## Appendix to I\u00b32c: Speusippus and Aristippus

I suggest that Speusippus is the source, not only for the argument of B2 996a21-29, but for the whole passage 996a21-b1, including the story about Aristippus at 996a32-b1. Aristotle shows no interest in Aristippus (the only other mention of his name is in the Rhetoric passage cited above), and would have no reason to use such hostile language against him. Aristotle was too young to have heard Aristippus himself, and so must be depending on some source, whether written or oral: Speusippus is the most plausible candidate. Speusippus must have detested Aristippus, and this for two reasons: first, because Aristippus identified the good with pleasure, while Speusippus thought pleasure was an evil, and, second, because Aristippus despised mathematics, while Speusippus was fascinated by Pythagorean numerology, and regarded the mathematicals as the highest beings and the highest objects of contemplation. Now Speusippus (according to the account in Diogenes Laertius IV,4-5) wrote a dialogue called Aristippus (so, later, did Stilpo; these are the only works of this title that I know). We have no fragments of this work and no reports of its contents, so reconstructions should be kept to a minimum. But I will venture the following. Obviously the dialogue was hostile to Aristippus, and the usual assumption is that it was ethical, an attack on Aristippus' hedonism. But note that Plato in the Gorgias derives Callicles' hedonism from his contempt for mathematics, which leads him to overlook the power of geometrical equality (508a5-8), and thus always to strive for having more, not content with having the right amount. Plato argues in the Gorgias that hedonism is always essentially a striving for more, because pleasure consists essentially in filling a vessel which is not yet full, and ceases when the vessel is filled; it is not a state, but a process of increase; we will continue enjoying pleasure indefinitely only if our vessel is leaky, so that instead of going up to the right amount and stopping there, we need continually to be filled up. I suggest that Speusippus imitated these arguments of the Gorgias in his Aristippus, with Aristippus in place of Callicles (as Aristotle imitated the Phaedo in his Eudemus, the protreptic speeches of the Euthydemus in his Protrepticus, and other dialogues in other works, changing the characters or abandoning the dialogue-form altogether), and that it was in this context that he told the story of Aristippus' attack on mathematics. It is very plausible that Speusippus should have seized the opportunity to trace Aristippus' hedonism back to his contempt for mathematics, using the model of the Gorgias: as we know from Aristotle's report in Eudemian Ethics VI.13 (= Nicomachean Ethics VII.13). Speusippus used mathematical arguments against hedonism, saving that the good was contrary to both pleasure and pain, as the equal is contrary to both the greater and the less, while pleasure and pain are contrary evils like the greater and the less. It also seems from the parallel in Nicomachean Ethics X,2-3 (where Speusippus is not named) that Speusippus followed the Gorgias in regarding pleasure as a process of replenishment (Speusippus is often thought to have been one of the people criticized in the Philebus for holding this view).

A further consideration in support of my suggestion that B2 996a21-b1 represents a Speusippean argument comes from the concluding passage of <u>Metaphysics</u> M3, 1078a31-b6, in which Aristotle answers "those who say that the mathematical sciences say nothing about beautiful or good" (1078a33-34), by distinguishing the beautiful [ $\kappa \alpha \lambda \delta v$ ] from the good [ $\dot{\alpha}\gamma \alpha \theta \delta v$ ]: he says that the good "is  $\dot{\alpha}\epsilon i ~\epsilon v ~\pi \rho \dot{\alpha}\xi\epsilon i$ , while the beautiful is also  $\dot{\epsilon} v ~\tau o \hat{i} \zeta ~\dot{\alpha}\epsilon i v \dot{\eta}\tau \sigma i \zeta$ " (a31-32), and he maintains that the mathematicals, insofar as they are orderly, proportioned, and determinate, display beauty although not goodness. This text is clearly a response to Aristippus and the other despisers of mathematics cited at B2 996a32-b1: it is so recognized by Syrianus and the pseudo-Alexander (who have the same text, whether one is copying from the other or both from the real Alexander), and by Ross (AM II,418). I claim that this passage from M3 is Speusippean. That it has <u>something</u> to do with Speusippus is not very controversial. If the Speusippus fragment unearthed by Merlan from Iamblichus <u>De communi mathematica scientia</u> is substantially genuine, then Speusippus distinguished the beautiful from the good, saying that the One was prior to beauty and goodness, that the mathematicals had beauty but not goodness, that goodness appeared in the things after the mathematicals, and evil alongside goodness only in the things after those. If this is right, then the M3 passage must be drawing on Speusippus: but if Aristotle's reply to Aristippus' challenge to mathematics at B2 996a32-b1 is taken from Speusippus (presumably from Speusippus' <u>Aristippus</u>), then presumably Aristippus' challenge is itself taken from the same work of Speusippus.

Even if Tarán is right that the Iamblichus fragment is a neo-Pythagorean forgery and that Speusippus denied beauty as well as goodness to the mathematicals, the fact that the pseudo-Speusippus was so careful to respond to the M3 passage shows that this passage was seen as having something to do with Speusippus, namely that it was Aristotle's reply to Speusippus' denial of goodness and beauty in the mathematicals; and thus again it would be probable that the B2 passage, to which the M3 passage replies, also has something to do with Speusippus, and conveys Speusippus' denial that the science of the highest things, i.e. the mathematicals, deals with final causes. But Tarán's arguments against the Iamblichus fragment (which mostly turn on his claim that Speusippus denied beauty to the mathematicals) are unconvincing. It is very hard to imagine that Speusippus, who thought that numbers were the highest objects of contemplation, denied that they are beautiful; it is far more likely that Speusippus explained why it is good to contemplate numbers by saying that numbers, though not themselves good, are beautiful. Speusippus F28 Tarán is an extended argument that the decad is τέλειον and indeed the παράδειγμα παντελέστατον for the cosmos (as Tarán rightly says, since Speusippus did not believe in the Forms, he had to find some replacement for the animal-itself as the demiurge's model; I will come back to Speusippus and Aristotle on this in Part III): Speusippus takes the word  $\pi \alpha \sqrt{\tau} \epsilon \lambda \epsilon c$  for the model from Timaeus 31b1, and the demiurge's choosing a  $\pi \alpha \sqrt{\tau} \epsilon \lambda \epsilon c$ model is closely bound up with his choosing a καλόν model and with his producing a καλόν work and with his being himself morally  $\dot{\alpha}\gamma\alpha\theta\dot{\alpha}\varsigma$ ; this makes it very hard to believe that Speusippus did not regard the decad as καλόν. Tarán's conclusion that Speusippus cannot have regarded numbers as  $\kappa\alpha\lambda\dot{\alpha}$ , although he repeats this over and over as something conclusively established, rests on nothing but Aristotle's assertion that for Speusippus the good and the καλόν are not in the ἀρχαί but are ὑστερογένη (Metaphysics Λ7 1072b30-34, N4 1091a29-b3); Tarán then argues that, since the numbers are eternal, they cannot have "developed" or been "generated," and therefore cannot be either good or καλόν. But there is no reason why Speusippus could not have spoken of the decad being "generated" from the doyaí of numbers without regarding this generation as temporal (the recognition of non-temporal causal relations also eliminates most of Tarán's other arguments against the Iamblichus fragment). In fact, Speusippus' assertion in F28 that the decad is τέλειον, and that the numbers below it (and the one as  $d\rho_{\chi}\eta$  of numbers) are not, is obviously analogous to his assertion at Metaphysics  $\Lambda$ 7 1072b30-34 that mature plants and animals are τέλεια and that their seeds are not; the latter passage calls the mature plants and animals καλόν και τέλειον, and there is no reason why Speusippus should not have used the same combination of adjectives for the decad. (Compare Dancy, Two Studies in the Early Academy, notes 140 and 160, against Tarán.)

There are also other reasons to believe that the argument of <u>Metaphysics</u> M3 1078a31-b6 is taken from Speusippus. Ross notes <u>ad locum</u> that Aristotle does not elsewhere distinguish

ἀγαθόν from καλόν, and that "it is somewhat surprising to find Aristotle saying that τὸ ἀγαθόν is ἀεὶ ἐν πράξει, considering that it is found in every category and can be applied to God and to reason [as in NE I,6 and EE I,8]" (AM II,418). Indeed, the assertion that τὸ ἀγαθόν is ἀεὶ ἐν πράξει seems quite inconsistent with what Aristotle says elsewhere about god-and-voῦς: but it fits well with the B2 argument, which says that the good is always a final cause of some πραξις (and therefore, presumably, that the good is something πρακτόν), and it fits even better with the more obviously Speusippean parallel in K1, which says that τὸ ἀγαθόν ... ἐν τοῖς πρακτοῖς ὑπάρχει (1059a36). It is also noteworthy that the M3 passage, in arguing that mathematicals can be καλά, does <u>not</u> suggest that the One is καλόν: the characteristics that are said to make for beauty are τάξις καὶ συμμετρία καὶ τὸ ὡρισμένον (1078a36-b1), and the One can at most have the third of these. Elsewhere Aristotle is most concerned to argue that the <u>ἀρχή</u> is ἀγαθόν and καλόν, and what he says here in fact creates trouble for this claim, since Aristotle's God, being purely simple, has no more τάξις καὶ συμμετρία than Speusippus' One. All these points give reason to think that Aristotle has taken the M3 argument from Speusippus, and that he has not rendered it fully consistent with his own commitments.