set the metamorphosis of Iphigenia of which Aristotle complains. And of course she is not the only one of the play's characters to change radically by the Euripus.<sup>6</sup> At 332 Menelaus accuses Agamemnon of constantly shifting:

πλάγια γὰρ φρονεῖς, τὰ μὲν νῦν, τὰ δὲ πάλαι, τὰ δ' αὐτίκα.

At 471 Menelaus himself totally reverses his own position. Then at 511 Agamemnon reverses his. Euripides has prepared the ground—and set the scene—for Iphigenia's famous reversal at 1368.

My suggestion is that Euripides draws our attention to the location of the play by the Euripus with its famously shifting currents<sup>7</sup>—because he wishes it to be an external symbol—an 'objective correlative', to use T. S. Eliot's expression—for the extreme shifts the play's characters undergo. Thus he can ensure that such shifts can become an integral part of the drama. The shifting currents of human motivation are surely an essential feature of the play's geography.

A fine irony is lent to Aristotle's criticism of Iphigenia's radical change by Procopius, who tells us (*History of the Wars* 8.6.20) that Aristotle quite literally worried himself to death because he could not solve the problem of the shifting currents of these very waters.

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<sup>6</sup> As J. Griffin remarks, the play 'is of all Greek tragedies the one with the largest number of changes of mind' (*Characterization and Individuality in Greek Literature*, ed. C. Pelling [Oxford, 1990], 143). Griffin sees changeability as a key feature of the world of this play (140–9).

<sup>7</sup> Cf. I.T. 6–7.

## A NOTE ON THE DEATH OF SOCRATES

Gill<sup>1</sup> suggested that since the symptoms which Plato describes for Socrates' death (*Phaedo*, 117a ff.) do not correspond with pure hemlock poisoning, the account is highly selective, both to show Socrates' self-control and the endurance of the psyche despite its departure, signified by  $o''_{i}\chi\epsilon\sigma\theta\alpha\iota$ , from the body.

Poetic licence certainly cannot be ruled out, but Gill, basing his interpretation wholly on Nicander's Alexipharmaca, seems to have ignored the fact that within the family Apiaceae (Umbelliferae), there are two distinct strains of native European hemlock which produce markedly dissimilar symptoms. The first strain includes Cicuta maculatalvirosaldouglasii—water hemlock, also known as 'cowbane', which has the active ingredient cicutoxin, an unsaturated alcohol; and Oenanthe crocata—water dropwort, whose active ingredient is oenanthotoxin. Both of these plants produce Nicander's pronounced symptoms of vomiting, convulsions, agitation, and violent spasms, as well as frothing at the mouth. Moreover, the scholiast to Nicander's Alexipharmaca suggests that some call the plant to which his source is referring krokeanon, which may also allow a further identification with Oenanthe crocata.

<sup>&</sup>lt;sup>1</sup> C. Gill, CQ 23 (1973), 25–8. 
<sup>2</sup> Pl. Phd. 115d3–4, 118a3–4.

<sup>&</sup>lt;sup>3</sup> D. Frone and H. J. Pfänder, A Colour Atlas of Poisonous Plants (London, 1983), 37-44; J. M. Kingsbury, Deadly Harvest (London, 1967), 67; K. F. Lampe and M. A. McCann, AMA Handbook of Poisonous and Injurious Plants (Chicago), 56-7, 124-5.

<sup>&</sup>lt;sup>4</sup> A. S. F. Gow and A. F. Scholfield (edd.), *Nicander: The Poems and Poetical Fragments* (Cambridge, 1953), 186-94.

Conium maculatum, however—poison hemlock—is a member of the second strain and has the active ingredient coniine, an alkaloid, which produces fewer and far less pronounced symptoms. Coniine is chemically related to nicotine, both of which 'work by depressing the function of the central nervous system and bringing on paralysis. Death occurs when the muscles used in breathing become paralysed.' To an onlooker, the most obvious of the symptoms occurring from an ingestion of poison hemlock are initial agitation, cold extremities, dilated pupils, and paralysis leading to coma. Paralysis would affect the voluntary musculature generally, but coniine would attack first the muscles used last: Socrates' walking about the cell, therefore, would of itself account for the symptom, interpreted as loss of sensation both by himself and his attendants, originating at his feet and creeping up the legs to the waist.

Nicander relates the symptoms of his

noxious draught... for this drink certainly brings disaster upon the head bringing the darkness of night: the eyes roll, men roam the streets with tottering steps and crawling upon their hands; a terrible choking blocks the lower throat and narrow passage of the windpipe; the extremities grow cold and in the limbs the stout arteries are contracted; for a short while the victim draws breath like one swooning and then dies.<sup>7</sup>

The symptomatic (and possible philological) correlation between Nicander's hemlock and water hemlock—(Oenanthe) crocata—and especially water dropwort makes it difficult to reconcile the members of this strain to the means of Socrates' death. The correspondence, however, between the symptoms of Conium maculatum and Plato's description makes an identification with poison hemlock far more secure and does not require the Phaedo to be an exercise in poetic licence.

Gill seems to have ignored, also, the attention paid to hemlock by Theophrastos. In the *Enquiry into Plants*, Theophrastos provides what appears to be a composite physical description of hemlock:<sup>8</sup> the parsley-like leaves are a standard feature of all hemlocks, whereas the shady conditions the plant requires indicate poison hemlock in particular. The hollow, fleshy stem, however, is a notable feature of water hemlock and Theophrastos' claim that the juice of his hemlock's root is more toxic than that of its fruit is also more appropriate to a description of water hemlock or water dropwort than poison hemlock. Whether Theophrastos' description allows a firm identification or not, he proceeds to describe two means by which hemlock can be prepared in order to provide a quick and painless death.<sup>9</sup> First, it can be mixed with poppy and 'other similar herbs' in the manner demonstrated by Thrasyas of Mantineia; notably, the morphine content of the opium poppy, specifically, might act as an antidote to the symptoms provoked in particular by water hemlock or water dropwort.<sup>10</sup> Alternatively, the *keluphos*—the indigestible bark or casing, can be removed, a method employed by the Kians once they discovered the ease with which death was assured by this treatment

<sup>&</sup>lt;sup>5</sup> Kingsbury (n. 3), 65.

<sup>&</sup>lt;sup>6</sup> See too And. 3.10; Ar. Ran. 122ff.; Lys. 12.17, 18.24; Xen. Hell. 2.3.56; R. J. Bonner, 'The use of hemlock for capital punishment', in Athenian Studies Presented to William Scott Ferguson (New York, 1973), 299-302; T. A. Henry, The Plant Alkaloids (London, 1924), 29ff.; D. M. MacDowell, The Law in Classical Athens (New York, 1978), 255; J. Doull, C. D. Klaassen, and M. O. Amdur (edd.), Casarett & Doull's Toxicology: The Basic Science of Poisons (New York, 1980<sup>2</sup>), 584-90; L. M. Haddad, M. W. Shannon, and J. F. Winchester, Clinical Management of Poisoning and Drug Overdose (Philadelphia, 1998<sup>3</sup>), 381, 383.

<sup>&</sup>lt;sup>7</sup> Gow and Scholfield (n. 4), 186-94.

<sup>&</sup>lt;sup>8</sup> Thphr. H.P., 1.5.3, 6.2.9, 7.6.4, 9.8.3, 9.15.8.

<sup>&</sup>lt;sup>9</sup> See Thphr. H.P. 9.16.8–9, 9.20.1.

<sup>&</sup>lt;sup>10</sup> I owe this suggestion to CQ's anonymous referee.

of the plant. Since it may be presumed that a quick and painless end would be desired by those attempting suicide, for which hemlock appears frequently to have been used, Theophrastos' precautions appear unnecessary unless he is, in fact, describing water hemlock or water dropwort.<sup>11</sup>

There are thus three possibilities which Gill has overlooked and which would obviate the need for Plato's description of Socrates' death to have been highly selective. First, the Athenians specifically used poison hemlock in the (possibly few) executions involving this method: this would have provided a death coincident with Plato's description of Socrates' final hours. Alternatively, water hemlock or water dropwort was used but was prepared, as by the Kians, by the removal of the indigestible *keluphos*. Finally, a mixed infusion of this plant was concocted with poppy and other similar herbs in line with a recipe such as that of Thrasyas of Mantineia. It is possible that Plato did indeed want to present Socrates' death in terms that displayed the philosopher's self-control and the endurance of the psyche despite its departure from his body. It is also possible, however, that the manner of Sokrates' death provided just this didactic opportunity. It may even have provided the original inspiration for the philosophical example with which Plato immortalized his mentor.

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<sup>11</sup> See too Bonner (n. 6), passim; Ar. Ran. 122-3. Although Gill (n. 1) suggests that Aristophanes is minimizing the choking symptoms of hemlock 'to sharpen the contrast with hanging', Heracles dismisses the former method of getting to Hades in terms which imply both that it was used frequently by suicides at the close of the fifth century and that it was not an intrinsically and extremely unpleasant way in which to meet death.

## MELANIPPE ECCLESIAZUSA (ARISTOPHANES, Ecc. 441-54)

In Aristophanes, *Ecc.* 372–477, Chremes relates to his neighbour Blepyrus how the Ecclesia (under the influence of Praxagora and various other women who attended disguised as men) came to vote that Athens should be turned over to the control of its women. One of these women (probably Praxagora herself) made the following points in favour of the proposal (Blepyrus' interjections have been omitted):<sup>1</sup>

γυναίκα δ' εἶναι πρᾶγμ' ἔφη νουβυστικὸν καὶ χρηματοποιόν. κοὕτε τἀπόρρητ' ἔφη ἐκ Θεσμοφόροιν ἐκάστοτ' αὐτὰς ἐκφέρειν, σὲ δὲ κἀμὲ βουλεύοντε τοῦτο δρᾶν ἀεί.

ἔπειτα συμβάλλειν πρὸς ἀλλήλας ἔφη ίμάτια, χρυσί', ἀργύριον, ἐκπώματα, μόνας μόναις, οὐ μαρτύρων ἐναντίον, καὶ ταῦτ' ἀποφέρειν πάντα κοὐκ ἀποστερεῖν· ἡμῶν δὲ τοὺς πολλοὺς ἔφασκε τοῦτο δρᾶν.

ἔτερά τε πλεῖστα τὰς γυναῖκας ηὐλόγει· οὐ συκοφαντεῖν, οὐ διώκειν, οὐδὲ τὸν δῆμον καταλύειν, ἄλλα πολλὰ κἀγαθά.

(441-4; 446-50; 454, 452, 453)

<sup>1</sup> Texts and translations for the play are taken from Aristophanes: Ecclesiazusae, ed. A. H. Sommerstein [= The Comedies of Aristophanes 10] (Warminster, 1998).

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