Diodorus Cronus and the Master Argument

Diodorus Cronus was an important philosopher of the fourth and third centuries B.C who was famed as a master dialectician and logician. He is nowadays chiefly known for a number of paradoxes, his thoughts on conditionals, and the so-called 'Master Argument'.

The Master Argument has exercised many philosophers, but is rather difficult to make out. According to our fullest report, Diodorus Cronus argued for the inconsistency of the three following claims: (A) every past truth is necessary; (B) the impossible does not follow from the possible; and (C) there are possibilities which neither are nor will be true. The precise argument Diodorus Cronus offered for the inconsistency of these three claims is not known, but— as a result of this argument — Cronus rejected (C) (so, according to him, (D) there are no possibilities which neither are nor will be true, i.e. every possibility either is or will be true).

The Master Argument

These seem to be the sort of starting-points from which the Master Argument is posed. The following three propositions mutually conflict: [A] 'Every past truth is necessary'; [B] 'something impossible does not follow from something possible'; and [C] 'There is something possible which neither is nor will be true'. Diodorus saw this conflict and exploited the convincingness of the first two to establish the conclusion that [D] 'Nothing which neither is nor will be true is possible'. Now some will retain the pair 'There is something possible which neither is nor will be true' and 'Something impossible does not follow from something possible', but deny that 'every past truth is necessary'. This seems to have been the line taken by Cleanthes and his circle, and was in general endorsed by Antipater. Whereas others will retain the other pair, that 'Every past truth is necessary, but hold that something impossible does follow from something possible. To retain all three is impossible because of their mutual conflict. So if someone asks me, 'Which of them do you retain?' I shall answer 'I don't know; but my information is that Diodorus retained the first pair I mentioned, the circles of Panthoides (I think) and Cleanthes the second pair, and Chrysippus and his circle the third pair.
(Epictetus *Discourses* 2.19.1–5 = LS 38 A)

Diodorus defines the possible as what is or will be, the impossible as what, being false, will not be true, the necessary as what, being true, will not be false, and the non-necessary as what either is now, or will be false.
(*Diodorus possibile esse determinat quod aut est aut erit; impossibile, quod cum falsum sit non erit uerum; necessarium, quod cum uerum sit non erit falsum; non necessarium, quod aut iam est aut erit falsum.* Boethius *In De Int.* 234.22–6 = LS 33 C)

Diodorus and Philo on Conditionals

(112) […] All the dialecticians in common say that a conditional is sound (*hugiēs*) when its finisher follows from its leader. But on the question of when it follows, and how, they disagree with one another and lay out competing criteria of following. (113) Philo, for example, said that the conditional is true when it does not begin with a true proposition and finish with a false one, so that a conditional, according to him, is true in three ways and false in one way. For when it begins with a true one and finishes with a true one, it is true, as in 'If it is day, it is light'. And when it begins with a false one and finishes with a false one, it is again true – for example, 'If the earth flies, the earth has wings'. (114) In the same way, too, the conditional that begins with a false one and finishes with a true one is true, such as 'If the earth flies, the earth is'. But it is false only when it begins with a true one and finishes with a false one, as does 'If it is day, it is night'. For when it is day, 'It is day' is true, while 'It is night,' which was the finisher, is false.

(115) Diodorus, on the other hand, says that a conditional is true if it neither was nor is *possible* (*endechesthai*) that its antecedent is true and its consequent false — which conflicts with Philo's position. For a conditional such as 'If it is day, I am having a discussion', when it is day at present, and I am having a discussion, is true according to Philo, since it begins with the true 'It is day' and finishes with the true 'I am having a discussion', but false according to Diodorus. For it *is able* to begin with the true 'It is day' and finish with the false 'I am having a discussion' (when I have become quiet), and it *was* able to begin with a true one and finish with the false 'I am having a discussion'. (116) For before I began having a discussion, it began with the true 'It is day' and finished with the false 'I am having a discussion'. Again, one of this character – 'If it is night, I am having a discussion' – when it is day and I am silent, is in the same way true according to Philo (for it begins with a false one and finishes with a false one), but false according to Diodorus. For it is *possible* to begin with a true one and finish with a false one, when night has come, and when, further, I am not having a discussion but am quiet. (117) But in addition, 'If it is night, it is day', when it is day, is true according to Philo for this reason: that it begins with the false 'It is night' and finishes with the true 'It is day'; whereas according to Diodorus it is false for this reason: that it is *able*, when night takes over, to begin with the true 'It is night' and finish with the false 'It is day.'

(S.E. *M.* 8.112–117 [trans. R. Bett, *Sextus Empiricus: Against the Logicians* (CUP)])