenes' deme was Steiria, in the coastal trittys of tribe III Pandionis; ${ }^{6}$ and his name comes in the third (notional) group of three.
(ii) Anaitios' deme (assuming him to be identical with the Hellenotamias of $410 / 9: I G \mathrm{i}^{2} 304$ A. 20) ${ }^{7}$ was Sphettos, in the midland trittys of tribe V Akamantis; and his name comes in the fifth (notional) group of three.
(iii) Drakontides' deme (assuming him to be identical with the $\Delta$. 'A ${ }^{2} \delta v a i o s$ of Arist. Ath. Pol. 34-3) was Aphidna, in the midland trittys of tribe IX Aiantis; and his name comes in the ninth (notional) group of three.
(iv) Aristoteles' deme is unknown, ${ }^{8}$ but he must be the Hellenotamias of $42 \mathrm{I} / 20$ ( $I_{\mathrm{i}} \mathrm{i}^{2} 220.5$ ), who is in tenth place in the list of Hellenotamiai and therefore the representative from tribe X Antiochis; and the name of Aristoteles comes in the tenth (notional) group of three.

These data, fitted into Xenophon's simple list of 30 names, all (to Loeper's eye) favoured the idea of its being not merely in tribal order, with three men listed under the implicit rubric of each tribe, but, within the tribal trios, in trittyal order also. ${ }^{9}$ A naitios and Drakontides, both from

[^1]demes belonging to midland trittyes, are both in second place in their (notional) tribal trio. Theramenes is in third position in his, and comes from a coastal trittys. This produces the order: urban/midland/coastal. ${ }^{10}$

The central part of Loeper's paper was thus a search for suitable demes for the other members of the Thirty, to fit the pattern of an urban/midland/coastal order of trittyes within each tribal group. ${ }^{11}$ His method, for the most part, was to look for men in fourth-century Attic inscriptions who might be claimed as descendants of members of the Thirty. The method is open to criticism on the grounds that since (as D. M. Lewis pointed out to me) the fall of the Thirty will have ruined some of them and their families in Athens for good, there is a certain presumption, unquantifiable, against being able to find such related homonyms. But in any case I am persuaded that no useful purpose would be served by continuing to reproduce here Loeper's evidence and arguments in the form in which he himself set them out; it seems best instead to review his basic model in the light of the prosopographical data and assumptions of the present day-and to begin by returning to the case of Aristoteles. Clearly we require only a single countervailing demotic to ruin Loeper's full, trittyal model at a stroke, and in Aristoteles, it would seem, we have it. Loeper, not content with allocating Aristoteles simply to a tribe ( X Antiochis), sought for him also a connection with the deme Alopeke-inevitably so, for the model calls for a deme from that tribe's urban trittys, and Alopeke apparently formed the whole of the urban trittys of Antiochis. ${ }^{12}$ To his satisfaction he found such a connection, by regarding the oligarch ( $P A$ 2057) as the Aristoteles who married a daughter of Andokides, grandfather of the orator ( $P A$ 2053); the necessary documentary link he found in $I G$ ii ${ }^{2}$ 10798, the epitaph (first half of the fourth century) of
 and $I G \mathrm{ii}^{2} 2826$, a fragmentary dedication (mid fourth
 ${ }^{\prime} A \lambda \omega \pi \epsilon \kappa \hat{\eta} \theta \epsilon \nu$. But this cannot be accepted, for three reasons. In the first place, the absence of a demotic from $\mathrm{ii}^{2}$ 10798 must give us pause before assigning it to an Athenian citizen. Secondly, ${ }^{13}$ the son of this marriage, Charmides, was brought up with Andokides (the orator) in the house of Leogoras, and was presumably therefore an orphan; so Aristoteles the oligarch cannot be the father in question here. Thirdly, and most important, it is now customary to identify the oligarch with 'Apıovo兀é $\lambda \eta$ ) Tı $\mu \omega \kappa \rho \alpha ́ \tau o v s$, strategos in 426/s (PA 2055), a man whose demotic was not ${ }^{\prime} A \lambda \omega \pi \epsilon \kappa \hat{\eta} \theta \in \nu$ but $\Theta o \rho a l \epsilon \mathcal{S}^{\prime}{ }^{14}$-and Thorai was a deme from the coastal trittys. ${ }^{15}$

So in its full and original form-that of not simply

[^2]tribal but trittyal representation (and order, in Hell. ii 3.2)-Loeper's model has to be abandoned. ${ }^{16}$

The possibility remains, however, that in what might be termed its debased form-simply three men per tribe, irrespective of trittys (or at any rate of trittyal order, in Xenophon)-the hypothesis could still stand, unless and until a new tribal affiliation for one of the Thirty should undermine even that. As matters now stand, four men would appear to have firm demotics congruent with such a pattern of tribal trios: Theramenes Steirieus (III Pandionis), Anaitios Sphettios (V Akamantis), Drakontides Aphidnaios (IX Aiantis) and Aristoteles Thoraieus (X Antiochis). What of the other 26? In nine cases-Melobios, Hippolochos, Chremon, Aresias, Peison, Onomakles, Theognis, Pheidon and Hippomachos-there is simply nothing to say, in this respect. In 10 more the evidence is so meagre and inconclusive that it is best relegated to an Appendix (q.v.). Seven men, however, lay claim to discussion here:
(I) Kritias [2 in Xenophon's list; Erechtheis required]. Loeper pointed to Kallaischros of Phegous, diaitetes in 325/4 (IG ii ${ }^{2}$ 1926.22), as a likely descendant. This deme provided him with not only the right tribe but also, probably, ${ }^{17}$ the right trittys (midland) for his full trittyal model. But there is now a case for believing that the family's deme was Aphidna. ${ }^{18}$ If this could ever be demonstrated beyond dispute, even the debased Loeper model would collapse, for Aphidna constituted the midland trittys of IX Aiantis. As things stand, it would be prudent, with Davies, to reserve judgment.
(2) Chaireleos [13; Akamantis]. In $P A$ there are, besides the oligarch (I5137), three men of this name, and two are from Akamantis; and another Chaireleos, closest of all in date, appears thrice on SEG xxi 72 (from 413-406) with the Akamantid demotic Kikynneus. Kirchner proposed to identify the oligarch with Xaı $\rho \in \lambda$ 白 $\omega$ s Xaı $\rho$ éo 'A $A$ vov́ouos (P $A_{15138}$; IG ii ${ }^{2}$ 5280, before the middle of the fourth century), in the knowledge that this would fit Loeper's (debased) schema. As for the Chaireleos of Prospalta who figures in Isaios xi $48-9$, Davies observes that he is probably too young to be the oligarch himself; ${ }^{19}$ clearly, though, he might be a relative.
(3) Sophokles [16; Oineis]. It is generally accepted (as Loeper himself believed) that the oligarch is $P A 12827$, Sophokles Sostratidou, one of the generals cashiered after the first Athenian expedition to Sicily (Thuc. iii i 15.5 , iv 65.3 ). But I can find no positive grounds for linking him with Oineis, or any other tribe; it is, I take it, simply the influence, direct or indirect, of the Loeper hypothesis itself which has elicited occasional attempts to establish an Oineid connection-most recently by Fornara. ${ }^{20}$ The patronymic, supplied by Thucydides, is no help, as the only deme in which it is securely attested is Eurypidai, of

[^3]Leontis; ${ }^{21}$ nor is assistance forthcoming from any of the currently tenable theories about the procedure for electing strategoi during the Peloponnesian War period.
(4) Eratosthenes [17; Oineis]. In $P A$ (and $R E$ vi 357) Kirchner proposed to identify the oligarch with Eratosthenes of Oe , the man whose murder as an adulterer gave rise to Lysias i. No other instances of the name are known, and Oe meets the (debased) Loeper requirement of being an Oineid deme. 'Nevertheless, there is room for doubt, in the first place because the absence from Lysias $i$ of any overt or even oblique reference to the oligarch's political career is so odd as to be almost unbelievable (such restraint, for Lysias of all men, would have been superhuman), and secondly because the adulterer is described as $\nu \in a v i ́ \sigma \kappa о$ (Lys. i 37), which is wholly inappropriate at any date after 403 for a man who was already adult and controlling his own property in 411 . It is probably wiser to regard the oligarch and the adulterer as two different men, very possibly related and of the same deme but a generation apart. ${ }^{22}$ Davies' statement of the two main objections to Kirchner's identification shows them to be cogent, but the first of them might also stand in the way of his compromise solution: is it credible that no mention was made of this evidently obscure young man's infamous relative and namesake?
(5) Erasistratos [24; Hippothontis]. Loeper made no comment here. The name is rare in Attika: there are only four homonyms for the oligarch in $P A$. One of them is the ' $E$. ' $E \rho a \dot{\sigma} \omega \nu \nu o s$ of Lysias xvii, who is firmly tied to Akamantis, not Hippothontis. ${ }^{23}$ The other three all belong to the family of Phaiax, active as diplomat and politician during the Peloponnesian War, and we now know that his demotic was ['A $\chi a] \rho v \in \dot{v}[s]$ (Peek, Kerameikos iii 78 no. 149)-a deme which made up the midland trittys of VI Oineis. Davies observes that 'the only simple way to connect [the oligarch] closely with his homonyms is to identify him with Erasistratos (III) by assuming that $\dot{a} \delta \epsilon \lambda \phi \iota \delta o v \hat{s}$ in Er $\gamma x i a s$ 392A means 'sister's son' and that a sister of Phaiax (I) married into a family of Hippothontis'. ${ }^{24}$
(6) Eumathes [27; Aiantis]. New epigraphical work by M. B. Walbank (which he very generously discussed with me and allows me to mention) now makes it very likely that Eumathes has an Aiantid demotic, Phalereus. ${ }^{25}$ We now have eight fragments, in all, of a series of stelai which evidently recorded the sale by the poletai, in 402/1 ( $\boldsymbol{\epsilon} \pi i$ $[M] i \kappa \kappa \omega \nu o s{ }^{2} \rho[\chi o v \tau o s)$, of the property of the Thirty and others, ${ }^{26}$ and the first entry reads as follows:

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${ }^{21}$ IG ii ${ }^{2}$ 353.3; IG vii 4254; Agora XV no. 52.5. J. K. Davies has called my attention also to $I G \mathrm{ii}^{2}{ }^{1586.15}$, ['H] $H a[\kappa] \lambda \epsilon i \delta[\eta] \mathrm{s} \Sigma \omega \sigma[\iota \sigma] \tau \rho a \tau i[\delta o] v$ ${ }^{\prime} A_{\chi}[a] \rho[\nu \epsilon u ́ s$, registrant of a mine at Thorikos. Sostratides is a rare enough name in Attika, but Sosistratides is a hapax-or would be, if correctly restored: all things considered, it would not be unreasonable to suggest that the name which stood on the stone was actually Sostratides. However, a link between the name Sostratides and an Oineid deme would not even so be secure, for the Hippothontid demotic ' $A_{\chi}[\epsilon] \rho[\delta o u ́ \sigma i o s ~ c a n n o t ~ b e ~$ ruled out. There seems no point in chasing this hare any further.
${ }^{22}$ Davies 185 . The terminus of 41 I comes from Lys. xii 42 (a tricrarchy)
${ }^{23}$ Lys. xvii $5-8$ (land in Sphettos and Kikynna).
${ }^{24}$ Davies 523 . See n .27 below.
${ }^{25}$ Phaleron made up the urban trittys of the tribe, so Eumathes joins Aristoteles as destroyer of Loeper's full, original hypothesis, which postulated a coastal deme.
${ }^{26}$ Pending Walbank's publication see in brief D. M. Lewis, Ancient Society and Institutions: Studies . . . Ehrenberg (New York 1967) 179. The two joining fragments which provide the date and context were found in June 1970.

## $E \dot{u}] \mu a \theta$ òs $\Phi a \lambda \eta[\rho \epsilon \bar{\omega}]$ s oiкías $\Phi\left[a \lambda^{\nu}\right]$ $\eta \rho \hat{\omega}] \stackrel{\eta}{\eta} \mu \iota \sigma v \hat{\eta} \iota \gamma \epsilon \dot{i} \tau \omega \mu$ ßop $\rho \hat{a}[\theta \epsilon \nu]$

Walbank's autopsy convinced him that the first surviving letter of the name of the confiscatee is indeed $m u$, as Meritt originally read, rather than the only alternative, delta. Theoretically [.|..] $]$ aOós remains a possibility, but I know of no Attic name that fits. PA lists only one other Eumathes besides the Tyrant ( 5807 ), i.e. 5806 , crowned by his fellow thiasotai in the late fourth century ( $\mathrm{IG} \mathrm{ii}^{2}$ 2936).
(7) Mnesitheides [30; Antiochis]. For his full model Loeper sought a link with the coastal trittys of X Antiochis, by attempting to improve upon Koehler's restoration of CIA ii 2692 (a double epitaph with the left-hand edge of the stone entirely missing): in so doing he conjured up a $[M \nu \eta \sigma] \iota \theta \epsilon i \delta \eta \rho[\ldots] a \iota \epsilon u ́ s$, who might be either $\left[\Theta_{o \rho}\right] a i \epsilon u ́ s$ or, as he seemed to prefer, $[\beta \eta \sigma] a i \epsilon u ́ s$. But unfortunately this inscription was not included in IG ii ${ }^{2}$ ! J. K. Davies suggests to me that Kirchner must have found some reason to doubt the whole basis of Koehler's supplements, which meant that the stone would not then fit the IG ii ${ }^{2}$ layout by demotics and then by nomina. Certainly none of the restorations is compelling, and there are other, non-Antiochid possibilities for the demotic; so the document is best ignored. And otherwise none of the handful of $P A$ homonyms for the oligarch offers a link with the tenth tribe.

Loeper concluded his detailed search by expressing the hope that his model would be strengthened by epigraphical and prosopographical work in the future. We have already seen that in its full, trittyal form it has not fulfilled these hopes, and must now be discarded. However, it emerges from the evidence set out above (which I have attempted to review as fairly as possible) that there is as yet no completely secure tribal affiliation for a member of the Thirty which would destroy the simplified model also; so what we must now endeavour to say is whether the data currently to hand are sufficient to warrant continued use of the model extrapolated from them. My contention is that they are not-or at least that caution is mandatory.

In the first place, if one asks whether the prosopographers are interpreting new data with open minds, keeping the model constantly under review, or else responding to them in a manner preconditioned, in fact, by that very model, the retort may well be that it is very hard to determine precisely when a model stops being a useful and suggestive extrapolation from incomplete evidence and starts to interfere tyrannically with other data and possibilities. So it is; but I feel that one modern expert at least, in a book which is already, deservedly, a standard work of reference, does come near on two occasions to putting the cart before the horse. ${ }^{27}$
More broadly still, one needs to voice some disquiet about the way in which epigraphists and prosopographers habitually set about identifying the persons named in Attic inscriptions. This note had already passed through several drafts before I came upon Wesley Thompson's paper 'Tot Atheniensibus idem nomen erat . . .', published

[^4]where it was clearly designed to cause a stir in epigraphical circles, ${ }^{28}$ and I am naturally delighted to find myself at one with so thoughtful and thought-provoking a scholar. Thompson's basic point is that we know so little about individual Athenians and their families, even at the highest level, that there are grave methodological risks inherent in the normal practice of such identifications, i.e. the assumption, unless there is hard evidence to the contrary, that Mr X in one context will be identical with his homonym in another; and he gives many examples of 'obvious' identifications subsequently disproved. Ironically enough, his discussion of the Thirty ( $148-9$ ) assumes the validity of the Loeper model, and uses it to argue that one or two 'obvious' candidates for identification as members of the Thirty come from the wrong tribe, but clearly the argument can work just as well in reverse: any ostensible support for the model which relies on the identification of homonyms (e.g. Anaitios) may not be as solid as it looks.

So is the foundation of the simplified Loeper model adequate or not? Of the many criteria involved, some are simply too subjective or unquantifiable to permit an explicit mathematical statement of the probabilities for and against; however, for the sake of simplicity let it be conceded that we have five fully secure identificationsTheramenes, Anaitios, Drakontides, Eumathes and Aristoteles. The model then draws secondary support from the case of Chaireleos, for whom a link with Akamantis looks likely, and distinctly weaker backing from Polychares, Mnesilochos, Phaidrias, Charikles and (arguably) one or two others. On the other hand there would seem to be some embarrassment for the model in the cases of Kritias (particularly) and Erasistratos. Needless to say, the great point in favour of the simplified Loeper pattern is the fact that the established correspondences occur in correct Kleisthenic tribal order-albeit threatened by the possibility of a Kritias from Aphidna; it would be uphill work to argue that this is fortuitous, and I would not do so. ${ }^{29}$ But I do say that we have to consider another option, between the extremes of pure randomness on the one hand and io trios in tribal order on the other. The fact, as it seems to be, that the list is one of names in tribal order cannot in itself prove (on the basis of 5 correspondences out of 30 ) that the board was made up of 3 men per tribe, no more and no less: only for tribe X Antiochis, in fact, can we assume, on present evidence, exactly three representatives. We have identifications in only 4 tribes out of the io: there is a run of 8 unknowns before Theramenes [9], and II-embracing 3 whole tribes-between Anaitios [14] and Drakontides [26]. Furthermore, such correspondences as have been established or postulated are correspondences not with a list of 30 different and distinct possibilities- $a, b, c, d$, etc.-but with (what is claimed as,
${ }^{28}$ Viz. PHOROS: Tribute to Benjamin Dean Meritt (Locust Valley, N.Y. 974) $14.4^{-9}$.
${ }^{29}$ Here at least some statistical precision is possible. Assume that the list of 30 names is random, as to both tribal affiliation and numerical (I-X) order: what then is the probability of identifying $s$ men whose 4 tribes do turn out to be in numerical order? Any group of 5 men can appear in 120 (i.e. $5 \times 4 \times 3 \times 2 \times 1$ ) different orderings; but if the 5 men come from only 4 different tribes, for every ordering of the 5 there is a corresponding ordering in which the order of the men is different but the order of the tribes the same; so these 5 men can be arranged to yield 60 different orderings. Only one of the 60 will be numerical, i.e. the chances of it are less than 2 per cent, which any statistician would accept as grounds for rejecting the hypothesis of random ordering; clearly the list is numerically (i.e. tribally) arranged. (For assistance here, and in what follows, to an innumerate colleague I am greatly indebted to Theo Balderston.)
and can be no more than) io groups of $3-a a a, b b b, c c c$, etc.; and this appreciably reduces their statistical significance. The crux of the matter, however, is that if this problem is considered as a statistical one, the possible solutions must be ranked in probability terms on a scale beginning with pure randomness and ending with pure (so to speak) contrivance; so any statistician, before allowing himself to be forced to the conclusion that precisely 3 men were drawn from each of io tribes, would wish to eliminate the possibility that the 30 names were taken at random from the tribal pool and then listed in I-X order. And this possibility cannot be eliminated here: if the Thirty Tyrants were chosen without reference to their tribes but then listed by Xenophon-or the interpolator ${ }^{30}$--in tribal order faute de mieux, this could produce exactly the pattern of correspondences that we have now, and more of them would have to be established before one was entitled to resort to the extreme hypothesis, the io tribal trios. ${ }^{31}$

It only remains to add that when one puts the problem back into its historical context, of the political realities of 404 and the access to power of the Thirty, the same view may well commend itself. Loeper saw no real difficulty in explaining why the oligarchs should have been chosen, on his full hypothesis, one from each trittys: their regime, as he saw it, was not set up by illegal means but fairly voted in by the ekklesia-albeit under Spartan pressure-so they had at first to be seen to be operating within familiar democratic forms; and Lysias' account of their selection (xii 76) simply shows that in fact they manipulated at least two-thirds of the appointments. ${ }^{32}$ My own view would place much more emphasis upon the degree of constraint, compulsion and intimidation which resulted from the Spartan military presence. The Thirty took office, to be sure, as a board of $\sigma v \gamma \gamma \rho a \phi \in i s$, and as such represented a perfectly normal feature of Athenian democratic administration in their day. But from another standpoint it is equally valid to describe them, with de Ste Croix, as 'a small oligarchy of the type [Lysander] had already been instrumental in bringing to power elsewhere'; ${ }^{33}$ and in these terms one sees little or no call for the sort of charade that Loeper envisaged.

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## Appendix

(I) Polychares [I in Xenophon's list; Erechtheis required]. Nothing is known of the oligarch himself, and Loeper made no comment. There are three homonyms in $P A$ : all have their demotics, none of them Erechtheid; but a bouleutic list of $304 / 3$ offers us a P. from Erechtheid Anagyrous (Agora XV no. 6I.184). The variant reading Polyarches leads nowhere.
(2) Eukleides [ 5 ; Aigeis]. To meet his full trittyal model-in this case requiring demes from the midland trittys of Aigeis-Loeper found two possibilities as later relatives of the oligarch: an Ikarieus ( $\mathrm{IGii}^{2}$ 1749.27) and a Gargettios (I428.2). (In 1428.2 only $] \kappa \lambda \epsilon^{\prime}[\delta] \eta s$ is actually preserved, but we may follow Loeper and compare ii ${ }^{2}$
 $|\Gamma a \rho \gamma \eta \tau \tau i o v| \gamma[v \nu] \eta^{\prime}$.) Since we need no longer confine ourselves to the midland trittys, one might care to see the

 such a common name- 28 entries in $P A$-such connections are hardly compelling.
(3) Hieron [6; Aigeis]. Loeper made no comment, and even today one is hard put to it to find Aigeid connections, despite the 3 I homonymns in PA: 7538 (Diomeia) is from the mid second century в.с., and the ephebe 7549 (Teithras) even later.
(4) Mnesilochos [7; Pandionis]. The fact that he is presumably identical with the two-month archon of 411/10 (Arist. Ath. Pol. 33.1) is no help here. Loeper resorted to a curious piece of special pleading: while recognising that the urban trittys of Pandionis, which his full model required, consisted of the one large deme Kydathenaion, he nonetheless remarked wistfully that if Konthyle were urban too there would be a likely grandson for the oligarch as tapias $\tau \hat{\eta} s \theta \epsilon o \hat{v}$ in $35 \mathrm{I} / \mathrm{so}\left(\mathrm{IG} \mathrm{ii}{ }^{2}\right.$ 1436.4)! On the simplified hypothesis his suggestion can still stand, for what it is worth.
(5) Diokles [ıI; Leontis]. Loeper found a number of candidates for descendants of the oligarch, though inexplicably his preference for a man from Sounion (IG ii ${ }^{2}$ 1596.28) produced the wrong trittys-coastal rather than midland-for his full model. But with 89 entries in $P A$ Diokles is one of the very commonest Attic names, and little weight can be given to such supposed connections.
(6) Phaidrias [12; Leontis]. A Leontid connection is offered only by Exopios Phaidriou, of Aithalidai (Reinmuth, Ephebic Inscriptions no. IS II. 16, from 324/3).
(7) Charikles [18; Oineis]. Loeper found a connection with Thria, thus (to his satisfaction) linking the oligarch not merely with Oineis but its coastal trittys, as his full model demanded: the two men with epitaphs on $I G \mathrm{ii}^{2}$

 and grandson. The suggestion is not unattractive, though it must be borne in mind that there are more than 20 other homonyms in $P A$ alone.
(8) Aischines [21; Kekropis]. Loeper's full model required a deme from the coastal trittys of VII Kekropis, and he found possibilities for the oligarch's son from both of its demes, Aixone ( $\mathrm{IG} \mathrm{ii}^{2}$ 5404) and Halai Aixonides (2820.17). The second of these is now seriously undermined by the fact that Aischines Polyzelou is attested in person 20 years after 403: Hesp. xv (1946) 160 no. 17.4; see Davies 6. Besides, there are 44 homonyms for the oligarch in $P A$, and no other links with Kekropis.
(9) Theogenes [22; Hippothontis]. Loeper was able to
 furnishes the necessary connection with VIII Hippothontis (though not, as he imagined, with its urban trittys: Oion Dekeleikon was midland; Traill s2, cf. 44 n. 17). There are, however, more than 40 men of this name in $P A$ alone.
(io) Kleomedes [23; Hippothontis]. Loeper's full model required a deme from the midland trittys of Hip-
pothontis, so he felt that $\Delta\left[\epsilon \kappa \epsilon \lambda \epsilon \epsilon \mathcal{U}_{s}\right]$ would be an attractive restoration in $I G$ ii $^{2}$ I374. 6 , where ' $A \rho[\iota \sigma \tau] o \mu \eta{ }_{\eta} \delta \eta$ s $\Lambda$, treasurer in 400 , could be seen as the oligarch's brother. For the $I G \mathrm{ii}^{2}$ text Kirchner read $A$ and restored ${ }^{\prime} A[\zeta \eta \nu \iota \epsilon$ ús $]$, which would suit the simplified model. More to the point, though, is the validity of the argument from Aristomedes to Kleomedes. Neither of the two homonyms in $P A$ (including 8598 , the strategos of $417 / 16$ ) is linked with Hippothontis.


[^0]:    ${ }^{10}$ Porph. VP $41=$ Arist. fr. 196; West (n. 9) 215 f .
    ${ }^{11}$ Aët. ii $16.2-3=$ DK $_{24} \mathrm{~A}_{4}$.
    ${ }^{12}$ Aët. ii $15.7=$ DK 28 A 40a. We do not understand his cosmology well enough to say whether he treated other planets individually.
    ${ }^{13}$ Aët. ii ${ }_{13} \cdot 11=$ DK $_{31}{ }^{1} \mathrm{~A}_{54}$.
    ${ }^{14}$ Daimachus ( $F$ GrH 65 F 8) ap. Plut. Lys. 12; cf. Plin. $N H$ ii 149, Sen. QN vii 5. 3. Pliny's date of Ol. $78 / 2=467 / 6$ agrees with Marm. Par. 239 A $57(468 / 7)$, and is supported by the Chinese Shih Chi, which records the appearance of a comet in 467 (Ho Peng Yoke, Vistas in Astronomy $\mathbf{v}$ [ 1962] 142, no. 13).
    ${ }^{15}$ DK 59 A $1 \S 9$ afd A 81 . Democritus, who repeated this theory, said that some $\dot{\sigma} \sigma \tau \boldsymbol{\epsilon} \boldsymbol{\rho} \boldsymbol{\epsilon} \boldsymbol{s}$ had been seen at the dissolution of comets (Arist. Meteor. 343b2s): comets do occasionally have a double or multiple nucleus, and if the comet of 467 presented this appearance during part of its period of visibility, Anaxagoras' theory was a natural one.
    ${ }^{16}$ Arist. Meteor. 342 b29 ff. $=$ DK 42 A 5; Aet. iii 2.1; O. Gilbert, Die meteorologischen Theorien des griechischen Altertums (Leipzig 1907) 642 ff .
    ${ }^{17}$ Aët. ii 15.3 (Placita) $=$ DK 68 A 86; A 92.

[^1]:    ${ }^{3}$ E.g. Lenschau (n. 2); Davies 185.
    ${ }^{4}$ The list is as follows (I divide it into the notional groupings of three):(I) Polychares, Kritias, Melobios; (II) Hippolochos, Eukleides, Hieron; (III) Mnesilochos, Chremon, Theramenes; (IV) Aresias, Diokles, Phaidrias; (V) Chaireleos, Anaitios, Peison; (VI) Sophokles, Eratosthenes, Charikles; (VII) Onomakles, Theognis, Aischines; (VIII) Theogenes, Kleomedes, Erasistratos; (IX) Pheidon, Drakontides, Eumathes; (X) Aristoteles, Hippomachos, Mnesitheides.
    ${ }^{5}$ This is Loeper's own assessment (91).
    ${ }^{6}$ The affiliation of demes to trittyes is from J. S. Traill, The Political Organisation of Attica, Hesp. Suppl. xiv (1975) 35-55 (hereafter Traill). I give more precise reference only in cases of uncertainty.
    ${ }^{7}$ Loeper's original references were mostly, of course, to the Corpus Inscriptionum Atticarum. It would be pedantry not to update them.
    ${ }^{8}$ Thus when Loeper wrote-but see below.
    ${ }^{9}$ Loeper 92-5.

[^2]:    ${ }^{10}$ In itsclf such an order raises no difficulties; there is no real counterindication in (e.g.) Arist. Ath. Pol. 2 1.4. Loeper, in fact, felt bound to note that other orders were possible, perhaps even demonstrable, in other documents, such as the great deme catalogue of 201/200 ( $I G$ ii $^{2} 2364$ ); however, with the distinction now drawn between the topographical trittyes and the $\tau \rho \iota \tau \tau v \epsilon \in s \tau \omega \nu \nu \rho \nu \tau a \nu \epsilon ́ \omega \nu$ (W. E. Thompson, Historia xv [1966] I-10; Traill 99) such documents as $\mathrm{ii}^{2} 2364$ and the various bouleutic catalogues would seem (even after Traill's most recent comments: Hesp. xlvii [1978] 109 n. 79) to belong to another area of discussion. In any case, even without a standard and single order for all purposes one can expect internal consistency within any one document.
    ${ }^{11}$ Loeper 95-9.
    ${ }^{12}$ Traill 53 n. 27.
    ${ }^{13}$ As Davies 30 points out.
    ${ }^{14}$ H. T. Wade-Gery, JHS 1 (1930) 292; D. M. Lewis, JHS $1_{\mathrm{xxxx}}$ (1961) 119-21; Davies 30.
    ${ }^{15}$ Traill 54.

[^3]:    ${ }^{16}$ D. M. Lewis has drawn my attention to the supporting evidence provided by Agora XVII no. 140, the epitaph (late fourth century) of
     loc. that [ $\Pi \epsilon \iota] \rho a i \epsilon \in \omega s$ (W. K. Pritchett, $A J P$ lxiv [1943] 339) is also possible, but he preferred the [ $\Theta o$ opait $\omega$ s of Meritt, Hesp. xxxiv (1965) $98-9$ no. ro, on the grounds that 'the latter not only makes the arrangement more symmetrical but is also supported by Meritt's suggestion that the deceased is a descendant of the Aristoteles Thoraieus who was prominent in the fifth century as general, Hellenotamias and member of the Thirty'
    ${ }^{17}$ Traill 38.
    ${ }^{18}$ Davies 328.
    ${ }^{19}$ Davies 85 .
    ${ }^{20}$ C. W. Fornara, The Athenian Board of Generals for 501 to 404, Historia Einzels. xvi (1971) $5^{8-9}$ (with the non-existent demotic Oiveús).

[^4]:    ${ }^{27}$ I refer to Davies, Athenian Propertied Families: in the case of Kritias we read (328) that 'but for Loeper's hypothesis there would be a case for identifying Dinsmoor's Kallaischros with the tyrant's father, and Kritias of Aphidna with Kritias (III) son of Leiades'; and the stemma of the family of Phaiax Erasistratou (523-4), admittedly offered 'with more than the usual reserve', is to a high degree conditioned by the Loeper requirement of a link with Hippothontis.

[^5]:    ${ }^{30}$ I mention this Belochian spectre for form's sake only: whether or not it was Xenophon himself who wrote Hell. ii 3.2 is irrelevant here.
    ${ }^{31}$ How many more is a question to which there is no clear-cut statistical answer, for the answer depends not only on the (mere) number of extra correspondences but also on their position in the list. The establishment, now, of an Aiantid demotic for Eumathes is less significant. for example, than it might appear at first sight, since even the intermediate hypothesis permitted only tribes IX or X.
    ${ }^{32}$ Locper 99-101. This will be a convenient place to note Lenschau's theory, (n. 2) 2636-5, combining the simplified Loeper model with Lys. xii 76, that, within each supposed tribal trio, (a) the individual picked out so ingenuously 'from those present', (b) the nominee of the crypto-ephorate and (c) the man chosen by Theramenes are always in this same order. One could easily criticise his grounds for determining which group of to is which; inter alia they require Theramenes to have selected himself; but the key objection must be the incongruity of thus conflating official tribal representation, enshrined (surely, on this view') in Drakontides' decrec, with a criterion which is simply the method of unofficial manipulation believed to have been employed by the oligarchs. I myself see no reason to doubt that the selection principles were much as Lysias describes them, but with the list of names now in tribal order there is no means of unscrambling the three (or any similar) groups involved.
    ${ }^{33}$ G. E. M. de Ste Croix, The Origins of the Pelopomnesian War (London 1972) 144 .

