Sextus Empiricus, in some well-known passages, reports four different criteria for the truth of conditional propositions, each of which was adopted by one or more dialecticians in antiquity. Sextus tells us that the dialecticians agreed that a conditional proposition is true (δύνατε) when its consequent follows upon its antecedent. But as to when and how its follows upon the antecedent they disagree with one another.

The dialecticians recommend conflicting criteria of following upon (κριτήρια τῆς ἀκολουθίας).

Philo maintained that the conditional proposition is true, or that “following upon” may be truly said to be the relation between propositions, in all instances except those in which the antecedent is true while the consequent is false. For example, given that it is day and that I am conversing, the following conditional propositions are, according to Philo, true: (i) if it is day, I am conversing; (ii) if it is not day, I am conversing; and (iii) if it is not day, I am not conversing; while, given the same circumstances, it is false, by Philo’s definition of “follow upon”, that if it is day, I am not conversing. In other words, Philo made “follow upon” the relation that is now called “material implication”.

Diodorus held any conditional proposition to be true if, beginning from a true antecedent, it could not have terminated and cannot terminate in a false consequent. For Diodorus, then, each of the four propositions formulated above as examples of Philonian true and false conditionals is false. For Diodorus would deny that ‘if it is day, I am

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1 P.H. ii.110-112; Adv. Math. viii. 112-117.
2 Sextus Emp. P.H. ii.110ff.
conversing' is a true conditional proposition, because if I cease conversing before nightfall the proposition will then have a true antecedent and a false consequent, and any conditional which admits such a combination of propositions is false. As Mates has clearly shown, a conditional proposition "holds in the Diodorean sense if and only if it holds at all times in the Philonian sense". Sextus gives as an example of a Diodorean true conditional proposition 'if atomic elements of things do not exist, atomic elements exist.' For, since the antecedent is always false, this conditional can never contain a true antecedent and a false consequent. Therefore it is Diodorean true. As Mates observes, this example shows that the ancients were aware of the paradox in Diodorean implication, that an always false proposition implies any proposition whatsoever, even its own negation.

Sextus next describes two other criteria of true conditional propositions, conflicting with those already presented as well as with one another. Unlike his descriptions of the two former views, the ones he now brings forward have no philosophers' names attached to them. Some men, Sextus says, maintain that a conditional proposition is true when the contradictory of its consequent is incompatible (μαχητα) with its antecedent; these are holders of the sunartesis (συναρτησις) or connection theory. From the example, furnished by Sextus, 'incompatible' appears to mean logically incompatible; that is, the conjunction of the antecedent and the contradictory of the consequent would be logically false. This third criterion of 'following upon' is even stronger than the previous two and, judged by it, none of the three propositions illustrative of Philo's criterion, nor the one presented as an example of a true conditional proposition for Diodorus, is a true conditional. The criterion for the truth of a conditional proposition demanded by the third view is satisfied in such a proposition as 'if it is day, it is day.' A fourth group of persons, referred to by Sextus as 'those who judge by way of implication (οι τη εμφασει καινοντες)', held the view that

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7 Sextus Emp. _P.H._ ii.111.
8 Mates, _Stoic Logic_, p. 48.
9 Sextus Emp. _P.H._ ii.111.
10 Mates writes, "Judging from the position of this type in the list, which was obviously intended to proceed from weakest to strongest, we are led to suppose that "incompatible" is used in its ordinary sense, according to which incompatible propositions cannot both be true, i.e. their conjunction is logically false. The example bears out this interpretation." _Stoic Logic_, p. 48.
11 Sextus Emp. _P.H._ ii.112.