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The Academy from Plato to Polemo *

Dimitri EL MURR

Université Paris 1 Panthéon-Sorbonne

UMR 7219 Laboratoire SPHERE Sciences Philosophie Histoire

When Plato died in 348/7 at the age of 80 (or 76, according to NAILS, 2002, p. 243-247), he left behind him a huge body of work, in size as well as importance. But he also left an institution, the Academy, which would carry on until Philo of Larissa's departure to Rome in 88 BC and his subsequent death without a successor. This institution is the distant ancestor of the Academies that would be founded in Europe between the 16th and 18th centuries, whose more recent predecessor is the *Accademia Platonica* that Cosimo de Medici founded on Plato's model in Florence around 1460, and where Marsilio Ficino made Plato's works accessible to the Western tradition.

The Enigmas of the Early Academy

The Riddle of the Early Academy. Such is the title that Harold Cherniss gave to a series of lectures in 1942, which is unlikely to be forgotten because it has greatly influenced and partially renewed the study of the Early Academy (CHERNISS 1945). The riddle Cherniss examines concerns the nature of the teaching Plato offered in his Academy and the significant differences between the ideas disseminated in his dialogues and the unwritten doctrines that Aristotle attributes to him. In the first part of this article, I will suggest that the Early Academy, despite the considerable amount of research it has inspired over the past sixty years, remains a somewhat mysterious institution (for a compelling overview of recent scholarship, see the annotated bibliography by TARRANT 2014). Since Cherniss, the state of our knowledge has of course evolved considerably and our access to the source material has been greatly facilitated in the past decades, as the recent editions of the fragments of Speusippus (ISNARDI-PARENTE 1980, TARAN 1981), Xenocrates (ISNARDI-PARENTE 1982) and Polemo (GIGANTE 1976), as well as the latest edition of Philodemus' *Index Academicorum* (DORANDI 1991) amply show. Even so, a large number of basic questions on the Early Academy have not yet been answered with any certainty.

Here are some of the most significant. How was the Academy organized, from a geographical as well as pedagogical standpoint? What did it represent institutionally? Was it just a school? A research center? A library and a publishing house? Or all of the above? Most

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importantly, was being a member of the Academy compatible with philosophical debate or did it involve a stern doctrinal orthodoxy?

The Mysteries of Akademos' Grove

One thing seems certain enough: the institution founded by Plato, most likely around 387 BC, derives its name from a public park planted with trees honouring the hero Akademos. Located outside of the city walls of Athens, this grove was a place where sophists or philosophers and their disciples had gathered (see DL, III, 7) for thirty years or so before Plato decided to set up his institution in this very location (for the archeological and textual information regarding the site of the Academy and its architecture, see the comprehensive article by BILLOT 1989 and the more recent very detailed study by CARUSO 2013). Did the members of the Academy live there? It seems plausible that Plato bought a property not far from this grove (see DL, III, 5 and 20, with GLUCKER 1978, p. 227, n. 4). But neither the textual accounts nor the archeological documents allow us to conclude with any certainty that the Academy was a place where its scholars and some of its students lived: the accounts available to us would seem to indicate the opposite (see DILLON 1983). Similarly, we must abandon the long-lasting image of an imposing portico at the entrance of the Academy, greeting the candidate with the famous motto “Let no one untrained in geometry enter here” (see SAFFREY 1968). It was also long thought, since Wilamowitz at least (WILAMOWITZ-MÖLLENDORF 1881), that the Academy was a *thiasos*, a religious fraternity dedicated to the cult of the Muses, because Plato dedicated a shrine to them, to which Speusippus later added statues of the Graces. Yet LYNCH (1972, 108-127) demonstrated that no decisive proof was available in favour of this hypothesis. The Academy was a place where knowledge was produced and transmitted, but it was not a sect.

The Academy as a school

But who was the knowledge transmitted to and how? Our sources regarding the Academy's actual teaching method and audience are practically non-existent. What's more, when such sources are available, they need to be treated with extreme caution. Let us consider, for instance, the most extensive account we have of a “class” given at the Academy.

(A.) What about Plato and Speusippus and Menedemus? What's occupying their time nowadays? What deep thought, what sort of speculation is under investigation at their establishment? Give me an insightful account of these matters, if you've come with any knowledge of them, by Earth!

(B.) I know enough to give you a clear report about this; because during the Panathenaic festival, I saw a herd of young men in the exercise grounds of the Academy, and I listened to unspeakably strange discussions. They were producing definitions having to do with natural history and trying to distinguish between animals, trees, and vegetables; and in the course of their discussions they attempted to determine which category the gourd belongs to.

(A.) What definition did they settle on? And what category did they put the plant into? Reveal this, if you have any information!

(B.) At first they all stood silent and gazed at the ground for a long time, thinking the matter through. Then suddenly, while the other boys were still staring at the ground and considering the question, one of them said it was a round vegetable, another a type of grass, and a third a tree. And a Sicilian doctor, when he heard this, farted on them for talking nonsense.

(A.) I imagine they got terribly angry and shouted that they were being mocked? Because during conversations of this sort † it's appropriate to do something like that.

(B.) The young men paid no attention. But Plato was there, and very gently and with no sign of excitement he ordered them once again to try to determine what category it belonged to. And they began drawing distinctions. (Athenaeus, II, 59 d-f, trans. Douglas Olson = Epicrates fr. 11 Koch = fr. 10 Kassel-Austin)

This fragment of an unknown play by the comic poet Epicrates shows Plato, assisted by Speusippus and Menedemus (on the latter, see DORANDI 2005), directing young students who are trying to define some kind of pumpkin. Some scholars argued that this was strong evidence for the existence of Academic seminars on biology and zoology (see, e.g. USENER 1884, p. 83) but, in all likelihood, this obvious imitation of a similar scene in Aristophanes' *Clouds* (191 sq.) should be read as a parody of the technical vocabulary of division (*diairesis*) abundantly used in Plato's *Sophist* and *Statesman*. As JAEGER (1923, p. 18 n. 1) noted, this fragment then shows that the method of Platonic division was famous enough for the audience to appreciate the joke. But, as far as the type and content of the activities that the Academy's students engaged in, it is difficult to infer anything at all from this fragment, save for the fact that the students were encouraged, and most likely trained, to construct precise definitions.

The Institutional Organization

Although the exact nature of the Academy's teaching activities remains largely mysterious, the same cannot be said about its institutional organization. From its very beginning to Plato's death, the identity of the school resulted from Plato's active teaching therein. But after Plato's death, the continuity and even the very existence of the institution were directly dependent on the election of a *scholarch*, an election that made a member of the Academy Plato's successor at the head of the school. How these scholarchs were appointed and elected still remains obscure, but it would seem that Plato resolved the issue of his own succession by appointing his nephew Speusippus, and that it was only after the latter's death that an election process was set up (see *Ind. Acad.*, col. VI-VII in DORANDI 1991 and MERLAN 1946). The most likely chronology of Plato's successors, in the period that concerns this article, is as follows: from 348/7 to 339/8, Speusippus; then, from 339/8 to 314/3, Xenocrates; and lastly, from 314/3 to 270/69, Polemo.

The Academy's institutional life, however, cannot be limited to the various scholarchates that punctuated its history. Indeed, philosophers such as Aristotle, Heraclides Ponticus (see GOTTSCHALK 1980) and Crantor (see METTE 1984 and DILLON 2003, p. 216-231), as well as

leading scientists such as Theaetetus of Athens (see LASSERRE 1966) and Eudoxus of Cnidus (see LASSERRE 1966 and 1987) were members of the Academy, or at the very least, gravitated towards it. This connection between the Academy during and after Plato's lifetime and the most renowned Greek mathematicians and astronomers explains why this institution was long seen as a research centre where scientists taught and conducted research under Plato's supervision, as architect of science and supplier of problems to solve. With the exception of a passage in Proclus (*In Euclid.* 125, 6 *sq* Friedlein), the most important and most frequently cited account on this issue is a passage from Philodemus:

At that time great progress was seen in mathematics, with Plato serving as general director and setting out problems, and the mathematicians investigating them earnestly. In this way the subject of metrology and the problems concerning <...> then reached their high point for the first time, as Eudoxus and his followers transformed the old-fashioned work of Hippocrates. Geometry, too, made great progress; for analysis and the [*lemma*] concerning *diorismoi* were created, and in general the subject of geometry was advanced greatly. And optics and mechanics were not at all ignored. (Philodemus, *Ind. Acad.*, col. Y, 2-12, trans. Mueller in KRAUT 1992)

If we are to believe this passage from Philodemus' *History of the Academy*, as well as several commentators (e.g. USENER 1884, WILAMOWITZ 1889, p. 279 *sq*, or BALTES 1993, p. 259-261), it should be clear that the Academy played a crucial role in the development of mathematics, both under Plato's leadership and after his death. Yet, here again, the picture may not be as simple as that, and there is strong evidence showing that the supervisory function attributed to Plato is actually a legend constructed in retrospect in the Academy and based upon Book VII of the *Republic* (see ZHMUD 1998). Even if it is beyond doubt that a significant number among the most prominent 4th century mathematicians and astronomers maintained contacts with the Academy, it is impossible to conclude, on the basis of the accounts available to us, that the Academy actually embodied, for the first time in history, the idea of a *universitas litterarum* where all branches of knowledge were developed.

So the Academy was indeed a school, but we do not know exactly what people taught there.¹ It did attract many scientists, but the nature of their relationship to Plato and his successors remains obscure.

The Academy as a Publishing House?

Given the number of titles attributed to Speusippus and Xenocrates in the catalogues preserved by Diogenes Laertius (DL IV, 4-5 and IV, 11-14), it seems safe to claim that the Academy was not just a school, but also a place of publication. Bear in mind that publishing then meant, first and foremost, reading a work in public, as well as making it accessible to those who wanted a private copy of it. Even though our knowledge of ancient methods of transmission and publication is far from complete, it is likely that this was how Plato's

1. We know that Plato's famous lesson on the Good (on which see GAISER 1980, as well as CHERNISS 1945, p. 1-30) turned out to be a lesson in mathematics, to the great disappointment of his audience. Yet, this evidence is not strong enough to conclude with certainty that advanced courses in mathematics were given at the Academy.

dialogues, and perhaps even the earliest versions of some of them, were published. A century ago, ALLINE 1915 showed that, surprising as it may appear to our modern eyes, the Academy may never have had a reference edition of Plato's dialogues, an edition it would have carefully safeguarded in order to refer when necessary to the master's text *expressis verbis*, or better yet, to his autograph manuscripts.

The members of the Academy surely cared about having Plato's works in their possession, but hardly bothered with minor details of style, nor the constitution of the text: autographs probably did not matter to them at all. [...] It is not certain that the Academy ever had [a library] [...] The Lyceum, which was modelled on it, did not have one: Aristotle bequeathed his manuscripts to Theophrastus personally, and Theophrastus left Aristotle's and his own to Neleus of Scepsis personally, and not to the Lyceum. [...] We know that Speusippus' collection of books did not remain in the Academy: Aristotle bought it for a high price of three talents, and it was well worth it if Plato's library was part of it. Lastly, after Philip of Opus and Aristotle, we lose all trace of Plato's unpublished works and autographs.

We must therefore give up this idea of a School Library, where precious autographs were conserved like in an archive, and where each scholar's intellectual treasures were deposited. The Academy probably had a book collection for everyday use: these books resembled those that could be found in shops. (ALLINE, 1915, p. 31-32, trans. El Murr)

According to ALLINE (1915, p. 45-64), the absence of a reference library at the Academy where Plato's and his successors' autograph manuscripts would have been preserved did not prevent the Academy from publishing and selling Plato's dialogues after his death, and even during his lifetime. In fact, a large edition of the entire *corpus Platonium* was produced during Xenocrates' scholarchate. This was the very edition that would be revised in the 2nd century BC by Aristophanes of Byzantium, who rearranged it into trilogies and which was also worked on by Thrasyllus in the 1st century AD in order to reorganize it according to the tetralogies we find in our medieval manuscripts. According to this story of the textual transmission of the Platonic dialogues, the Early Academy thus played a key role which, ultimately, warrants the continuity linking Plato's original text to the text of our modern editions (in addition to ALLINE 1915, see also USENER 1892). Yet, this might be a fairly optimistic story, perhaps mostly fictional, given the scanty and fragile textual accounts it is based on (see JACHMANN 1941 and BARNES 1991, p.123-128). The publishing habits of the members of the Academy, and the possible edition of the *corpus Platonium* to which they devoted their efforts remain matters of mere speculation.

The Issue of Sources

Why so many problems and mysteries surrounding the Early Academy? Why so many riddles still unsolved? Despite the renewal of scholarly interest in the field in the past 60 years or so, the scholarship on the Early Academy has faced two main problems: one concerns the state and status of the sources available, and the other the hermeneutical framework within which these sources were handled.

The catalogues of Speusippus' and Xenocrates' writings preserved by Diogenes Laertius unambiguously prove that they were prolific authors. DL IV, 4-5 lists just under thirty titles (but the list is certainly incomplete) authored by Speusippus, some of them including several books, such as the *Homoia* (which can be translated as *Similitudes* or *Likes*) in ten books. These titles, which contain treatises (*hypomnemata*) as well as dialogues, bear witness to the breadth of topics addressed by Speusippus, which cover ethics, theology, psychology, epistemology, and even politics (for a general yet precise overview, see DILLON 2003, p. 34-40; see also TARAN 1981, p. 188-200). The same goes for the catalogue of Xenocrates' works (DL IV, 11-14), which contains over seventy-five titles touching on ethics, logic, physics, psychology, politics, and a good number of other subjects. But what can we read today of the numerous works written by the Academy's first two scholars? The answer is clear and incontrovertible: almost nothing.

Of course, some accounts and a few scanty fragments of some of their works have come down to us, mostly through Aristotle. But Aristotle is a far cry from an objective historian concerned with the accuracy of his sources and the precision of his references. The use he makes of the Academic writings is evidently polemical and subordinate to the refutation he wishes to achieve. For instance, even though the importance of Speusippus as a prime target in the *Metaphysics* is beyond doubt, we only find his name cited on two occasions in Aristotle's treatise. Hence the extraordinary difficulty in attributing a given Aristotelian passage discussing a given Academic position to such and such philosopher of the Academy.

To these two major difficulties regarding the rarity and status of the sources, we can add a third that is directly linked to the previous one and stems from the type of hermeneutical paradigm that Aristotle's account of Plato and the Academy has produced. Since the seminal works of ROBIN 1908, KRÄMER 1959 and GAISER 1962, an exegetical school called the Tübingen School has developed, whose hermeneutic principles are built on the interpretation of several passages of Aristotle which refer to Plato's unwritten doctrine. Whence the idea that Plato's oral teachings outweigh his writings in importance, and must be understood in order to grasp the specificity of Speusippus' and Xenocrates' philosophies (on the principles of the Tübingen School and Plato's oral teachings in general, see RICHARD 1986). Based on a general confidence in Aristotle's account, this position is diametrically opposed to that of CHERNISS 1944 and 1945, according to whom the historian must view the Aristotelian account with great suspicion. The works produced in the wake of the esoteric school have without a doubt contributed to the resurgence of interest in the thought of the Academy's first scholars. Yet they have also helped obscure the genuine innovations that Plato's successors introduced with regard to the doctrines to be found in Plato's dialogues.

Platonism in the Academy from Speusippus to Polemo

Despite the grey areas mentioned earlier, there is one philosophically decisive thing we know about the Academy and its members. Being a member of the Academy, during Plato's lifetime as well as after his death, never meant subscribing to an orthodoxy that would have stymied discussion and debate. The fundamental differences between the principles of

Speusippus', Xenocrates', and Polemo's philosophies, which I will quickly present below, should prove to be persuasive on this matter. Without even mentioning the sceptical turn taken later by the Academy with Arcesilaus who considered himself nonetheless to be in direct continuity with Plato (see LÉVY 1993 and 1996), the Early Academy brought together philosophers defending very different and sometimes even mutually contradictory theories. How, for instance, should one understand the continuity between Plato, the founder of the institution, who made the theory of intelligible Forms one of the cornerstones of his philosophy, and Speusippus, his nephew and successor, who seems to have abandoned this theory? The relationship between orthodoxy and invention, tradition and innovation, is without a doubt one of the biggest enigmas of the Early Academy, a fascinating riddle touching upon what it meant to philosophize, as a Platonist, in the 4th and 3rd centuries BC.

Speusippus

At the very beginning of the chapter Diogenes Laertius devotes to Speusippus, he says the latter “adhered faithfully to Plato's doctrines” (IV, 1). Yet, if we are to believe Aristotle, nothing seems to be further from the truth.

The way some other people speak about numbers is not correct either. These are people who believe that Forms do not exist, either straightforwardly or as being a kind of number, but that mathematical objects exist and that number are primary among existing things, their principle being the original One. (Aristotle, *Metaph.*, M, 8, 1083a20-24, trans. Annas in ANNAS 1976 = F. 34 Tarán)

This passage (which should be compared with frs. 29A, 30, and 33 Tarán to understand why it is taken to refer to Speusippus) demonstrates that, according to Aristotle, Speusippus rejected the existence of Ideas by positing the separate and independent existence of mathematical numbers, which he considered the primary substance. Even so, is this compelling enough evidence to reject Diogenes Laertius' claim that Speusippus loyally followed Plato?

It is difficult to know exactly why Speusippus abandoned Plato's theory of intelligible Forms and even more difficult to know why he did so in favour of an ontology of separate numbers. It is possible that some of the objections addressed, within the Academy, to Platonic Forms and to the participation of sensible particulars in intelligible Forms, objections whose traces are most likely preserved in the first part of Plato's *Parmenides*, appeared insurmountable to him. It is also possible, as CHERNISS (1945, p. 39-40) suggested, that the method of division developed by Plato in the *Sophist* and the *Statesman* as a partial response to these objections, seemed to him incompatible with the ontological status of Platonic Forms. Yet we also know that Speusippus developed the method of Platonic division in a particular direction and made much of it. Perhaps then Speusippus modified Plato's ontology to build an epistemology he thought more efficient, and yet still authentically Platonic.

However convincing this hypothesis may be in accounting for the abandonment of the Forms, it is true that it does not, by itself, explain why Speusippus chose an alternative ontology of numbers and mathematical magnitudes. To cast light on this specificity of

Speusippus' ontology (on which see DANCY 1991), one should first explain his conception of numbers, and how this conception differs from Plato's. For the latter, to cover quickly a highly disputed question, Forms of numbers are not different from Forms of other realities, in that they constitute perfect, immutable units, without parts, units which are not derived from anything else. Consequently, the Form of the Triangle, that of Two, and the Form of Justice are Forms of different realities but they are all ontologically similar in that they are *Forms*. For Speusippus, on the contrary, a number is a set of units. Each number is therefore not a unique being, but is produced from the interaction of two principles, the One and the Indefinite Dyad (or the Many), the latter principle being the only creative principle, as the cause of differentiation and individuation. These numbers are the only objects of genuine knowledge. Despite these differences, it is very likely that Speusippus did not consider his ontology of numbers to be at odds with Plato's. Indeed, however remote from Plato this doctrine may appear to us, Speusippus probably thought that the One and the Dyad were the basis of Plato's real ontology. In the Academic tradition as well as in Aristotle, this doctrine of twin principles was in fact regarded as Plato's own. So yet again no explicit disagreement with Plato need be present.

Concerning epistemology, Speusippus, like Plato himself, thinks that the objects of knowledge must be eternal and immutable, and that sensible particulars cannot be the objects of mathematics, since mathematical propositions are not true of sensible particulars. Yet, Speusippus distances himself from Plato when he maintains that numbers and mathematical magnitudes are the *only* objects of knowledge, and arithmetic and geometry, strictly speaking, the *only* sciences. The prominence given by Plato to dialectic thus disappears, in favour of an epistemology based on the direct contact of the intellect with eternal and immutable realities, i.e. Numbers. And the method of division that, according to Plato, was concerned with intelligible Forms becomes the means of classifying sensible realities.

It is on the basis of this specific development of *diairesis* that one can also understand another important aspect of Speusippean logic and epistemology. Speusippus maintained that in order to be able to define a reality, one must know all of the relationships between this reality and all the things that differ from it. This theory, strictly speaking, implies that to know a thing, one must know all of the relationships between this thing and all the others.

There is no need for one who is defining and dividing to know everything there is. Yet some say that it is impossible to know a thing's differences from something without knowing that thing; but that without the differences one cannot know that thing – for it is the same as that from which it does not differ and different from that which it does differ. (Aristotle, *Anal. post.*, II 13, 97a6-11, trans. Barnes in BARNES 1993 = fr. 38 Isnardi Parente = fr. 63a Tarán)

Eudemus says that in the opinion of Speusippus it is impossible to define anything that there is without knowing everything that there is. (Anon., *in Arist. Anal. post.*, 584, 17-18 Wallies, trans. Barnes in BARNES 1993 = fr. 39 Isnardi Parente = fr. 63b Tarán)

These passages and the Speusippean theory they convey have been extensively written about (see BARNES 1993, p. 245-247 and FALCON 2000). Suffice it here to say that this theory did not

lead Speusippus to scepticism. It is quite the opposite: his work on the *Homoia* in ten books appears to attest a colossal effort to classify sensible reality. As TARÁN (1981, p. 60-72) showed, each object is for Speusippus at the centre of a web of relationships, which constitute the very essence of this object. There is therefore a great difference between the direct knowledge of numbers (the only beings that are genuinely immutable and eternal) and the mediated knowledge of other realities. The latter one only operates by using the concepts of identity, difference, and resemblance, all of which are necessary for any classification. Indeed, as far as the classification of sensible realities (plants, animals, words, etc.) is concerned, dichotomous division can only work once it has been established whether two given things are alike or unlike. How Speusippus understood the articulation of these two levels of knowledge, i.e. the true, direct knowledge of numbers and the classificatory, mediated knowledge of other realities, is difficult to know for sure, but it is possible he held that it is thanks to our direct knowledge of numbers that we grasp the principles allowing us to categorize (i.e. identity, difference, resemblance) (see TARÁN 1981, p. 53-55).

The first two principles, the One and the Dyad, which are the source of numbers according to Speusippus, also seem to have been conceived of by him as the principles at the root of all things.

Those who suppose, as the Pythagoreans and Speusippus do, that supreme beauty and goodness are not present in the beginning, because the beginnings both of plants and of animals are causes, but beauty and completeness are in the effects of these, are wrong in their opinion. For the seed comes from other individuals which are prior and complete, and the first thing is not seed but the complete being. (Aristotle, *Metaph.* Λ 7, 1072b30-34, trans. Ross, rev. Barnes in ARISTOTLE 1984 = fr. 53 Isnardi Parente = fr. 42a Tarán)

If, then, it is impossible not to place the good among the principles or to place it there in this way, clearly their account of the principles and primary real objects has been incorrectly given. Nor is someone correct who compares the principles of the universe to that of living things and plants, on the ground that the more complete always comes from what is indefinite and incomplete (this being his reason for saying that this applies to the primary principles too, so that the original One is not even an existing thing). (Aristotle, *Metaph.* N 5, 1092a9-14, trans. Annas in ANNAS 1976 = fr. 57 Isnardi Parente = fr. 43 Tarán)

Speusippus understands the two principles as the seeds or potentialities of all things. The two passages of Aristotle cited above demonstrate what particular conception of causality derives from this analysis of principles: that which is in itself the cause of a given quality in other things cannot possess this quality in the same manner. Hence the idea that if the One is the cause of good or being of all other things, it cannot itself be good or existing. It is in this sense that, as I pointed out earlier, the One cannot be the creative principle in the couple it forms with the Dyad. But how do such principles produce the series of natural numbers, as Speusippus seems to have held? Furthermore, how are they, from there, capable of producing and accounting for the diversity of the universe? According to Aristotle, the generation

process from the Speusippean principles only leads to an 'episodic' universe that needs new principles at every level of reality.

And those who say mathematical number is first and go on to generate one kind of substance after another and give different principles for each, make the substance of the universe a series of episodes (for one substance has no influence on another by its existence or non-existence), and they give us many principles. (Aristotle, *Metaph.* Λ 10, 1075b 37-1076a4, trans. Ross, rev. Barnes in ARISTOTLE 1984 = fr. 52 Isnardi Parente = fr. 30 Tarán)

Aristotle's account of Speusippus' theory may very well be misleading. As DILLON 2003, p. 42-56 argues, it is not impossible to respond to Aristotle's ferocious criticism, provided one takes into account a difficult passage in Iamblichus (*De comm. math. Scientia*, 4), whose precise relationship to Speusippus' doctrine is not easy to determine. It is likely that Speusippus supported the idea of a process of ontological derivation based on principles, in which the product of a higher level became in turn the principle of the following level. It is even likely that the first hypotheses of Plato's *Parmenides* may have influenced this aspect of his ontology (see DILLON 2005).

Lastly, the accounts available to us report Speusippus' significant contribution to the field of ethics.

Speusippus, the nephew of Plato, declares that happiness is a perfect state in the area of what is natural, or the state of [possession of] goods, which is a state for which all men have a [natural] impulse, while the good aim at freedom from disturbance. It would be the virtues that are creative of happiness. (Clement of Alexandria, *Strom.*, II, 133, 4, trans. Dillon in DILLON 2003 = fr. 101 Isnardi Parente = fr. 77 Tarán)

The conception of happiness defended by Speusippus, despite its Stoic overtones, remains undeniably Platonic, inasmuch as it seems to imply that the happy life coincides with the virtuous life. Although all human beings desire happiness, Speusippus points out that only good or virtuous people aim for, and can hope to achieve, freedom from disturbance (*aokhlēsia*), the happy medium between the extremes of pleasure and pain (on the Speusippean conception of pleasure, see DILLON 1996). Yet this freedom from disturbance, which foreshadows Epicurean *ataraxia*, is not a sufficient condition for happiness, but only one of its necessary conditions. For Speusippus, like Plato, wisdom is the highest virtue and the key to happiness.

In the end, what best characterizes Speusippus' philosophy is the constant and consistent effort to avoid certain difficulties, whether real or imagined, posed by Platonic idealism. In so doing, as Aristotle's criticisms suggest, Speusippus is likely to have created more difficulties than he resolved. But the intensity and force of his philosophy, the details and richness of which are in all likelihood lost forever, shows through even in the little of it that has managed to reach us.

Xenocrates

The attempt to resolve the problems raised by Speusippus' philosophy, and the desire to reconcile it with Plato's doctrine, characterize in turn the philosophical project of Xenocrates, Speusippus' successor at the head of the Academy. Like his predecessor, Xenocrates subscribed to the fundamental principle of Platonism that holds the existence of transcendent intelligible realities. But what was his precise position on Plato's intelligible Forms and on the numbers Speusippus substituted for them as objects of true knowledge? On this question Aristotle's account is as indispensable as it is distorted by his own polemical objectives. In a nutshell, Aristotle thinks that if Speusippus attempted, unsuccessfully, to avoid the inherent contradictions in Plato's doctrine by dispensing with the Forms, Xenocrates was doubly mistaken because he kept Speusippus' defective theory while at the same time trying to return to the Platonic Forms.

The people who want to posit Forms and numbers at the same time could not see how mathematical number could exist over and above Form number if one posits only these principles, and so set up Form number and mathematical number as identical – in name, since in fact mathematical number is done away with (the assumptions they make are peculiar to them, and unmathematical). (Aristotle, *Metaph.*, M 9, 1086a6-11, trans. Annas in ANNAS 1976 = fr. 110 Isnardi Parente)

According to Aristotle, therefore, Xenocrates tries to retain the Platonic Forms, all the while mathematizing them like Speusippus but treating these Form-Numbers as if they were mathematical numbers, thus submitting them to arithmetical operations and adding them to one another to produce other Form-Numbers. In Aristotle's eyes, this is completely impossible and tantamount to utter confusion. Nevertheless, as DILLON (2003, p. 110-111) showed, there is no evidence that Xenocrates ever maintained that all of these derivative operations must be conceived as being *effective*: each Form-Number is what it is, unique and immutable in essence, and our operations on them, aiming to explain such and such numeric property, do not change anything about their intelligible nature (on this point, see BENATOUIL-EL MURR 2010, p. 57-68).

The same desire to resolve the difficulties in Speusippus' system are to be found in Xenocrates' analysis of the first principles. Like Speusippus, Xenocrates posits the existence of a pair of opposite principles, which he seems to have named Monad and Dyad, the second constituting the principle of multiplicity, identified with matter (see fr. 188 and 101 Isnardi Parente) and intervening at different levels of reality. As far as the Monad is concerned, there is a sharp difference from Speusippus' account, since Xenocrates claims that this Monad is an intellect (see fr. 214 Isnardi-Parente and DILLON 2003, p. 121). From these principles, Xenocrates attempted to derive all of reality, at least if we are to believe Theophrastus, who distinguishes Xenocrates from all of his predecessors on this very issue (*Metaphysics*, 6a23-b9). However, the other, considerably more substantial, doxographical account (fr. 213 Isnardi Parente) through which this enterprise has become known to us raises huge textual

and hermeneutical problems (see DILLON 1986), so much so that it is difficult to grasp the details of this ontological derivation.

On the other hand, we have more plentiful information on how Xenocrates conceived of the Forms that Speusippus had abandoned. They remained mathematical entities, but Xenocrates conferred upon them the status of “the paradigmatic cause of whatever is at any time composed according to Nature” (fr. 94 Isnardi Parente, trans. Dillon in Dillon 2003, p. 119). We may doubt the attribution of this idea, whose legacy was immense, to Xenocrates, given the general context of the Proclus passage in which it appears. Yet, as LÉVY (1996, p. 869) argued, this definition may be understood as Xenocrates' response to the criticism of “episodism” addressed by Aristotle to Speusippus: because they are cause and model, the Forms take into account the continuity of the sensible universe by attaching it to the principles from which it derives.

So it should be clear that Xenocrates' desire to reconcile Plato and Speusippus did not reduce his philosophical effort to a mere sterile and formal orthodoxy. This can be illustrated persuasively with an example:

Some of those who hold that the world, though indestructible, was yet generated, try to support their case by a parallel which is illusory. They say that in their statements about its generation they are doing what geometers do when they construct their figures, not implying that the universe really had a beginning, but for didactic reasons facilitating understanding by exhibiting the object, like the figure, as in course of formation. (Aristotle, *De Caelo*, I 10, 279b 32-280a 2, trans. Stocks, rev. Barnes in ARISTOTLE 1984 = 153 Isnardi Parente = 61A Tarán)

How is this passage (on which see BENATOUIL-EL MURR 2010, p. 63-68) related to Xenocrates? Commenting on this very same passage, Simplicius suggests that Aristotle's target here is above all “Xenocrates and the other Platonists” (fr. 154 Isnardi Parente). Plutarch confirms that Xenocrates, as well as Crantor, developed an interpretation of Plato's *Timaeus* (here rejected by Aristotle), whose main gist is that the *Timaeus* is a pedagogical narrative of the purely logical structuring of the world (*De procr. anim. in Tim.* 1013b = 158 Isnardi Parente = 10 (3) Mette). We also know that Xenocrates' cosmology differed significantly from what we find in the *Timaeus*. If we are to believe Sextus Empiricus (*Adv. Math.* I, 147-149 = fr. 83 Isnardi Parente), Xenocrates attributed to the heavens an intermediary status between what is “outside of the heavens” and purely intelligible, and what is “inside the heavens” and purely sensible, with the heavens themselves composed of both because they are at the same time visible and intelligible by means of astronomy. According to Xenocrates, there are three levels of cognition corresponding to each of these three cosmological levels. Cosmology is therefore neither “science” nor “sensation” but falls under *doxa* and “contains both truth and falsehood at the same time”. Hence, on the basis of Plato's *Timaeus* (and other dialogues such as the *Phaedrus*), Xenocrates seems to have developed an epistemology and a cosmology that were very much his own. When Xenocrates comments on the *Timaeus* by coming to Plato's defence against Aristotle's objections, he does so as a genuine interpreter, anxious to pursue, in his own way and according to his own terms, the ideas bequeathed by Plato and Speusippus.

Many similar examples can be found in fields as varied as psychology (see DILLON 2003, p. 121-123), theology (DILLON 2003, p. 130-136), and even mathematics (on the thorny issue of Xenocrates' doctrine of indivisible lines, see fr. 127 Isnardi Parente with ISNARDI PARENTE 1982, p. 357-367 and DILLON, 2003, p. 111-118). All testify to the same desire to combine tradition and originality, all demonstrate the same effort to clarify the articulations of reality as well as those of philosophical thought in general. It is probably not surprising that Xenocrates was, according to Sextus Empiricus, the first to shed light on the idea, already implicitly present in Plato, of a tripartite division of philosophy, an idea which was to become crucial for Hellenistic philosophers.

Well, these people seem to have been deficient in their approach; by comparison, the approach of those who say that one part of philosophy is physics, another ethics, and another logic seems to have been more complete. Of this group Plato is in effect the founder, since he engaged in discussion on many matters in physics, many in ethics, and not a few in logic. But the most explicit adherents of this division are Xenocrates, the Peripatetics, and the Stoics. (Sextus Empiricus, *Adv. log.*, I 16, trans. Bett in BETT 2005 = fr. 82 Isnardi Parente)

In the field of ethics, Xenocrates' importance is far from negligible, even though it is sometimes difficult to assess precisely, given the little information we have and the fact that many of the accounts of his contribution bear the mark of a later re-reading by Antiochus of Ascalon. In light of the impressive list of works that Xenocrates dedicated to ethics (see DL IV, 11-14) and the many accounts present in Cicero (e.g. *De fin.*, IV, 15-18 = fr. 234 Isnardi Parente) and Plutarch (e.g. *De comm. not.*, 1069 E-F = fr. 233 Isnardi Parente), it seems safe to claim that in Xenocrates' works many central themes of Hellenistic ethics, and particularly Stoic ethics, are prefigured. Among them, we can attribute to Xenocrates the invention of the category of indifferent things (fr. 231 Isnardi Parente), and an analysis of the first principles of ethics, as well as an in-depth consideration of the relationship between virtue and nature (*ibidem*).

If one had to identify the most significant difference, from the viewpoint of the history of philosophy, between Xenocrates and his predecessor at the head of the Academy, it would have to be Xenocrates' greater legacy, in later Platonism (Neoplatonism included) as well as in Stoicism.

Polemo

We do not know anything about the works of Xenocrates' successor at the head of the Academy other than that he left behind "a respectable number of works" (DL IV, 20). We do not know much about his life either, except the edifying story of his radical change in lifestyle in the wake of his meeting with Xenocrates. Diogenes Laertius (IV, 16-17), as well as Philodemus (*Ind. Acad.*, col. XIII Dorandi), report several details of his dissolute youth, but above all tell of the electric shock he received from Xenocrates' lesson on moderation. Once he became a member of the school, Polemo surpassed everyone with his hard work and

temperance, so much so that he became the natural successor of Xenocrates. The other available information on Polemo's biography is in the same vein: Polemo was a man known for his equanimity and self-control.

These anecdotes are not insignificant, to the extent that Polemo's most noteworthy contribution to philosophy seems to have been in the field of practical ethics.

Polemo used to say that we should exercise ourselves with facts and not with mere logical speculations, which leave us, like a man who has got by heart some paltry handbook on harmony but never practiced, able, indeed, to win admiration for skill in asking questions, but utterly at variance with ourselves in the orderings of our lives. (Diogenes Laertius, IV, 18, trans. Hicks)

Polemo's importance also stems from the fact that he seems to have exercised considerable influence over Zeno of Citium, the founder of Stoicism. It is possible, if we believe Antiochus of Ascalon's account, relayed by Cicero in several places (e.g., *De fin.*, II 33-34), that it was from Polemo that Zeno took the Stoic doctrine of the *telos* of human life, consisting of "living in agreement with nature." It is true that in these accounts the names of Xenocrates and Polemo are most often associated. However, we can rightly think that Polemo changed the course of the Academy's ethical doctrine in a more austere and strict direction.

Polemo, the associate of Xenocrates, seems to wish happiness (*eudaimonia*) to consist in self-sufficiency (*autarkeia*) in respect of all good things, or at least most of them and the greatest ones. For he lays it down that happiness can never be achieved apart from virtue (*aretē*), while virtue is sufficient for happiness even if bereft of bodily and external goods. (Clement of Alexandria, *Strom.* II 22, trans. Dillon slightly modified in DILLON 2003)

While Xenocrates gave at least a secondary role to bodily and external goods in the happy life, it would seem that Polemo maintained that virtue constituted in itself a necessary and sufficient condition for happiness, thus prefiguring the Stoics (for further details, see DILLON 2010, p. 439-440).

The fact that Polemo greatly contributed to the field of ethics and practical philosophy is sufficiently substantiated. But does this mean that we should consider it self-evident that a scholarch who headed the Academy for 40 or so years never showed the least interest in physics or logic? Thanks to recent research, we now know that this long-lasting picture of a Polemo exclusively interested in ethics is false, or at the very least highly exaggerated. Based on the different accounts found in Theophrastus, Aetius, and especially Cicero, SEDLEY (2002) showed that it is possible to reconstruct some of the elements of the physics developed at the Academy by Polemo or under his scholarchate. He brought out the importance of the *Timaeus* and suggested that Zeno most likely found the first elements of Stoic necessitarian corporalism in Polemo's Academy.

The recent understanding of the physics doctrine developed under Polemo allows us to better understand why Arcesilaus, who became scholarch after Crates' short stint at the helm of the Academy around 274, gave a radically new direction to Plato's school. If it is true that

Zeno's Stoicism was largely a development and radicalization of Academic thought under Polemo's scholarchate, only two options were then open to a Platonist: either he could consider that Stoicism captures the dogmatic truth of Platonism and is Plato's true legacy, or he could go back to the very foundation of Platonism, while radically challenging the idea of dogmatic certainty. Arcesilaus opted for the second: in so doing, he put an end to the Early Academy and gave birth to a new form of Platonism.

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