

last one and a half lines in his essay *On exile* (*Mor.* 603e), but he fails to perceive the witty *double entendre* in Theocritus' final words, which appear to indicate a conventional geographical reference¹⁴ but in fact have a much less innocuous intent.¹⁵ If he had recognized the presence of *Rep.* 533c in the background, it might have discouraged him from making the suggestion that *βόρβορος* was the name given by the Madeconians to a river near Pella. For, as Düring rightly observes, the river Borborus owes its existence (and, we might add, its place in Pauly Wissowa's *Realencyclopädie*) entirely to the fertile imagination of the author of this *ad hoc* interpretation.¹⁶

Free University, Amsterdam

DAVID T. RUNIA

¹⁴ *προχολή* in the plural generally refers to the mouth of a river; cf. LSJ *ad loc.*

¹⁵ The reader has no opportunity of checking, because Plutach quotes only the end of the poem. We may assume, I think, that he knew the whole of it.

¹⁶ Düring, *op. cit.* 381; *RE* 3.1 (1897), 720.

WHAT WORRIED THE CROWS?

A well-known epigram by Callimachus on the philosopher Diodorus Cronus (fr. 393 Pfeiffer) reads as follows:

αὐτὸς ὁ Μῶμος
ἔγραφεν ἐν τοίχοις 'ὁ Κρόνος ἐστὶ σοφός'.
ἦν ἰδέ κοὶ κόρακες τεγέων ἐπὶ 'κοῖα συνήπται,'
κρῶζουσιν καὶ 'κῶς αὐθι γενησόμεθα,'.

The question of the third line, while perhaps recondite from a contemporary perspective, was clear in antiquity. The crows are asking 'What follows (from what)?', in allusion to the Hellenistic disputes concerning the truth conditions of conditional propositions (*συνημμένα*), disputes in which the views of Diodorus figured prominently.¹

I agree with Sedley that the question of the last line is 'much more problematic'.² The common interpretation has been to read the *αὐθι* as a form of *αὐθις* and to interpret it temporally. The result, in Pfeiffer's estimation, is 'quomodo posthac erimus?'.³

This interpretation derives from Sextus Empiricus' discussion at *M.* 1.309–12 of the last two lines of the epigram. After crediting the grammarian with the ability to understand the allusion in the crows' first question (*M.* 1.310: *καὶ μέχρι τούτου συνήσει τὸ καὶ παιδίους γνώριμον*), he proceeds to argue that the philosopher has a better chance than the grammarian of understanding the second question. But, to quote Sedley, Sextus 'makes a ghastly mess of it' when he attempts his own elucidation. According to an argument of Diodorus, a living thing does not die in the time in which it lives nor in a time in which it does not live. Hence, Sextus concludes, it must be the case that it never dies and, 'if this is the case, we are always living and, according to him, we shall come to be hereafter (*αὐθις γενησόμεθα*)' (*M.* 1.312).

With respect to an assessment of the adequacy of Sextus' account, I can scarcely do better than quote the comments of Sedley:

¹ See Sextus Empiricus, *PH* 2.110–12 and the discussion in B. Mates, *Stoic Logic* (Berkeley and Los Angeles, 1961), pp. 45–7.

² D. Sedley, 'Diodorus Cronus and Hellenistic Philosophy', *Proceedings of the Cambridge Philological Society* 20 (1977), 108 n. 35.

³ Pfeiffer, *Callimachus* (Oxford, 1949), i.35.

Editors quote Sextus' words as sufficient explanation of the lines, but I find them entirely incredible. Diodorus probably did have an argument against the possibility of perishing (cf. S.E. *M* 10.347 = fr. 126 Döring), but if so his intention was formally Eleatic and stood on a par with the Eleatic denial of becoming. To express 'we live for ever' by saying 'we shall become hereafter' is odd coming from anyone, but is sheer self-contradiction in the mouth of an Eleatic.⁴

Moreover, it seems unlikely that Diodorus would have regarded any argument of his against the possibility of dying (*ἀποθνήσκειν*) as entailing immortality, i.e., that one is never dead (*τεθνηκέναι*). For, according to Sextus (*M*. 10.97ff.), Diodorus maintained that it is possible for the 'perfect-stative' (*συντελεστικός*) form of a verb to be true of a subject without the corresponding 'present-imperfective' (*παρατατικός*) form ever having been true of that subject.

As an alternative interpretation of the crows' second question, I suggest that the *αἴθι* be read as the contracted form of *αὐτόθι*, used as an adverb of *place*. The allusion is to Diodorus' denial of motion. There are several locative senses given in the *LSJ* entries for *αἴθι* (= *αὐτόθι*, = *αὐτοῦ*): on the spot, (just) here, (just) there. And a locative interpretation of *αἴθι* supplies a plausible reading for the crows' question. What they are asking is 'How shall we get to that very place (*scil.* the place where we shall be once we *have* moved)?'.

The locative use of *αἴθι* by Callimachus is attested by a line from the *Hecale* (fr. 260, 9–10 Pfeiffer): ὁ μὲν φάτο, τοῖ δ' αἰόντες πάντες ἢ παιῶν ἀνέκλαγον, αἴθι δὲ μίμνον.⁵ The real argument for this reading, however, is that it makes sense. As Sextus notes in his discussion of the crows' second question, 'it is the opinion of Diodorus that nothing is moving (*μηδὲν κινεῖσθαι*)' (*M*. 1.311). This Diodorean doctrine is further explicated by Sextus at *M*. 10.85–6:

Another weighty 'reminder' of the non-existence of motion is provided by Diodorus Cronus, through which he shows that although nothing is moving (*κινεῖται*), it none the less is moved (or has moved: *κεκίνηται*). That nothing is moving is a consequence of his hypothesis of indivisibles: for it behooves an indivisible body to be contained in an indivisible place and, on account of this, it is not moving in the place where it is (for it fills up that place, but it is necessary that a moving thing have a larger place in which to move). Nor is it moving in the place where it is not; for it is not yet in that place, so as to move in it. Consequently, nothing is moving. But, according to reason, it has moved. For what was formerly observed to be in this place is now observed to be in another place.⁶

There is evidently nothing in Diodorus' view that denies that the crows can *have* moved (*κεκίνηται*), i.e., that they can later be in a place different from the one they presently occupy. But the crows are puzzled as to *how* (*κῶς*) this can happen: how is it possible to have moved (*κεκίνησθαι*) without previously having been in the process of moving (*κινεῖσθαι*). Diodorus was evidently understood as having eliminated Aristotelian *κινήσεις*, connoted by the present-imperfective verb forms, from the world and as having substituted for them a fixed series of states, connoted by the perfect-stative verb forms.

I submit that Diodorus' doctrine of 'minima', i.e., his conception of space and time as composed of indivisible atoms, makes the crows' 'how-question' a particularly pointed one. In the passage just quoted Sextus says that Diodorus' judgement that nothing *is* moving 'follows from' (*ἀκολουθεῖ*) his postulation of such minima. Although it is not clear why this entailment obtains, it is clear, I think, that without the added element of temporal and spatial minima Diodorus' argument is nothing

⁴ Sedley, loc. cit.

⁵ See Pfeiffer's apparatus, op. cit. i.247.

⁶ Cf. *M*. 10.119–20.

more than one familiar version of the Arrow paradox of Zeno of Elea: 'the moving thing does not move in the place where it is nor in the place where it is not'.⁷ It seems unlikely that Diodorus' reputation should largely have rested on repeating Zeno's paradox without any sort of elaboration.

The elaboration that Diodorus supplied is his doctrine of spatial and temporal minima. It has been argued⁸ that at the heart of Zeno's Arrow paradox is the following implicit but plausible line of reasoning: nothing is moving at any *instant* (durationless 'point' of time) during a supposed interval of motion; therefore, everything is at rest at each of these instants; consequently, no motion occurs. By the time of Diodorus, there was a powerful response to this argument: that of Aristotle. As Aristotle somewhat elliptically puts it at *Phys.* 6.9.239b30–3: '[That the supposedly moving arrow remains at rest] follows from conceiving time as composed of instants (τῶν νῦν); if this is not granted, there will not be an argument'. To elaborate on Aristotle's statement, motion is something that requires *duration*, a 'lapse' or interval of time; and the concept of rest also presupposes such a temporal lapse. But an instant, a 'τὸ νῦν' in Aristotle's technical sense, is definitionally punctal – without temporal duration or magnitude. Hence it is a mistake to speak of either motion or rest at τὰ νῦν. According to Aristotle, the crows need not worry how they will get from one place to another. The intuitive answer holds: the crows move from place X to place Y by continuously traversing all the intervening places.⁹ 'Moving' (τὸ κινεῖσθαι), in order to occur, need not occur at some durationless τὸ νῦν, as Zeno seems to have supposed. Aristotle holds that the notion of either motion or rest at a temporal point or τὸ νῦν is incoherent. Rather, τὸ κινεῖσθαι is a continuous process that requires some interval or 'stretch' of time. Aristotle, I believe, would regard his criticism of Zeno's Arrow as having been vindicated by the rigorous mathematical account of a continuous process made possible by the development of calculus in the seventeenth century.¹⁰

Diodorus' postulation of spatial and temporal minima precludes Aristotle's response to Zeno, however. These minima are true atoms, that is, indivisible spatial and temporal *intervals* rather than points. It is thus entirely intuitive to speak of space and time as composed (συγκείμενα) of these atoms. It is thus also appropriate to conceive bodies as being either at rest or in motion *during* such temporal atoms. But it happens that all bodies must be at rest during the temporal minima: for if a body were to be

⁷ Diogenes Laertius 9.72.

⁸ G. Vlastos, 'Zeno of Elea', *The Encyclopedia of Philosophy*, ed. P. Edwards (New York and London, 1967), viii. 375.

⁹ The technical import of this phrase is that a crow moves through a potentially infinite number of places where it *might* stop in moving from place X to place Y. These 'potential places' can be linearly ordered: for any two distinct potential places U and W between X and Y, either U is between X and W while W is between U and Y or W is between X and U while U is between W and Y. However, these potential places cannot be discretely ordered, that is, ordered ἐφεξῆς, in Aristotle's sense: no such potential place could be the *immediate* successor or predecessor of another potential place. I should like to thank the anonymous reader for drawing this matter to my attention, and for suggesting the phrase 'continuously traversing'.

¹⁰ Although the development of the calculus facilitated the formation of a conception of 'instantaneous velocity', it is open to the defender of Aristotle's resolution of the Arrow to claim that this term involves a πρὸς ἑν homonymous use of 'velocity': instantaneous velocity is not velocity in the primary or focal sense, i.e. distance traversed divided by the time *during* which it is being traversed, but the limit of an infinite sequence of velocities in this primary sense. Hence, the concept of instantaneous velocity need not imply that a body is either moving or at rest at an instant in the way that the concept of velocity in a primary sense implies that a body is either moving or at rest during a (non-zero) interval or 'stretch' of time.

moving during such an atom, it would have to traverse different spatial intervals during different temporal subintervals; but a time *atom* has no such subintervals.

The crows' how-question is particularly apposite, then. Because of Diodorus' doctrine of temporal and spatial minima, the 'natural' answer cannot be given to their question *how* they will come to be at that very place they will later occupy. That is, Diodorus cannot admit that the crows get from one place to an adjacent minimal place by means of a continuous process or *κίνησις* of moving (*κινείσθαι*) that results in the crows' gradually occupying less and less of the first place while occupying more and more of an adjacent minimal place. Rather, the crows simply are at rest in the first place during one time atom and, during the next time atom, they find themselves at rest at the adjacent minimal place. The crows' question, natural though it may be, is a question that Diodorus cannot answer.

Arizona State University

MICHAEL J. WHITE

GLADIATORS IN THE THEATRE

While restating the correct interpretation of the prologue to the *Hecyra* of Terence in *CQ* 32 (1982), 134 F. H. Sandbach has this to say: 'Possibly the widespread view which the translators and I reject has been encouraged by disbelief that the theatre could be used for gladiatorial combat. It is true that there is no reliable evidence for such use at Rome, for Donatus' statement "hoc abhorret a nostra consuetudine uerumtamen apud antiquos gladiatores in theatro spectabantur" may be no more than inference from Terence's text.' There is, in fact, a certain amount of evidence for gladiatorial combats in the theatres at Rome, that is at venues where *ludi scaenici* were performed, which it is difficult to regard as unreliable and which is consistent with what we know of the relationship between the theatre and gladiatorial games.

(a) Gladiatorial shows, funeral games and the Roman Forum

Gladiatorial shows were first introduced to Rome as part of the previously scenic *ludi funebres* in 264 B.C.¹ Valerius Maximus states that these shows were held in the *Forum Boarium*, but we learn from Polybius that in his day it was the Roman *forum* and the *rostra* which were the focal points for ceremonies honouring the dead.² In the earliest example of private funeral games where the venue of the gladiatorial contests is recorded, the games of M. Aemilius Lepidus in 216 B.C., it is the *forum Romanum*.³ Funeral games and a gladiatorial show were celebrated to commemorate the death of Valerius Laevinus in 200 B.C. In this case the *ludi funebres* are specifically stated to have taken place in the *forum*, and there is no reason to assume that there was a separate venue for the gladiatorial show.⁴ In 183 on the death of Publius Licinius there was a distribution of meat, gladiatorial combats, funeral games and subsequently a banquet. The banquet was held in the *forum*, as presumably were the other events.⁵

¹ Livy, *Epit.* 16; Valerius Maximus 2.4.7. For *ludi scaenici* as funeral games see Livy 41.28.11 and L. R. Taylor 'The Opportunities for Dramatic Performances in the time of Plautus and Terence', *TAPA* 68 (1937), 299.

² Polybius 6.53.

³ Livy 23.30.15.

⁴ Livy 31.50.4. The *forum* was used for gladiatorial shows for the next 200 years: Plut. *Gaius Gracchus* 12; Suetonius, *Julius* 39.1; Dio 43.23.3; Suetonius, *Augustus* 43, etc. See K. E. Schneider, *R. E. Suppl.* III, 760-2.

⁵ Livy 39.46.2-3. Compare the similar ceremonies in honour of Flamininus in 174 B.C., Livy 41.28.11.