The Alexandrian classrooms excavated and sixth-century philosophy teaching

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It was announced in 2004 that the Polish archaeological team under Grzegorz Majcherek had identified the surprisingly well-preserved lecture rooms of the sixth-century Alexandrian school. This was a major archaeological discovery. Although the first few rooms had been excavated twenty-five years earlier, identification has only now become possible. By 2008, twenty rooms had been excavated. Twenty is the number of rooms reported by a twelfth-century source writing in Arabic, Abd el-Latif, but there may be more than twenty.

Some of the rooms had been rebuilt after an earthquake, presumed to be that of 535, so they would have been there only in Philoponus’ later years. But others are dated to the late fifth century, so belong to the time of his teacher, Ammonius. Even the later rooms may be a guide to the structure of the earlier ones. Further reconstruction or refurbishment in the late sixth to very early seventh centuries is suggested by the ceramic in the cement of one room.

One very good specimen of a room, which is illustrated here, has three tiers of seats in a horseshoe, enough to accommodate thirty students, with a professor’s throne (thronos) elevated up six steps at the back of the horseshoe, and a stone stand out at the front of the horseshoe. One stand has a hole in it, which Majcherek takes to be for a lectern to be inserted. The speaker would have stood there. Twenty rooms of similar or smaller size could have accommodated four hundred to five hundred students. The stand is not found in most rooms, but the throne was eventually recognized in all, although it sometimes took the form of one step, or a block covered with plaster or in one case marble. In most rooms the tiers are rectangular rather than horseshoe shaped, and some rooms have only one tier of seats (see Figure 3.1).

The position of the stone stand for a lectern isolated in the front of the room gives us a sense of the extent to which the speaker, often a student, would have been exposed to interrogation from professor and students. We can also imagine many different tasks that a speaker might perform there. The different environment of Plotinus’ Rome did not
necessarily have a room of the same structure. But we can imagine how the Alexandrian rooms could have been put to use, when we think of Porphyry, newly arrived as a student at Plotinus’ seminar in the third century. He had to rewrite his essay three times, and face criticism from another research student, Amelius, until he was persuaded to change his view. We might picture a student reading out his revised essay at the stand, although it was actually Amelius who was asked to read aloud Porphyry’s essay (Porphyry, Plot. 18.19). Plotinus also started his classes by having commentaries and texts read to him by a student.4 At a very much earlier date, in Athens of the second century BCE, Carneades, the head of the Platonic Academy, had a student summarize his previous lecture at the beginning of the next, and criticized him for getting it wrong (Philodemus, Acad. Ind. (Herculaneum papyrus) col. xxii(35)–xxiii(2)).

The professor’s throne or thronos, by contrast, being at the back, gave him a much less exposed position than the modern Western professor tends to have. Raffaella Cribiore has explained the throne or thronos very well.5 Plato caricatures the Sophists at Protagoras 315c, when he has Socrates go to see the sophist Hippias of Elis holding forth on a thronos, with listeners sitting round him on benches (bathra). Plutarch comments that Socrates did not use a thronos nor set out benches (Plutarch, An seni respublica gerenda sit [Moralia X] 796D–E). Ammonius is caricatured in the work named after him, Ammonius, which is written by one of his Christian students, Zacharias. Ammonius is presented as being
interrupted in a lecture on Aristotle’s physics by his Christian students who refute him on the question of whether the universe had a beginning. Ammonius is represented as sitting on a high step or seat (*hypsilon bēma*) and expounding Aristotle’s doctrine in a very sophistic and swaggering way, which suggests that Ammonius’ lecture arrangements made a similar provision. Cribiore suggests that the caricature is partly drawn from Plato’s *Protagoras*. Mossman Roueché has pointed out to me an Ethiopic text, which reports that earlier in Alexandria, Hypatia, the woman mathematician murdered in 415, had been forced off a high seat or chair before being dragged away to her death (*Chronicle of John, Bishop of Nikiu*, ch. 84). Cribiore and Majcherek have drawn attention to the fourth-century rhetorician Libanius describing the terror of a rhetoric student required to deliver his composition in front of the teacher who sits frowning “on a high place (*hupsilou tinos*”) (Libanius, vol. 8, *Chreia* 3.7 [Foerster]). The tallest set of professorial steps surviving in the Alexandrian excavation is six steps high. Comparison has been made with the minbar of a later period, the flight of steps leading up to the speaker in Islamic mosques.

As regards the rounded shape, it has been pointed out that Elias, a prominent Alexandrian philosopher later in the sixth century, explains its purpose. Seminar rooms (*diatribai*) are rounded so that students can see each other and the teacher. Philoponus also attaches importance to seeing the students’ faces, to tell whether or not they have understood. The layout seems to have been designed to ensure a lot of student participation. The curved student seating may already be reflected in a mosaic installed in Apamea, now in Syria, by Julian, Roman Emperor from 361 to 363, to commemorate his favourite pagan philosopher, Iamblichus. A mosaic preserved on the site shows Socrates surrounded by colleagues in a curve to either side of him. I have interpreted another of the mosaics in this school in the introduction to Sorabji (1990). I know of no evidence that the curved shape was still used in Islamic teaching, and Yahya Michot has drawn attention to Islamic pictures of disorderly seating. But some orderly arrangement would fit with those cases for which it is reported that the Islamic professor put his best pupil and aspirant successor to sit next to him, demoting him if next year’s entry contained an even better student (Watt 1972).

In 639, a little after the last-known professor of pagan Greek philosophy in Alexandria, a Christian building with a very similar structure was erected in another part of the Mediterranean world at Torcello, off the coast of what became Venice (see Figure 3.2). The bishop’s throne is elevated up steep steps at the back of the apse in the middle of its curved wall, and to either side and a little lower is a horseshoe of six tiers of curved benches for the presbyters to sit on. The arrangement is extraordinarily like that in the seminar rooms of sixth-century Alexandria. It was once thought that Christians took the curved shape of the apse from Roman judicial courts sited in the curved apse of a basilica. But it now appears that Roman judicial courts were housed in various shapes of building with varied seating arrangements (de Angelis 2010: index). The shape, without the seating, was well known from other Roman buildings, and the baths of Constantine in Arles have been cited as a model for later Romanesque churches in Provence (Mullins 2011: 157). I think it more likely that the seating pattern arose when the familiar shape was seen by both pagans and Christians as useful for teaching. A Christian mosaic that has been dated to 410–17 from the apse of Santa Pudenziana in Rome shows Christ on a gilded throne surrounded by disciples in a horseshoe. I have been told that the performance rooms of Hadrian from 123, newly excavated near Santa Pudenziana, include one room with the
Figure 3.2 The tiered curved benches of the apse and the bishop’s throne retain the same structure for teaching in Torcello Cathedral, founded in 639 just after the last-known commentator in Alexandria.

Figure 3.3 St Catherine refuting the Neoplatonists of Alexandria in their seminar room, portrayed in the Basilica of St Clement, Rome, which itself retains its bishop’s throne in the apse, although choir stalls conceal the curved structure. Painting by Masolino da Panicale, 1425 (photo: Scala, Florence).
same horseshoe shape, central dais and tiered seats on a larger scale. This surely might have influenced later mosaic. I am also told that the bishop’s throne in the apse is still called “the high place” in Eastern churches.

There is an even more unexpected continuity of design. One of the basilicas with a throne in the centre of the apse, dated by an inscription to a cardinal of 1108, is that of St Clement in Rome. But this is the very basilica that contains a fresco of 1425 depicting the structure of the sixth-century Alexandrian lecture rooms. The fresco by Masolino da Panicale shows St Catherine of Alexandria from the third century CE refuting an earlier generation of Alexandrian philosophers (see Figure 3.3). She had been summoned by the emperor Maximinus to answer them, but she had turned the tables on them. She is counting off the points against them on her fingers, while they look very refuted. The emperor is pictured seated in the professor’s elevated throne, while the professors are arranged like students on benches to either side. Catherine is in the open space where hapless students might normally be put through their paces. How did Masolino depict so accurately Alexandrian seminar rooms of a type only now brought to light by archaeology? Could the bishop’s throne in the apse of the very basilica that he was adorning have given him the clue? The chief difference from Alexandria and Torcello is that he has portrayed the benches in front of the throne as straight. He may have based the straight benches on the straight-sided choir stalls, which by his day had been installed outside the apse in St Clement and separated from it by a canopied altar.

Another depiction, reproduced in Figure 3.4, is by Sodoma, from the first half of the sixteenth century, and is in Monte Olivetto Maggiore. It shows a similar structure in a

Figure 3.4 St Benedict (529, Monte Cassino) tiptoeing out of a sixth-century pagan seminar room to avoid being corrupted; detail from fresco by Sodoma (1477–1549) in Monte Olivetto Maggiore (photo: Scala, Florence/Ministero Beni e Att. Culturali).
lecture room of Philoponus’ period. Here Philoponus’ contemporary Saint Benedict is tiptoeing out of a seminar, so as to avoid being corrupted by the pagan professor, who is again at the back on an elevated throne, while the listeners are seated to either side.\footnote{13}

One of the excavated lecture rooms at Kom-El-Dikka has a unique structure. Four student tiers are facing each other, but instead of a complete horseshoe there is an apse, where we might have expected the professor’s throne to be. The apse would accommodate only a few people, and is separated off by a low, curved wall in front, so that it is not easily visible from the closest of the student seats. The area cut off is roughly circular. My present inclination is to wonder if there could have been an aperture in the roof leaving the apse open to the sky for viewing the stars. Only the two banks of student benches would have needed roofing. There is a report by Simplicius about his former teacher in Alexandria, Ammonius, that he looked through a three-dimensional “astrolabe” and confirmed that the “fixed” star Arcturus had moved one degree from its supposedly fixed position over the previous hundred years.\footnote{14} Philoponus wrote the only extant ancient treatise on the astrolabe. In that treatise, he describes how delicately you have to hoist the instrument by its ring, shut one eye to make sure you are looking through both holes, angle it to the right plane, swivel its ruler, and mark your findings with charcoal or wax on its face.\footnote{15} You could not have done all this if hoisting it by hand. It must have required a very stable platform, and the low wall in the front of the apse or the ground in the centre of the apse would have supplied one. Only one student could look at a time, so the line of sight from the student tiers across to those queuing in the apse to take a look would not matter. Nor would it matter in those astronomy classes that were held at night. The one described in Philoponus’ chapter 5 \cite{Segonds} is held in the day, but that would not be true of Ammonius’ observation of Arcturus. There are two excavated rooms with an apse, and Majcherek tells me that they alone face east–west. That would fit with the interest of astronomers in observing at sunrise and sunset.

Another anomaly in four of the lecture rooms is a trench, which only in one case shows signs of having had a lined bottom capable of holding water. I was at first reminded of Galen’s dramatic demonstrations of animal vivisection, which might well have required a dry place to stow the animal before the vivisection. In Galen’s case, dry stowage would have been needed afterwards as well, since he prided himself on stitching the animals back up alive.\footnote{16} But I am told that surviving medical texts of the period expound only anatomy, not “anatomical procedures”. Only the latter would have involved vivisection. This could suggest that the classes too only described anatomy. On the other hand, it may be that the descriptive classes were the ones most often represented in books, because they were more elementary and easier to record in writing than vivisections.

I have mentioned above Zacharias’ caricature of Ammonius’ seminar in these lecture rooms. But he also wrote about his fellow student Severus, in the \textit{Life of Severus}, which survives in Syriac. He there gives an eye-witness account of how in the mid-480s twenty camel-loads of pagan idols were transported after a raid on a secret temple of Isis at Menuthis and, before being burnt, were paraded by the Christians in Alexandria, together with imprecations against the Alexandrian professor Horapollo, with whom Damascius had possibly been studying rhetoric at this time, and who was accused of converting students to paganism. It has been suggested that it may be the burnt idols from this incident that were reported by Elizabeth Rodziewicz as having been found at a site close to the newly identified lecture rooms \cite{Haas1997,ch.9,note109;Athanassiadi1999:27–9}.
This incident was to lead to a period of persecution of the Alexandrian philosophers, to whom I will now turn.

When the young Damascius first studied in Alexandria, he is described as wearing the rhetorician’s (not the philosopher’s) gown (tribōn). Talk of wearing the philosopher’s gown is very common, and, although the practice of wearing academic robes has been said to come to Europe from Islam (Watt 1972), I think the idea may have reached Islam from ancient Greek practice.

Damascius studied and taught rhetoric for nine years. His rhetorical studies were in Alexandria, where he was also in the circle of Proclus’ pupil Ammonius for whose mother he delivered the funeral oration. He seems to have been in Athens shortly before the death of Proclus in 485, and some have suggested that he was teaching his rhetoric there. He may nonetheless have been back in Alexandria during the persecution of 488–9, from which he may have fled with Isidore, according to one reconstruction. Influenced by Isidore, Damascius turned from rhetoric to philosophy and studied philosophy in Athens, perhaps around 492. But at some unknown time he studied Plato’s philosophy along with astronomy back in Alexandria under Ammonius and Ammonius’ brother Heliodorus. This is likely to have been before his dissent from Ammonius’ political deal with the authorities there. Although later dates have been suggested, there would have been possible earlier occasions up to 489. Isidore was offered and declined the philosophy chair in Athens both in succession to Proclus and, at Damascius’ urging, in succession to the next head, Marinus. It was eventually around 515 Damascius himself who became head of the Athenian Neoplatonist school, only to have it closed by the Christian emperor Justinian in 529.

The only notable pagan Neoplatonist who had stayed behind in Alexandria after the persecution of 488–9 was Ammonius, and Damascius accused him of doing a sordid deal, presumably after that date, with the Christian authorities. I believe the deal may have kept philosophy going in Alexandria much longer than in Athens. It has been a mystery what the deal was, but I have argued that on his side Ammonius agreed to teach pagan Neoplatonism without emphasizing religious practice, while the Christian authorities on their side funded his teaching. As regards the first side of the bargain, I cited Ammonius’ commentary on Aristotle, in Int. 1.6–11, where he claims to follow his Athenian teacher Proclus. But the strange thing is that Proclus had argued, page after page, for the natural character of divine names, by claiming the power of pagan priests to motivate the gods by the correct use of their names. Ammonius, at the corresponding point in his account, omits all mention of divine names and mentions only the natural force in magic of human names, and that as the opinion not of any Neoplatonist philosophers, but of an obscure Egyptian priest, Dousareios. As regards the funding of Ammonius’ teaching, the evidence is not direct. The Christian authorities of Alexandria had funded the philosophy chair of his father, Hermeias, and on the father’s death had made an unparalleled offer to his esteemed widow to fund the philosophical training of Ammonius, who went to study with Proclus at the pagan Neoplatonist school in Athens. The Christian authorities wanted Alexandria to remain a world centre for pagan learning, so long as Christian students were not being proselytized. But how was Ammonius to continue without funding? The lavish character of the school’s rebuilding after the earthquake of 535 seems to me to confirm that the Christian authorities would have been willing to pay for the teaching of Ammonius and his successors. Ammonius’ reticence about religious practice differentiated him from the
devotional enthusiasm of Iamblichus, and of the Athenian school notably under Proclus, and I believe this gives truth to the controversial claim that the Alexandrian school was different in character from the Athenian.

Often philosophy teaching was privately arranged in antiquity. The extent of public provision for philosophy in Alexandria and the range of subjects will have been unparalleled for the time. It has been pointed out that in the capital at Constantinople, the emperor Theodosius II set up only one public philosophy post in 425, against twenty in grammar, eight in rhetoric and two in law. Ammonius was in a better position in Alexandria. He taught all the leading philosophers of the sixth century: Philoponus, Simplicius, Damascius, Asclepius, Olympiodorus, as well as the mathematician Eutocius, his immediate successor. Two of these went on to edit Ammonius’ lectures, three to teach in Alexandria, although only Eutocius and Olympiodorus held an Alexandrian chair of philosophy. Philoponus had probably started as a teacher of grammar, as his pagan enemy Simplicius liked to emphasize, but that would not have prevented him from teaching philosophy too. He would have been likely to do so under Ammonius and Eutocius, and Edward Watts has suggested that he may have delivered his polemical dissent from Proclus and Aristotle, when Olympiodorus followed Eutocius in the chair (Watts 2006: 244–5).

When Ammonius died some time before 526, Philoponus did not succeed him. His was by far the most brilliant mind. But it was pagan philosophy teaching that the Christian authorities wanted offered, and the curriculum was not Christian in philosophy or in any of the other subjects either. In Zacharias’ fictional work, in order to get a discussion of the Christian belief in God’s Creation, the students have to interrupt Ammonius’ lecture on Aristotle’s physics. Philoponus by contrast was not only a Christian, but was by a gradual process presenting Aristotle in a more and more unconventional way, with ideas of his own. He would not have fulfilled the role of continuing the heritage of pagan learning, and he was left free to publish his attack on the pagan beliefs of Proclus in 529, the year in which Damascius’ school in Athens, where Proclus had taught, was closed.

Philoponus taught more subjects than philosophy and grammar, to judge from his writings. These include not only a massive philosophical output along with a grammatical treatise on Greek accents, but also two commentaries on Nicomachus’ arithmetic, and the astronomical treatise on the astrolabe which is directed at students, telling them how to use it. The subjects taught in the school included philosophy, grammar, rhetoric, mathematics, astronomy and medicine, a wider range than the three provided for in Constantinople by Theodosius. The written commentaries, which reflect lectures on standard texts, have a similar structure in different disciplines, which suggests that the lectures also had patterns in common. Thus in law and medicine, as in philosophy, the commentaries can be divided into lectures (praxeis) about a text, which is quoted in lemmata or excerpts, and in which a statement of the doctrine (protheōria, theōria) of a passage is separated from a discussion of the exact wording of the passage (lexis in philosophy, paragraphē in law). In medicine, as in philosophy, at the beginning of a course before the first text is broached, there are prolegomena, which cover a standard number of frequently asked questions, and discuss definitions of the discipline. The practice is also followed in both disciplines of advanced students writing up the seminar “from the voice of” the master.

Evidence has been assembled for a two-way interaction in which medical students were required to study logic and medical teachers taught some philosophy (Westerink 1964; M. Roueché 1999). Already in Zacharias’ Ammonius, the doctor Gessius is treated as studying
the issue whether the universe had a beginning, and Ammonius’ philosophical pupil
Asclepius says in his commentary on Aristotle’s *Metaphysics* that the medical Asclepius
was his fellow student. At the end of the sixth century, Westerink has commented, Pseudo-
Elias’ *Prolegomena to Philosophy* with *Commentary on Porphyry’s Isagôgê* shows more
competence in medicine than in philosophy (Westerink 1967).

The person who inherited Ammonius’ chair of philosophy, Eutocius, is recorded as
writing on the logical works of Aristotle, a politically safe subject. Most of his works were
on mathematics, which was equally safe and had been a strong Alexandrian tradition.
Eutocius was followed by Olympiodorus, who, more enterprisingly, wrote commentaries
still extant not only on Aristotle’s logical texts, but also on Aristotle’s *Meteorology* and
Plato’s *Gorgias, First Alcibiades* and *Phaedo*. He was less cautious than Ammonius when,
for example, in *Phaedo* he said that pagan priestcraft or theurgy could bring you to the
pagan Neoplatonist ideal of mystical union with the divine world of intelligibles. 23 But
Westerink has shown him going to great lengths to present to his Christian students pagan
beliefs as analogous to Christian ones (Westerink 1990: 328–36).

Olympiodorus was still teaching in 565, but he is widely thought to have been the last
pagan professor and to have been succeeded by Christians of whom three, Elias, David
and Pseudo-Elias, confined themselves in their extant writings to Aristotle’s logical works,
whether or not Stephanus did also. They continued Ammonius’ tradition of providing
introductions to philosophy and to Aristotle, a tradition that strongly influenced the
Greek-speaking Christians Maximus the Confessor and John of Damascus, and eventually,
via Persian and Syriac, the Arabic tradition. Ammonius’ skill had kept the Alexandrian
school open into the seventh century, much longer than the one at Athens. As to whether
the lecture rooms were still in use even in the late seventh century, despite the Persian and
Arab invasions of 615/16 and 640, the archaeological evidence is not at present decisive. 24

**NOTE**

1. Majcherek & Kolataj (2003); Majcherek (2004). There are web reports on Majcherek’s excavation in Polish
in *Histmag* for 19 May 2004 by Lord Lothar at www.histmag.org and in English in Al-Ahram for 20–26
2. I am very much indebted to Roger Bagnall and to Grzegorz Majcherek for making it possible for me
to attend the conference held on 16–18 March 2005 at and near the site in Alexandria, and to invite
Majcherek to speak at a conference on the classrooms and the use in general of classrooms held by myself
and Charlotte Roueché at the Institute of Classical Studies in London on 26–27 April 2005. I learnt more
from a conference addressed by Majcherek, and hosted by the Oxford Centre for Late Antiquity on 8
March 2008. I shall include with acknowledgement points made by others at the three conferences, as well
as drawing on Majcherek’s report and personal communication and my own impressions. The proceedings
of the Alexandria conference are published in Derda et al. (2007).
3. I owe this information to Judith Mckenzie.
4. Porphyry, *Plot.* 14.10. This is the interpretation of the passive voice of *aneginósketo autôi* in Snyder (2000),
from whom I draw these examples.
5. In her paper “The School of Alexandria and the Rivalry Between Rhetoric and Philosophy”, delivered
at conferences on the excavation in Alexandria, in Budapest and at the Institute of Classical Studies in
London, and to be published in a different paper in preparation, “The Conflict between Rhetoric and
Philosophy and Zacharias’ Ammonius”.
6. Zacharias Scholasticus, *Ammonius, or de Mundi Opificio* (*Patrologia Graeca* vol. 85, cols 1028–9); Colonna
(1973) lines 92–9, trans. Sebastian Gertz.
7. Elias, *in Porph.* 21.30: Majcherek acknowledges Elzbieta Szabat as having pointed this out.
10. I thank Susan Walker, Keeper of Antiquities in the Ashmolean Museum, Oxford, for this information.
11. I thank the art historian Christine Verzar for this information.
12. I thank Tony Kenny for the identification.
13. I thank Maurice Pope for showing me the reproduction and its relevance, which I had not foreseen on my pre-excavation visit to the frescos.
15. Chapter 5 in Hase’s text, reproduced by Segonds with French translation (1981); chapter 4 in Green’s translation (1932).
17. Damascius, Isid. 122D [Athanassiadi]; see also Epictetus, Dissertationes 4.8.12; Plutarch, de Capienda ex Inimicis Utilitate (Moralia II) 87a; de Tranquilitate Animi (Moralia VI) 467d; Eusebius, de Martyribus Palaestinae 52.
20. Sorabji (2005) and more briefly in the introductions to each volume of Sorabji (2004), under the heading “The commentators and Christianity”. I plan to respond elsewhere to David Blank’s disagreement in Blank (2010: 659–60) and Blank (2011). Van den Berg (2004: 1999) adds a reason why the deal on ritual would have been congenial to Ammonius.
21. Cod. Th eod. XIV.9.3, which is repeated in the Cod. Iust. as 11.19.1, cited by Dennis Feissel in his paper at the Alexandria conference (above, note 2).
23. Olympiodorus, in Phd. 8, 2.1–20 [Westerink]. Other examples of his less compromising position are given in the magisterial introduction to Westerink (1990: 328–36).
24. This chapter is revised from the second edition of my Philoponus and the Rejection of Aristotelian Science (2010).