$i\alpha\rho\delta\nu$  of Ares in Biennos,<sup>20</sup> and it is clear that his cult was firmly established there. With the cult belongs the story of his captivity by Otus and Ephialtes. The Otian plains in Crete<sup>21</sup> can also be placed near Biennos; and from Fulgentius we now see that men of Gortyn and of

20. Inscr. Cret. I Biannos, 1. 11.

Lyctos considered the worship of Ares at Biennos so important that they came thither to sacrifice to him jointly.<sup>22</sup>

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22. I am grateful to my colleagues Dr. A. B. Scott and Mr. James Grainger for helpful discussion of points in Latinity and paleography.

## LUCRETIUS 2. 615

gallos attribuunt, quia, numen qui violarint matris et ingrati genitoribus inventi sint, significare volunt indignos esse putandos, vivam progeniem qui in oras luminis edant.

These lines appear early in Lucretius' description of the procession of Magna Mater. There is much in the entire passage which perplexes readers and commentators, including the basic question whether the passage has any role at all to play in the context. The clause "ingrati genitoribus inventi sint" has proved intractable to all commentators whom I have been able to consult. I propose to offer an interpretation which may clarify its meaning and purpose.

One must first attempt to determine whether the meaning is to be construed literally or figuratively. A. K. Michels links the entire passage with Cicero's invective against Clodius and comments, in connection with lines 614–17, that "Cicero accuses Clodius of exactly these sins, for by desecrating the Megalesia and the shrine at Pessinus he has assaulted the *numen* of the goddess, and, by being adopted into a plebeian family, he has deserted his own." D. J. Stewart suggests that "it might not be too farfetched to see the eunuchs (164)... as a code designation for Stoics and others of mentalist kidney who try to denature the physical world—their mother, too—with their

Either interpretation may be valid, but it need not be, nor can it be proven. But, taken literally, Lucretius is unquestionably discussing the galli, the multilated priests of Cybele; does he define them as one group or two?

Consensus is that there is only one group. Leonard and Smith,<sup>3</sup> recapitulating Munro<sup>4</sup> and Merrill,<sup>5</sup> state "et: i.e., id est, for the clause ingrati . . . sint is merely explanatory of numen . . . violarint Matris." Bailey's 6 note is the fullest: "numen . . . inventi sint: the reason Lucr. gives is not clear. Matris is certainly Cybele, as is shown by numen, but how had they violated her numen? By their ingratitude to their parents, says Munro, and the same idea seems to be suggested by 641-3. The good man will take up arms for his country and defend his parents; if he does not, he is not fit to have children himself. But Giussani is also probably right in seeing an allusion to the story of Attis, who spurned the love of Cybele, violavit numen Matris, and so was afflicted with

<sup>21.</sup> In connection with giants, Servius ad Aen. 3. 578 (I, 440 Thilo and Hagen) mentions Otus in Creta secundum Sallustium, unde Otii campi. For Blevos | Blavos | Vián(n)o(s) as a surviving pre-Hellenic place name, see P. Faure, Kadmos, VI (1967), 53.

ethereal doctrines, and foolishly carry on pretending that there is a cosmic sympathy among all parts in Nature, as it were addressing her with pleas never to be answered (in any case Lucretius would not be above saying that the Stoics indignos esse putandos, / vivam progeniem qui in oras luminis edant, 617!)."<sup>2</sup>

<sup>1.</sup> A. K. Michels, "Lucretius, Clodius and Magna Mater," Mélanges Carcopino (Paris, 1966), p. 678.

<sup>2.</sup> D. J. Stewart, "The Silence of Magna Mater," HSCP, LXXIV (1970), 81.

<sup>3.</sup> W. E. Leonard and S. B. Smith, T. Lucreti Cari De rerum natura libri sex (Madison, 1942), p. 370.

<sup>4.</sup> H. A. J. Munro, T. Lucreti Cari De rerum natura libri sex<sup>4</sup> (Cambridge, 1893), II, 151.

<sup>5.</sup> W. A. Merrill, T. Lucreti Cari De rerum natura libri sex (New York, 1907), p. 440.

<sup>6.</sup> C. Bailey, T. Lucreti Cari De rerum natura libri sex (Oxford, 1947), II, 903-904.

madness, during which he mutilated himself; but this will not explain *ingrati genitoribus*. The former moral explanation must have been more prominent in his mind."<sup>7</sup>

Must it be so? If et is taken as a true coordinate, the two clauses are parallel and two groups are under discussion. The first, "numen qui violarint / matris," refers to Attis and the legend surrounding him, whose story may well have been vividly known to contemporaries from Catullus' tour de force. He typifies resistance and defiance of the divine will; self-mutilation occurred in a fit of madness and is followed by regret: "rabie fera carens dum breve tempus animus est. / egone a mea remota haec ferar in nemora domo? / patria, bonis, amicis, genitoribus abero?" (Cat. 63. 57–59). The second group consists of those

7. Violation of pietas is the view of J. Perret, "Le 'Mythe de Cybèle' (Lucrèce, II, 600-660)," REL, XIII (1935), 340: "Dans le cortège, ces suivants humiliés portant les stigmates de leur cruelle mutilation représentent pour le poète les impies violateurs de toute piété filiale." D. West, The Imagery and Poetry of Lucretius (Edinburgh, 1969), pp. 106-107, interprets as follows: "The offence as he words it, is that they have violated the divinity of their mother and been found guilty of ingratitude towards their parents... In matris and

who consciously and willingly mutilate themselves to serve the goddess; they have thus brought their family line to an end (how serious a matter this was to the Romans is well known, and is underscored by the frequency of adoption among families of equal social status). Their parents had given them birth and had looked forward to the continuation of the family; it is in this regard that the *galli* are ungrateful to their parents. Not only are both groups incapable of siring children, but both are deemed unworthy of doing so, even if they could. But the guilt of the latter group is the greater, because divine compulsion was absent.<sup>8</sup>

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genitoribus in 615 Lucretius is insisting that the offence is against a parent in order to assimilate the offence to the punishment. Such people have offended against their parent and been castrated to show that ungrateful children don't deserve to have children of their own."

8. Thanks are due to Professors Joseph M. Conant and Richard W. Minadeo for helpful comment and criticism, but they do not share responsibility for the views presented.

## ANAXAGORAS ON THE SIZE OF THE SUN1

In 1923 Erich Frank argued that Anaxagoras discovered the mathematical basis of the laws of perspective and that he applied these laws to the shadows cast by the heavenly bodies to explain the workings of eclipses.<sup>2</sup> This has not been universally accepted; G. Sarton, for example, accepts Vitruvius' testimony, but assumes that Anaxagoras (like Agatharchus, whom Vitruvius also mentions) was interested in perspective "for theatrical purposes"; <sup>3</sup> and J. Burnet discounts Vitruvius' account as "most improbable." <sup>4</sup> Frank's position can be strengthened, I believe, if it can be shown that

Anaxagoras' estimate that the sun is larger than the Peloponnese<sup>5</sup> is not merely a guess on his part, but is as seriously considered as any mathematical statement of the form x > a; and that this estimate derives from his understanding of perspective and eclipses.

If Anaxagoras was ignorant of the distance from earth to moon and from earth to sun, and of the dimensions of the moon (as he must have been), what evidence did he have that enabled him to estimate the size of the sun as he did? He knew (1) that the sun is further away from the earth than the moon,<sup>6</sup>

<sup>1.</sup> This note, in an earlier draft, has benefited from a reading by M. S. Freedman.

<sup>2.</sup> E. Frank, Plato und die sogenannten Pythagoreer (Halle, 1923), pp. 20-23. Vitruvius 7. pr. 11 (DK 59 A 39) is our source for Anaxagoras' work on perspective. For his work on eclipses, cf. Hippolyt. 1. 8. 7, 9, 10 (A 42); Plut. Nicias 23 (A 18); Aët. 29. 6. 7 (A 77).

<sup>3.</sup> G. Sarton, Introduction to the History of Science (Baltimore, 1927), I, 86.

<sup>4.</sup> J. Burnet, Early Greek Philosophy<sup>4</sup> (London, 1930), p. 257. Cf. further D. Lanza, Anassagora: Testimonianze e Frammenti (Florence, 1966), p. 44.

<sup>5.</sup> Diog. Laert. 1. 8 (A 1), Hippolyt. 1. 8. 8 (A 42), Aët. 2. 21. 3 (A 72), Theodoretus 4. 22.

<sup>6.</sup> This is necessary for a correct understanding of solar eclipses, and that Anaxagoras believed this is stated by Hippolyt. 1. 8. 7.