

Ancient
Commentators
on Aristotle

GENERAL EDITOR: RICHARD SORABJI

‘PHILOPONUS’:
On Aristotle On the
Soul 3.9–13 *with*
STEPHANUS:
On Aristotle On
Interpretation

Translated by
William Charlton

B L O O M S B U R Y



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Contents

Preface	vii
Introduction	1

‘Philoponus’: On Aristotle On the Soul 3.9-13

Textual Emendations	18
Translation	19
Notes	63
English-Greek Glossary	69
Greek-English Index	84
Subject Index	107

Stephanus: On Aristotle On Interpretation

Textual Emendations	114
Translation	117
Appendix	191
Notes	199
English-Greek Glossary	215
Greek-English Index	224
Subject Index	237

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Preface

The earlier part of the commentary by 'Philoponus' on Aristotle's *On the Soul* is translated by William Charlton in another volume in this series. This second volume includes the latter part of the commentary along with a translation of Stephanus' commentary on Aristotle's *On Interpretation*. It thus enables readers to assess for themselves Charlton's view that the commentary once ascribed to Philoponus should in fact be ascribed to Stephanus.

The two treatises of Aristotle here commented on are very different from each other. In *On Interpretation* Aristotle studies the logic of opposed pairs of statements. It is in this context that Aristotle discusses the nature of language and the implications for determinism of opposed predictions about a future occurrence, such as a sea-battle. And Stephanus, like his predecessor, Ammonius, brings in other deterministic arguments not considered by Aristotle ('The Reaper' and the argument from God's fore-knowledge). In *On the Soul* 3.9-13, Aristotle introduces a theory of action and motivation and sums up the role of perception in animal life.

Despite the differences in subject matter between the two texts, Charlton is able to make a good case for Stephanus' authorship of both commentaries. He also sees Stephanus as preserving what was valuable from Ammonius' earlier commentary *On Interpretation*, while bringing to bear the virtue of greater concision. At the same time, Stephanus reveals his Christian affiliations, in contrast to Ammonius, his pagan predecessor.

January 2000

Richard Sorabji

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Introduction

1. The problem of authorship

The commentary on *de Anima* 3 translated here appears in the manuscripts as a continuation of commentaries on *de Anima* I and 2 by John Philoponus. In a later hand, however, in the twelfth-century codex *Parisinus* 1914, and in the fifteenth-century *Estensis* 3 F 8, it is said to be 'from the voice of Stephanus', and Michael Hayduck in the Preface to his 1897 edition attributes it, though with some diffidence, to the Stephanus of Alexandria who is the author of a commentary on the *de Interpretatione*. We have a Latin translation by William de Moerbeke of a lost Greek commentary on *de Anima* 3, chapters 4-8 (referred to below as the *de Intellectu*) which is generally agreed to be by Philoponus, and which is completely different from the commentary on these chapters in our Greek *in de Anima* 3. This tells against Philoponus' authorship of the latter, though not decisively. For Philoponus could at different times have written two different commentaries on the same work, and if the Greek *in de Anima* 3 is by someone else, it is a mystery what happened to that other author's *in de Anima* 1 and 2, for the commentary on the third book does not begin as if it were a work standing on its own.

Since 1897 the issue has been the subject of a fair amount of discussion. Among those who are substantially of Hayduck's opinion are:

Raymond Vancourt, *Les derniers commentateurs alexandrins d'Aristote. L'école d'Olympiodore. Étienne d'Alexandrie*, Lille 1941.

H.J. Blumenthal, 'Neoplatonic elements in the *de Anima* commentaries', *Phronesis* 31 (1976), reprinted in *Aristotle Transformed*.

H.J. Blumenthal, 'John Philoponus and Stephanus of Alexandria: two Neoplatonic Christian commentators on Aristotle?' *Neoplatonism and Christian Thought*, ed. D.J. O'Meara, Albany 1982.

L.G. Westerink, *Anonymous Prolegomena to Platonic Philosophy*, Amsterdam 1962.

Wanda Wolska-Conus, 'Stephanus d'Athènes et Stephanus d'Alexandrie. Essai d'identification et de biographie', *Revue des Études Byzantines* 47 (1989).

Mossman Roueché, 'The definitions of philosophy and a new fragment of Stephanus', *The Philosopher, Jahrbuch der Österreichischen Byzantinistik* 40 (1990).

Among dissentients are:

- É. Évrard, *L'école d'Olympiodore et la composition du 'Commentaire à la Physique' de Jean Philopon*, Ph.D. dissertation, Liège 1957.
 W. Bernard, 'Philoponus on self-awareness', *Philoponus and the Rejection of Aristotelian Science*, ed. R. Sorabji, London 1987.
 P. Lautner, 'Philoponus, in *de Anima III*: quest for an author', *Classical Quarterly* 42 (1992).

In the Introduction to my translation of the Latin version of the *de Intellectu* I argue that the author of the Greek commentary on *de Anima* 3, G3 for short, is not Philoponus. To my arguments there I shall add only one point. G3 twice refers to observations on the *de Anima* by Ammonius (473,10; 518,32). The only recorded commentary by Ammonius is the one written up by Philoponus. If these references are to Philoponus' commentary, and G3 calls the author of that commentary Ammonius, G3 can hardly himself be Philoponus. But is he Stephanus?

2. Stephanus

Philoponus was a prolific polymath. His surviving commentaries on Aristotle run to more than three thousand pages of the *Commentaria in Aristotelem Graeca*. He also produced an abundance of works of his own on medicine, astronomy, cosmology, theology and grammar. For a short account of his life and work, the reader may be referred to Richard Sorabji's chapter 'John Philoponus' in *Philoponus and the Rejection of Aristotelian Science*, ed. R. Sorabji, London 1987. Stephanus, by comparison, is a shadowy figure. I know of little that has been written about him in English, though there are secondary sources in Latin and French: Hermann Usener, *De Stephano Alexandrino Commentatio*, Bonn 1880, *Kleine Schriften* Bd 3, Leipzig 1914, pp. 247-323; and two works cited above, R. Vancourt, *Les derniers Commentateurs*, and W. Wolska-Conus, 'Stephanos d'Athènes et Stephanus d'Alexandrie'.

The name Stephanus appears a number of times in sources for the history of philosophy in the sixth and seventh centuries. John Moschus (Migne, *PG* 87 2929d) reports attending lectures by a 'sophist' Stephanus in Alexandria between 581 and 584. The ninth-century Syrian author Dionysius Telmahrensensis refers to a 'sophist' Stephanus who was encountered in Alexandria at about the same time by Probus and John Barbur and who held controversial views on the Hypostatic Union (see J.-B. Chabot, *Historiae Ecclesiae auctore Dionysio Telmahrensi Fragmentum*, in E.W. Brooks, *Historia Ecclesiae Zachariae Rhetori vulgo ascripta*, Louvain 1953, pp. 151-4; K.-H. Uthemann, 'Stephanos von Alexandrien und der Konversion des Jacobiten Probus, des späteren Metropolitens von Chalcedon', in C. Laga, J.A. Munitz and L. van Rompay (eds), *After*

Chalcedon. Studies in Theology and Church History. Offered to Professor Albert van Roey for his Seventieth Birthday. Leuven 1985, pp. 381-99.) The prologue of the seventh-century Theophylact Simocatta to his History bears witness to a restoration of higher education at Constantinople after the death of Phocas in 610, and Usener (op. cit. p. 251) makes the conjecture (accepted by many scholars, including Richard Sorabji in his General Introduction to the Commentators) that to revive philosophy the Emperor Heraclius summoned Stephanus from the chair of philosophy in Alexandria and gave him an official title, a salary, and a dozen assistants. Certainly in the later years of Heraclius' reign there was at Constantinople a Stephanus of Alexandria who wrote on astronomy, astrology and alchemy. The commentary on the *de Interpretatione* mentioned above is attributed to a Stephanus in the sole manuscript of it that we possess (*Parisinus Graecus* 2064) and so is our commentary on *de Anima* 3 in the two manuscripts to which I have referred. Mme Wolska-Conus attributes commentaries on the *Categories* and *Prior Analytics* to the author of the *de Interpretatione* commentary on the basis of his 2,11-12; 30,17; 45,23-4 and 54,1-2, and although I do not think that these passages need be taken to refer to actually existing commentaries on these works by Stephanus, she assembles evidence of various attributions to a Stephanus of commentaries not only on them but on the *Sophistici Elenchi*, the *de Caelo* and Porphyry's *Isagoge* (op. cit. pp. 9-10, notes). Finally commentaries on some medical works, notably the *Prognosticon* and *Aphorisms* of Hippocrates and the *Therapeutic* of Galen, are attributed to a 'philosopher' Stephanus whom one manuscript (*Ambrosianus* S 19) calls 'Stephanus of Athens'.

There is wide consensus that our commentaries on *de Anima* 3 and the *de Interpretatione* are by the same man, and that this man is identical with the writer on astronomy and astrology who was in Constantinople in the time of Heraclius and who is given in manuscripts referred to by Usener (op. cit. pp. 248-9) as 'great teacher', 'catholic teacher' and 'ecumenical teacher'. Mme Wolska-Conus wants to show that he is identical also with the Alexandrian sophist of John Moschus and Dionysius Telmahrensis, with the medical Stephanus of Athens, and with Pseudo-Elias, the author of the commentary on Porphyry's *Isagoge* formerly attributed, it is now thought wrongly, to the sixth-century Alexandrian commentator Elias. This single individual, she thinks, came originally from Athens, between 580 and 610 lived in Alexandria, where he was called 'Stephanus of Athens', and after 610 lived in Constantinople where he was called 'Stephanus of Alexandria'.

To show that Stephanus of Alexandria and Stephanus of Athens are the same, she says: 'Different as are their subject-matters, the medical commentaries on Hippocrates and the philosophical commentaries on Aristotle raise questions in the same manner, have the same formulas for introducing and closing a discussion, use the same modes of reasoning with pedantic exact repetitions, both have frequent recourse to the posing

of problems to which they offer several solutions, and finally reproduce each other in several places in their teaching and interpretation' (p. 34). And she illustrates this claim by comparing what is said in the commentaries on the *Prognosticon* and on *de Anima* 3 about sleep, locomotion in animals and imagination. She also cites a number of passages from the commentary on *de Anima* 3 (588,10-12; 452,32-453,1; 462,15-17; 487,9-12; 501,1-26; 595,20-2) to show the author's interest in medicine. While I have not examined the medical commentaries very thoroughly, my first impression is that the commentary on the *Prognosticon*, at least, shows the same traits of personality and style as the *in de Anima* 3 and the *in de Interpretatione*.

The identification of the commentator on Aristotle with the sophist visited by John Moschus and the theologian mentioned by Dionysius seems to me plausible enough, though Mme. Wolska-Conus' positive evidence for it is slight. As to Pseudo-Elias, she claims that Stephanus is the author, not only of the commentary on the *Isagoge* which we possess, but also a variant commentary on the same work which is among the sources of the *Dialogues* of Severus bar Sakku (op. cit. p. 69). Unfortunately she offers no external evidence for these last identifications. Mossman Roueché (op. cit.) finds a difficulty for them in the inferior philosophical capacity revealed in Pseudo-Elias.

Mme Wolska-Conus proposes the following biography for her composite figure. Stephanus was born in Athens in 550-55, when the city was still echoing with the philosophy of the closed Platonic school. On completing his secondary education at the age of seventeen or thereabouts, he went to Alexandria, where Olympiodorus has just been succeeded in the chair of philosophy by Elias, and Philoponus, long occupant of the chair of grammar, may still have been alive. He followed Philoponus both in the breadth of his interests and in adopting monophysite views, though he later returned to the orthodox theological fold. After 610 he removed to Constantinople, perhaps summoned by the Emperor as Usener suggested. He taught, among others, Tychikos, teacher of the Armenian Ananias of Shirak (whose autobiography is translated by H. Berberian, in *Revue des Études Arméniennes* 1 (1964), pp. 189-91), and died before 638. This story, though conjectural, seems to me perfectly credible.

Of those who dispute the attribution of *in de Anima* 3 to Stephanus, Bernard does not offer any arguments, limiting himself to a long sceptical footnote, but Évrard and Lautner are more expansive.

Évrard points out that the arguments of Hayduck are inconclusive. If, he says, there were differences in doctrine and not just in form between the Greek and the Latin commentaries on *de Anima* 3, they could not be ascribed to the same thinker, but Vancourt has shown there are no such differences. And resemblances of style between *in de Anima* 3 and Stephanus' *in de Interpretatione* would have probative force, but no such resemblances have been identified. Blumenthal in his 1982 article men-

tioned above and I in my introduction to the *de Intellectu* try to meet the demand for differences in doctrine, and I shall speak below about resemblances in style, but Évrard draws the conclusion that the authorship of *in de Anima* 3 remains uncertain.

Lautner's conclusions are more decisive. Against Stephanus' authorship he marshals the following considerations. (1) At 541,24-6 G3 seems to speak of the pre-existence of the human soul. An Alexandrian Christian of Philoponus' time could have accepted this doctrine, but Stephanus, writing after Justinian's edict of 543, and teaching in Constantinople, centre of theological orthodoxy, could not. (2) At 457,24-5 we read: 'The unit is not a number, as was demonstrated in the arithmetical discourses.' There is no evidence that Stephanus wrote on arithmetic, as distinct from astronomy and astrology. (3) G3 alludes to work of Philoponus and Ammonius without mentioning them by name (458,25-6; 481,27-9; 571,17-18; 528,35), which shows that he was in close contact with them, to say the least, whereas Stephanus at *in de Interpretatione* 5,13; 21,38; 66,1 and 67,17 refers to Ammonius by name or as 'our teacher'. (4) Blumenthal argues that G3 is other than Philoponus on the ground that he refers more often to other commentators by name than does the author of *in de Anima* 1-2. If G3 is Stephanus, 'why do we *not* find any sign of this attitude in his *in de Interpretatione* as well?' (p. 515) These 'items of evidence', Lautner says, 'are perhaps sufficient to establish that Stephanus cannot be the author of the *in De Anima* 3'. Furthermore, (5) G3 postulates a pneumatic body in which the common sense-ability resides (481,18-20; 482, 11-12); the same doctrine appears in Philoponus' commentary, 52,6; 158,7-34; 161,19-21; 201,31; 433,34-5. Lautner concludes that G3 is either Philoponus himself or a pupil of Philoponus other than Stephanus.

I am not convinced. Talk of pneumatic body (5) is not peculiar to Philoponus; it pervades Neoplatonic commentaries (for some references, see H.J. Blumenthal, 'Neoplatonic elements in the *de Anima* commentaries', in Richard Sorabji, ed., *Aristotle Transformed*, London 1990, pp. 310-11), and the whole Alexandrian school was influenced by Neoplatonism. At 541,24-6 (1) the pre-existence of the soul appears as something presupposed not by G3 but by unnamed difficulty-raisers. The reference at 457,24-5 (2) may be to Aristotle's *Metaphysics* 14, not to some later treatise. (3) Similarly 458,25-6; 481,27-9; 571,17-18 and 528,35 need not refer to anyone beyond Aristotle. (Incidentally 'our teacher' in *in de Interpretatione* 5.13 is surely *contrasted* with Ammonius.) (4) Stephanus' commentary on the *de Interpretatione* contains plenty of references to other writers by name: Theophrastus, Galen, Iamblichus, Porphyry, Proclus and, as Lautner himself observes, Ammonius.

Évrard and Lautner are right that we cannot say that G3 is the Stephanus responsible for our *in de Interpretatione*, simply on the ground that both divide their commentaries in Divisions (*tmēmata*) and Lectures (*praxeis*), and both employ the technique of double exposition, first a

continuous exposition (*theôria*) of a substantial length of text, and then comments on particular gobbets of this text (*lexis*). These practices go back to Philoponus if not to Ammonius, and seem to be standard in Alexandria from the time of Olympiodorus (head of the philosophy school roughly from 540 to 565). But I think that anyone who reads the two commentaries in Greek will, like Hayduck, feel there is a strong similarity of personal style. The *in de Interpretatione* is said to be 'from the voice of Stephanus'. This means that it is written by someone who attended his lectures, not by Stephanus himself, and the *in de Anima* is given a similar proximate source. We do not know at what speed the lectures were delivered. C. Hignett used not only to dictate his lectures on Greek History in the Hall of Hertford College, Oxford, but to walk up and down between the tables to make sure everyone was taking him down correctly. It must not be thought that unless lecturers at Alexandria did likewise, no inferences can be drawn from style. Even if a lecturer speaks fast, some idiosyncrasies of vocabulary and sentence-structure are likely to be preserved in notes, and the general cast of the lecturer's mind ought to come through.

Perhaps the most prominent trait of G3 is a liking for order and clarity. This appears in several ways. He tells us what he is going to do before he does it, sometimes sketching the plan of a *theôria* in advance, and imposing a tight structure on texts that in themselves are loose or discursive (477,23-31, 506,20-507,9; 553,22-4; 594,27-32), and he also tells us when he has finished doing something he has been engaged in – 'that is the problem' he will say, having stated it, and 'that is the solution' e.g. 448,29-30 and 449,6; 455,18 and 455,25). He lists and numbers points (*kephalaia*, 534,20-535,1), problems (*aporiai*), differentiations (*diakriseis*, 494-6), arguments (*epikheirêmata*), things had in common (*koinôniai* 509,9; 516,22-517,3), pleas (*sunêgoriai*, 563,22-564,18) and so forth. He provides 'divisions' (*diaireseis*), systematic classifications of things that fall under concepts, of cognition (*gnôsis*) 490,20-34, the indivisible (*adiaireton*) 544,4-15, imagination (*phantasia*) 589,35-590,4, cf. 500,23-5. No doubt he used the work of predecessors for these divisions (see, e.g., Sophonias 116,30-117,36, possibly preserving Philoponus), but he probably made them neater and shows a strong taste for them. And we have explicit remarks like these: 'Such is the whole problem, but because of the lack of clarity, let us go over it again briefly (527,18-19). 'We raised certain other matters in the *theôria* but since we looked at them superficially it seems best to take up the discussion again. It is better to cover the same ground twice than to miss anything out' (570,5-7). 'See how, though the text looks like a single continuum, we have cut it into four proofs' (582,27-9). As it happens, *de Anima* 3 contains some of the least clear chapters in Aristotle. The whole section on the intellect (chapters 4-8) is extremely difficult, and modern readers despair of finding a consecutive train of thought in chapters 6 and 7, but regard them as collections of jottings. The

regimentation which G3 imposes on them in the *theôriai* 542,21-547,22; 553,19-556,7 and 562,18-563,7 is truly impressive.

Of a piece with this enthusiasm for clarity and order is a fondness for logic. There is a logical digression at 590,17-20. He readily uses logical terminology like *lêmma* ('assumption' 474,16), *sunêmmenon* ('conditional proposition' 447,20 etc.), *prosdiorismos* (literally 'further differentiation', i.e. 'quantifier' 476,3-4). He makes frequent use of the tactic of casting an argument into fairly rigorous syllogistic form: so 447,16-19; 485,25-9; 487,21-2; 494,19-22; 496,29-497,2; 500,12-17; 502,10-12; 579,25-6; 580,1-3; 586,20-2; 590,22-4; 593,26-8; 603,2-12; 603,28-604,2. Occasionally he states a syllogism that is plainly fallacious, e.g. 603,29-30, but there is no reason to think he is unaware of the fallacy.

Next, G3 likes direct speech. His commentary is peppered with the words 'look!' and 'see!' (*idou, hora*). He presents the debate on whether the heavenly bodies have sense-perception (597,2-598,6) almost as a dialogue. He apostrophises Aristotle (464,13; 563,27.34), Alexander of Aphrodisias (471,2; 537,19; 537,33-4), Empedocles (487,25), Marinus (537,19), Plato (575,1) and an unnamed objector (526,2), and he makes Empedocles (452,7) and Homer (486,23) address Aristotle. This produces a pleasant air of briskness and vivacity.

These three traits contribute to making a good teacher, and so does G3's tendency to make a meal of what is readily intelligible, and keep away from conceptual morasses. He deals briefly and firmly (note especially 535,1-2) with the notoriously difficult chapter 5; he explains with limpid clarity (576,8-577,32) why purposive movement cannot be due to the powers of the vegetable soul, but not how it can be due to the soul at all; and he lingers affectionately on such intriguing but slightly unphilosophical topics as heavenly bodies (595,33-598,6), zoophytes (600,13-601,3), the lethal potentialities of various kinds of sense-object (602,7-20, cf. 472,4-20, 476,18-25) and the psychology of animals (488,34-489,6, 496 27-497,10), but avoids confusing us with such questions as how Aristotle can hold that the intellect comes to be identical with the objects of thought. 564,25-565,6 skirts delicately round the hard sayings at 431b21-4. If he had set an examination on *de Anima* 3 for his pupils, even the dimmest of them should have got good marks. Could this be why the titles associated with the name Stephanus (see Usener, *op. cit.* 248-9) speak of him as a teacher and not just as a philosopher?

A final personal trait I think we can discern is an interest in grammar. He uses words like 'hyperbaton' (514,16; 531,1; 548,28; 568,11; 606,1) and *makroapodotos* ('with the main clause long delayed', 582,32) which would startle a philosophical audience in the English-speaking world today, and see 474,34-475,5; 475,29-476,7; 490,15-16.

To turn to more linguistic points, G3's Greek seems to me easier and more transparent than that of other ancient commentators on the *de Anima*, and it has certain idiosyncrasies. He likes adverbs which are fairly

uncommon formations from nouns or adjectives, and might be compared with the ‘-wise’ formations that were popular some years ago, for instance: *anupokritôs*, *holikôs kai kosmikôs*, *holotelôs*, *kentrikôs*, *morphôtikôs*, *horikôs*, *spermatikôs*, *toioutotropôs*, *tupôtikôs*. He also likes unusual compound verbs: *anakhlyzein*, *katamathêmatikeuein*, *kuriolektein*, *pareistrekhlein*, *prokharattein*, *prophantazesthai*, *prothesaurizein*, *sunupakouein*, *hupainittesthai*. The words *dusthêratos*, *laburinthôdês*, *homokhronos*, *philenklêmôn*, *têlaugôs*, are also characteristic of him. He uses the word *exôthen*, literally ‘from outside’, to say that an argument is taken from outside Aristotle’s works: 503,9; 525,25; 526,29; 578,6; 578,34; 583,6. When he wants to say that Aristotle attends to a point later he uses *parakatiôn*; 493,24; 519,6; 519 13; 522,7; 563,12. He favours the word *gumnazein* for trying out or setting out an argument, 463,34; 467,15; 472,21-7; 480,20-4; 481,8, and also likes to flag *porismata*, ‘corollaries’: 470,19; 472,4 (*bis*); 475,9; 475,11; 475,14; 476,8; 547,15; 566,20. Some constructions are conspicuous too. ‘Whence is it clear?’ *pothen dêlon*, he often asks, that something claimed is in fact the case: 447,23; 450,4; 450,6; 454,13-14; 494,30; 496,28; 496,32; 497,2; 603,5; 603,8. He often introduces a further reason for something with the words ‘and because’, *kai hoti*: 478,11; 483,7; 519,5; 535,24; 535,26; 537,21; 546,22; 571,8; 573,2; 575,31; 577,37; 578,10; 578,20; 591,18; 596,3-4; 601,30, cf. 584,15.

G3’s love of order and clarity is conspicuous in Stephanus’ *in de Interpretatione*. Stephanus sketches the plan for a coming *theôria* at 24,13-18, 39,28-32 and 53,4-10. He likes numbering sections, reasons, arguments, proofs etc and telling us when he has come to the end of each, for example 26,21-32; 31,12-26; 34,34-5; 63,22-65,26. We are given ‘divisions’ of predicates (11,9-21), of sentences (17,29-18,3), of kinds of potentiality (61,8-21). The pat lists of things from which it is clear that names are not natural and of things signified by *onoma* (9,27-9; 11,26-8) recall G3’s list of ways in which an opinion can come unstuck at 502,27-33. Aristotle is told what he ought to have said at 60,1 in tones like those of G3 at 451,7-15.

A commentator on the *de Interpretatione* may be assumed to have some interest both in logic and in grammar. Stephanus, however, shows particular affinity with G3 in setting out arguments with syllogistic rigour (e.g. 1,15-17; 15,29-30; 67,35-68,2) and in raising certain gratuitous linguistic points, for instance at 23,37-24,6 (on the lack of a word *antiprotasis*, with which we may compare 474,32-475,5) and 26,35-27,9. He also thinks it worthwhile to point out a difference between the usage of philosophers and that of grammarians at 12,9-13, and between the interests of grammarians and rhetoricians at 19,3-6.

The *de Interpretatione* does not provide much opportunity for enlarging on unphilosophical topics (though a dry text does not prevent the Stephanus who commented on Hippocrates’ *Prognosticon* from telling a long, racy story about Antiochus’ love for his stepmother at 58,21-62,5); but Stephanus shows himself pupil-friendly by the amount of space he gives

to determining the full number of formally different propositions that are possible at 24,37-25,39, 39,32-40,17 and 54,13-55,22 and by his enthusiasm for tables; he offers three tables of modal propositions, where no one else provides more than two. We hear little about animals, but camels appear as an example at 10,11, as they do at 450,7.

The *in de Interpretatione* does not reveal the free use of apostrophe so conspicuous in the *in de Anima* 3 but that should rather be counted a difference in literary style than an indication of a difference in the author's personality. We have the occasional *idou* (14,39; 25,16 etc.) and other traces of plain speaking, e.g. 'But that is not true.' (21,32).

The two commentaries show linguistic similarities, but these are limited. Hayduck in his Preface to the *in de Anima* (p. v) says: 'Whereas in the first two books Philoponus' painstaking verbosity (*verbosia industria*) is everywhere apparent, there is peculiar to the third book a certain ascetic, attenuated conciseness (*ieiuna quaedam et exilis brevitās*).' This does not seem to me an apt description of *in de Anima* 3; I think Mme Wolska Conus is nearer the mark when she speaks of 'pedantic exact repetitions' ('des symmetries pédantes et répétitives'); and I suspect Hayduck was applying to the *in de Anima* 3 the impression he received from the *in de Interpretatione* which is indeed closely pruned, especially in comparison with the commentary on the same book by Ammonius. The *in de Interpretatione* is considerably more concise than the *in de Anima*. The lectures (*praxeis*) are less than half the length. But this may well be because it was taken down by a different student who preferred to be concise. (Mme Wolska-Conus ventures the surmise that students at Constantinople were not of the same calibre as students at Alexandria; if that is right, one might assign the *in de Anima* to Alexandria, and the *in de Interpretatione* to Constantinople.)

But although the *in de Interpretatione* differs from the *in de Anima* 3 in these ways, there is not such a dearth of stylistic resemblances as would constitute a reason for thinking it has a different source. We have *pothen dêlon* questions at 5,16; 35,9; 66,29 and 67,34. Stephanus uses *parakatiōn* at 3,6; 16,25; 18,27; 20,1; 21,35; 30,38; 43,13; *gumnazein* at 44,18; 45,8; 64,35-65,1; 67,28. He begins a sentence *kai hoti* at 3,9, and derives a *porisma* at 32,25. Considerations drawn from outside Aristotle's works are called *exōthen* (34,34; 36,9). There are some noticeable compounds, e.g. *sunupakouein* (19,17), *prosupakouein* (13,32; 19,16), *arkhoeidesteros* (13,33), *aperilēptos kai akatalēptos* (53,15) and (a word that caught Stephanus' eye in Ammonius) *dustantibleptotatos* (66,7-8).

The *de Interpretatione* and *de Anima* 3 are so different in subject matter that one cannot expect to find in commentaries on them many significant agreements or disagreements in philosophical doctrine. It may be worthwhile, however, to note that imagination, which according to Philoponus (*de Intellectu* 61,84-5; 62,9-63,23) impedes contemplation of God and is generally a nuisance, is given an important role in acquiring knowledge of God by G3, at 563,38-564,14, and by Stephanus at 35,27-8; and Stephanus,

though a Christian, shares (38,29-30) G3's realism about universals, mentioned below.

While I must repeat Hayduck's warning that from these things a certain conjecture cannot be made (*certain ex his rebus de illo scriptore coniecturam capi non posse*), I personally am persuaded that G3 is the Stephanus of the *in de Interpretatione*, and will take the liberty of referring to him as Stephanus below.

3. The *in de Anima* 3

It is difficult for scholars today to imagine what academic life was like in the sixth and seventh centuries. In Britain, perhaps, it was non-existent. Stephanus was a contemporary of St Augustine of Canterbury, and the society which Bede describes Augustine as finding in Kent was certainly not one in which commentaries on Aristotle were in high demand. How different things must have been in Alexandria. For nearly nine hundred years it had been the greatest centre of higher education in the world. Endowed by the Ptolemys with its Library and Museum, it had included among its teachers Euclid, Aristarchus the astronomer and his namesake the grammarian, and among its pupils Archimedes and Galen. It had founded geometry, edited the classics, and measured the Sun and the Moon. Under the Roman Empire it became famous first for Jewish and then for Christian theology: the home of Philo and Origen, the see of Athanasius and Cyril. But by the sixth century the fires seem to have been burning low, both in Alexandria and in Greece, and in Alexandria they were destined to be finally and violently extinguished when the city fell to the Arabs in 640.

Stephanus was perhaps the last senior scholar of Alexandria. The *in de Anima* 3 gives us a view, as through a narrow window, of a world in which there is no presentiment of impending disaster, but something of a sunset atmosphere. An intense conservatism prevails. Literary quotations are mostly from Homer, and never from anyone later than Euripides. And as there might have been no literature in the last thousand years, so history might have stood still. There is no mention of any historical event after the time of Plato or reference to any social or political institution, such as the Roman Empire, the Byzantine civil service, or the Christian Church, that was unknown to the fourth century BC (being dragged to court, 582, 18-19 was a classical phenomenon). Stephanus often discusses other commentators from Alexander of Aphrodisias onwards, and takes issue with them in a way recognisably similar to that in which a modern writer takes issue with rival interpretations. But about what lies outside the limits of the professional study of Plato and Aristotle, his lips are sealed.

This conservatism shows itself particularly in the examples, as if there were a strong preference for examples that had been used many times before, and a convention not to seek examples outside certain areas. When

there is a moral conflict, with reason advocating one course and passion, or the lower side of our nature, another, the only thing that passion finds pleasant is sex (560,5-6; 576,12); the other deadly sins are all eclipsed by lust; and the sole object of lust envisaged is a prostitute (*pornê*, 583,26; 590,14). The only alternative attractions reason can offer are philosophy tutorials and prayer (590,14; 579,4; cf. also 555,19-20; 562,13-14). There is no mention of politics or commerce as possible fields of moral conflict, and only a brief and unrealistic mention of war (578,15-16). If Stephanus had been lecturing to clerical students at a seminary, this narrow range of examples might have seemed appropriate, but I suspect that showing a closer knowledge of the world would have been thought undignified in a philosopher. The most a philosopher could do was to modify an example to suit his auditors; if you wanted an example of forethought and deliberation, making a coat to protect oneself against the cold (Sophonias 142,20-5) might be less convincing for Egyptians than constructing a roof to shelter from the sun (585,8-13).

The tradition of the Alexandrian school was Neoplatonist (for detailed justification of this statement, see essays 1, 13 and 14 in *Aristotle Transformed*), and although Stephanus himself was a Christian, his departures from Neoplatonism are minimal. He retains, for instance, the Neoplatonic doctrine that we have three bodies, one 'of luminous form' (597,18), one of pneuma (481,20) and one earthy or shell-like (482,12). Westerink says (*Aristotle Transformed*, p. 340): 'he accepts unquestioningly the authority of Christian dogma and of the Bible', but the passages he cites do not provide strong support for these claims. To show Stephanus' unquestioning acceptance of Christian dogma, he refers us to 527,29-32, which runs: 'But since that God is intellect is the view neither of Plato nor of pious doctrines [*eusebesi dogmasin*] – for God is superior to intellect, for which reason he is also called 'Providence' [*pronoia*], as coming before intellect, – come, let us resolve the problem in another way.' The unquestioning acceptance of the authority of the Bible is supposed to appear from 547,11-14: 'That is why it is said "He said, and it came to be". But this saying [*logion*] may be interpreted in two ways: what he knows, he also says, and this also comes about [sc. we have three independent facts]; or because his activity is all at once, and that is why it is said "He said, and it came to be".' Westerink is also a little misleading when he says (*ibid.*) that the 'old tenets' of the eternity of the world and the fifth substance, the pre-existence of the human soul, and the rationality of the heavenly bodies 'continue to reappear' in him; he certainly does not commit himself to their truth. Westerink is right, however, that 'there is no attempt at a wholesale revision of the traditional material from a Christian point of view' and Stephanus seems happy to accept a Neoplatonic psychology with three bodies, a heavenly, a spiritual or pneumatic and a material or shell-like, and a division of the soul that attaches sense and imagination to the pneumatic body. He also seems to take a Neoplatonically realistic view of

universals, whether transcendent (467,3, cf. *in de Interpretatione* 38,29-30) or *in re* (481,14).

But although Stephanus' Christian beliefs do not have much obvious effect on his philosophy, the passages in which he reveals them, e.g. 528,13; 536,11-13; 537,26-7; 538,19-21; 545,27; 547,9-11; 586,5; 587,11, his talk of the Creator (for whom he uses the Platonic term 'demiurge', *dêmiourgos*, 474,2 etc.) of divine illumination (486,38), and divine Providence (564,1), contribute to our picture of philosophy in the sixth and seventh centuries. They show that it was being done by people close in their view of the world to philosophers of the mediaeval West and to philosophers today who adhere to their ancestors' faith. Such latter day believers will find it easier to imagine themselves in the same pew with Stephanus than with Philoponus or any earlier philosopher who fails to make it into Migne. A certain credulity about astrology (attested by 526,36 as well as by the treatise for Timotheus) only brings him closer to our fin-de-siècle croyants.

We see, then, first in Alexandria and then in Constantinople, a man of classical education and Christian beliefs, with little to say about the rougher side of secular life, but a good teacher. He is scrupulously loyal and warmly devoted to the academic tradition in which he is schooled; well read in the literature of his subject; a master of the formal logic and the linguistics of his day. If we think of him as trying to give a course on *de Anima* 3 which will leave his pupils with some clear ideas about it and enable them to impress an external examiner, we may judge that he has done an excellent job.

Of course, that is a highly anachronistic view. What if we enquire into his originality, or ask what fresh insights he offers into the philosophical problems which Aristotle discusses in *de Anima* 3? He is certainly capable of being critical; he mounts spirited defences, for instance, of Empedocles and Homer against Aristotle's attacks at 486,6-487,5, and puts Aristotle right about imagination at 488,21-30. The founder of the Lyceum is owed nursling's dues (450,20; 467,4), not slavish assent. And if not the originator, he is a lucid and forceful expositor of an idea which is absent from classical philosophy but appealing to the heirs of Descartes and Locke, the idea that we are conscious of the functioning of our senses by a special attentive faculty, *prosektikon*, an intellectual capacity for reflecting or turning in (*epistrophê*) on ourselves (464,30-467,12).

4. The *in de Interpretatione*

The *de Interpretatione* was a popular text in sixth-century Alexandria. Besides the commentary of Stephanus we have that of Ammonius (to which I refer, by page and line of Busse's 1897 CAG edition, simply as 'Ammonius'), fragments of a commentary by Olympiodorus, and most of an anonymous commentary, the two last edited by Leonardo Tarán under the title *Anonymous Commentary on Aristotle's De Interpretatione*, Meisen-

heim 1978. In the Supplementary Preface to his edition of Ammonius, Busse describes a second anonymous commentary, apparently later in date but still representing the Alexandrian tradition, which survives in manuscript but has not been printed, and Philoponus and Elias appear to have written commentaries which are now lost.

Tarán's anonymous commentator resembles Stephanus in making extremely free use of Ammonius, and also in being much briefer than Ammonius, writing in a simple, direct style. He is, in fact, clearer and less ambitious philosophically than Stephanus. He is independent of Stephanus; at 16,12-15 (Tarán), for instance, he uses material about Achilles from Ammonius 63,10-13 which is missing from the parallel Stephanus 16,1-12. And he does not agree with Stephanus on any of the points which Stephanus makes against, or independently of, Ammonius.

Although Stephanus refers to Ammonius by name only at 5,13; 21,38; 66,1 and 67,17, he depends heavily upon him, even helping himself to felicitous turns of phrase such as *suntomias erastês*, 'enamoured of brevity' (12,32, taken from Ammonius 47,21; the Anonymous Commentator fancied it too: see Tarán 103,5). Hayduck in his Preface to his 1885 CAG edition goes so far as to say: 'He brings forward hardly anything that is not expounded more carefully and copiously (*diligentius et uberius*) by Ammonius' (p. vi). A more sympathetic editor might have said that Ammonius brings forward hardly anything of value that is not more clearly and concisely expounded by Stephanus. In fact, though Stephanus omits a fair amount of material in Ammonius, he also provides material Ammonius does not. Tarán (p. ix) mentions 12,1-6, where he refers to Galen. The following are other passages I have noticed in which he goes his own way.

5,13-19: rejection of Ammonius' distinction between *gramma* and *stoikheion*.

12,9-13: difference between grammarians and philosophers in their use of *ptôsis*.

17,17-28: solution to the question whether 'statement' is univocal or equivocal in terms of 'focal meaning'.

19,13-21: definition of a sixth form of sentence, additional to declarative, interrogative etc.

22,9-11: Aristotle needs a small preliminary assumption (*lêmmation*) for his account of contradiction.

23,38-24,6: why no word *antiprotasis*?

35,34-36,8: divine foreknowledge and the problem of evil.

47,17-50,3; 57,15-21; 65,27-32; 68,5-9: attempt to demolish the distinction between 'is-not a just man' (simple denial) and 'is a not-just man' (assertion from transposition)

63,12-66,34: various amendments to Ammonius' treatment of the arguments in *de Interpretatione*, ch. 14.

67,17-27: the definite article and the universal quantifier.

Stephanus also does some discreet depaganising. He never refers, as Ammonius does, for instance, at 38,27-39,2 to gods in the plural, or mentions oracles as Ammonius does at 135,3-7 and 137,12-23, and when showing how language is conventional he omits the religious and sexual material in Ammonius 35,21-36,21. Stephanus' contribution, mentioned just now, to the problem about future contingents, would hardly have been possible for a pagan: 'If the Divine knows that a human being is going to do something, in the case of the good it is reasonable not to prevent it. But why not in the case of the evil? For instance if it knows that the infant is going to be a sorcerer, a scourge, a murderer. Can the Divine prevent it or not? To say 'It cannot' is most impious. So it can. But if it can prevent it, but does not wish to, that is characteristic of someone malevolent and maleficent. To this we say that the Creator has given self-determination for the sake of future goods.' Vancourt says of his Christianity 'certainly on reading the commentary on the *de Interpretatione* one could not divine it' (p. 29); I find this surprising.

Readers will judge for themselves how far, when Stephanus departs from Ammonius, he carries them with him. Two points of difference may be mentioned between him and a modern writer on the topics in the *de Interpretatione*. First, when he wants to prove a logical theorem — to prove, say, that one proposition is logically equivalent to another or that one proposition is not the negation of another — he never tries to do this by natural deduction from axioms: his method is always to give examples to show that the propositions are true or false together. See, for instance, 27,15-34; 31,11-20 and, most notably, 47,33-49,2. This apparently rigorously extensional approach relies on the notion of a 'materiality', see 22,23 and note and 53,3-7, which is a kind of modality *de re*.

Secondly, he never uses symbols, and though variables were available in his time, he had no perspicuous means of indicating scope. This affects his treatment of the problem of future contingents. The Alexandrian solution of this problem, the solution which appears if we put Ammonius 152,33-155,8, the Anonymous Commentator 64,7-66,15 and Stephanus together, is that while necessarily (if p then p) it is not the case that if p then necessarily p ; and while necessarily (either we shall reap or we shall not reap) it is not the case either that we shall necessarily reap or that we shall necessarily not reap. They express this, however, very awkwardly. The Anonymous Commentator speaks of disjuncts neither of which is necessarily true or necessarily false as true or false 'indefinitely' (*aeoristôs*, 67,1-2; though perhaps he means only, like Ammonius 139,14-15, that truth and falsehood are *divided* in an indefinite way between them,¹ not that they are *possessed* in an indefinite way).² And all three writers try to make the point in terms of a distinction between what is necessary simply, *haplôs*, and what is necessary hypothetically, *ex hupotheseôs*. They say that (where p is a proposition in the 'materiality' of the contingent), if p is the case, then hypothetically necessarily p . This terminology is particu-

larly unfortunate because Aristotle himself uses ‘necessary hypothetically’ not for what is implied or entailed by something, but for what is necessary if some benefit is to be achieved or evil to be averted. If your sister falls overboard it may be necessary hypothetically to dive in after her: not because ‘She fell’ implies ‘You dive’, but because your diving is necessary if she is not to drown or be devoured by aquatic carnivores. Aristotle’s hypothetical necessity is a moral or practical necessity.

The absence of means of indicating scope may also be responsible for the dubious argument of 47,17-49,12, see my note to 47,25. And it is very apparent in the examples of propositions of various kinds given in the appendix. Hayduck says that this appendix is not by Stephanus, because the positioning of the negative ‘not’ is often inconsistent with what is laid down in the body of the commentary (p. viii). In my notes I say that the Greek is ambiguous, and can be taken to conform with Stephanus’ canons. The ambiguity could be removed if there were a way of showing whether the scope of a negative is a proposition or a part of a proposition.

I should like to record my gratitude to Henry Blumenthal, Paolo Crivelli, Peter Lautner, and the galaxy of anonymous commentators who have vetted parts of my translation in a most helpful and constructive spirit; to Sylvia Berryman, who has been far more than a copy editor and to whom I owe many corrections and improvements; and to the patient and tactful Editor in Chief, whose Olympian overview of the whole field of ancient commentary on Aristotle and Plato is always at the service of contributors.

Notes

1. i.e. that while one is true and the other false, it is not determined (*hōrismenon*) in advance which is which. I take it that this is not a solution, but something a good solution should entitle us to say.

2. Mario Mignucci in ‘Ammonius’ sea battle’, (*Ammonius on Aristotle On Interpretation* 9 with *Boethius on Aristotle on Interpretation* 9, translated by David Blank and Norman Kretzmann, London and Ithaca NY 1998, pp. 53-86), claims that Ammonius too thinks that of ‘We shall reap’ and ‘We shall not reap’ one is indefinitely true and one indefinitely false. He has to work hard to make the notions of indefinite truth and falsehood intelligible, and I do not think Ammonius’ text forces us to attribute them to him.

Sigla In de Anima 3

Text: *Commentaria in Aristotelem Graeca*, Vol. 15, see Hayduck below.

D: Codex Parisinus Graecus 1914.

Hayduck: Michael Hayduck, *Joannis Philoponi in Aristotelis de Anima libros commentaria*, Berlin 1897.

OCT: *Aristotelis de Anima*, ed. W.D. Ross, Oxford, Clarendon Press 1956.

Philoponus, de Intellectu: *Jean Philopon, commentaire sur le de Anima d'Aristote*, traduction de Guillaume de Moerbeke, ed. G. Verbeke, Louvain 1966.

Ross: *Aristotle, de Anima*, ed. Sir David Ross, Oxford, Clarendon 1961.

Sophonias: *Sophonias in de Anima paraphrasis*, ed. M. Hayduck, CAG 23.1, Berlin 1883.

t: *Commentaria in Aristotelis de Anima*, ed. Victor Trincavellus, 1535

Themistius, *in de Anima paraphrasis*, ed. R. Heinze, CAG 5.3, Berlin 1899.

In de Interpretatione

Text: *Commentaria in Aristotelem Graeca*, Vol. 18.3, see Hayduck below.

Ackrill: J.L. Ackrill, *Aristotle's Categories and de Interpretatione*, translated with notes, Oxford 1963.

Ammonius: *Ammonius in de Interpretatione*, ed. A. Busse, CAG 4.5, Berlin 1897.

Anon: *Anonymous Commentary on Aristotle's de Interpretatione* (Codex Parisinus Graecus 2064), ed. L. Tarán, Meisenheim 1978.

Hayduck: Michael Hayduck, *Stephanus in librum de Interpretatione*, Berlin 1885.

OCT: *Aristotelis Categoriae et liber de Interpretatione*, ed. L. Minio-Paluello, Oxford 1949.

P: Codex Parisinus Graecus 2064

‘PHILOPONUS’
On Aristotle
On the Soul 3.9-13
Translation

Textual Emendations

- 573,27 Reading *hoiaper êi* with t in place of *ê haper êi*
574,9 Correcting *ê hê phutikê* to *ê hê alogos*, as Hayduck suggests
578,11 Supplying *mallon* in the text
579,16 Accepting Hayduck's suggestion that *epi men gar tôn logon ekhontôn ho nous* has dropped out
580,13 Accepting Hayduck's suggestion that *alla mên kai en tois alogois ginontai enantiai kinêseis* has dropped out
581,3 Reading *antê* for *hautê*
584,34 Taking the words *to de telos tou praktikou nou* to have dropped out
586,13 Reading *pôs ekhomen* with Dt
588,29 Inserting *kai ti kinoumenon* after *akinêton*

[Concerning Soul Book III]

[THIRD DIVISION contd]

[LECTURE 7]

432a15-17 Since the soul of animals is defined by two powers, by that which discerns, which is the function of thought and sense, and also by changing¹ with change in respect of place, [let these distinctions suffice concerning sense and intellect, but concerning that which changes let us see what it is in the soul, whether it is some one part of it] 570,1

If we remember, at the beginning of the present work [403b26-7] he said that all students of nature define the soul by these two things, that it is cognitive and that it changes [the animal] in respect of place. For it is at these things that they look. And he agrees with them in that they try to capture the substance of soul from its activities, as indeed they should – he too does that. But he disagrees with them in the first place because they miss out the vegetable soul. For that neither changes anything in respect of place nor knows anything. And because here they turn aside to false ideas. For they think that the soul is changed. For seeing evidently that the soul changes the body they supposed that it did this through being changed itself, and for this reason said that everything which changes [something else] is itself changed. They also made another mistake about that which cognises. They thought that the soul consists of all things that are, so that, consisting of the principles,² it is as if it had hostages from them, and that is how it knows them. So says Empedocles in his poem: ‘By earth we have a sight of earth.’ Having, then, condemned the physicists and for this reason added the discussion of the vegetable soul, and having spoken of the cognitive part of the soul, here he speaks also of that which changes in respect of place. He should have placed it in order before the rational soul, because everywhere he places earlier what is more universal. But because he had need of the exposition of the three kinds of soul in his teaching about that which changes in respect of place, in order to say what it is and what it is not, for that reason he mentions it [only] now. In order that he may teach that it is not the vegetable soul, not the non-rational, not intellect, whether thinking simples or composites and whether using 15 20 25 30

imagination or thinking without imagination, he first mentions these things. And the things he said earlier help also to show what it is. For he wants to show that what changes in rational beings is something
 571,1 common to non-rational and rational soul, but in non-rational, something belonging solely to the non-rational.

And when Aristotle says that that which is appetitive changes, he is giving it not as final cause but as efficient. This is clear because when he enquires what it is that changes, he says it is either intellect
 5 or appetite. Intellect is efficient, not final, nor without change is it capable of being final.³ On the contrary, when we act intellectually we desist from change. That is why Thales, when thinking about astronomy, fell into a well. So it is as efficient cause that he says appetite changes; because he joins another efficient cause to it; and also because it is not that which is appetitive that is the end, but the object of appetite.

Aristotle then enquires concerning that which changes in respect
 10 of place: does the soul change with a part or does the whole soul change? He brings in this because being a substance it is divided into powers. A power pervades the whole of a substance. For the fragrance of a fruit, which is a power of it, comes from the whole of it as a whole, and it is not the case that the fruit has fragrance here and not here, but it is throughout the whole fruit as a whole. And this is how a
 15 power differs from a part, that a power, as we said, runs through the whole substance, whereas a part is not in the whole substance but in something of it, since it is a part of it; and also in that a power is not a substance, whereas a part is a substance, since the parts of substances are substances as we learn in the *Categories*.⁴ Does the soul, then, change [the animal] with a part or with a power? And if with a
 20 part, is it with one of those usually mentioned – by ‘those usually mentioned’ he means the three parts in Plato, reason, spirit, desire – or another one over and above these? And if another, is it other than they only in conception or both in conception and in subject?

Plato is obliged to say that the soul changes with a part; for he wants it to be multipartite. And that which changes in respect of place will have to be something else over and above reason, spirit and
 25 desire. For he says that what changes in respect of place is not the same as any of these; it is other, and other not only in conception but also in subject. For he does not want the parts of the soul to be the same in subject, since he distinguishes them in place.

So he has three charges against Plato. One, that he divides the soul as a whole into parts. For it is quite impossible to divide it into parts; for in the case of incorporeal things it is the same thing to be divisible
 30 into parts and to be divided; for incorporeal things do not have to wait for a period of time or for the cut from what goes through them. So if the soul is divisible into parts it will be divided and the whole will

vanish. For it will have ceased to be even that there is a common whole when the parts have been divided in actuality from one another. But in the case of bodies it is one thing to be divisible into parts and another to be divided.

When they get here Alexander and Plutarch say that Aristotle charges Plato with dividing the soul as a whole into parts because he himself divides it as one substance into powers; for he wants the soul to be one many-powered substance. But they speak falsely. For he himself says elsewhere that it never happens that of the powers of the same substance some are destructible and others indestructible, but all alike are indestructible or destructible. He says that intellect is eternal and the non-rational [soul] destructible. So they are not one. 35 572,1

He has another⁵ charge against Plato, that he makes two souls, I mean the rational and the non-rational, into one, and divides this one into three, reason, spirit and desire; whereas Aristotle wants the three souls.⁶ But perhaps we may say on Plato's behalf that he calls these three 'parts' for this purpose, to make one animation.⁷ For the animate being is one and not three. 5

Then he has a second charge against Plato: why does he leave out a number of parts? The defence to this has been stated [565,31ff.], that he does it in the *Republic*, not in the *Timaeus*, for in the *Republic* he has need only of the three. Then he also has a third charge, that he severs these parts one from another. To the extent to which this is the case it is not easy to say what it is that changes; for it is not possible for Plato to say it is a common strand in the souls, since according to him they are separated. So that which is appetitive is torn apart. The defence to this has been stated too [566,5-7]. 10 15

That from the text. And if truth is to be told, these opinions on that which changes in respect of place, the Platonic and the Aristotelian, do not cohere well with one another. Plato wants the strongest thing that is present in us to be that which changes. In non-rational animals imagination is stronger (which is why it is called 'passive intellect', in that it has its object of cognition within it), and in rational, intellect. So for that reason, according to him, imagination changes non-rational animals and intellect rational ones. For that which leads and moves the animal ought to have the supreme power in it; that is why the stronger should be the changer. Then, when the setback arises for the Platonists that emotion overpowers reason and leads us astray into base pleasure (for it is not intellect that will do this, but emotion), they say that then too it is reason that is the changer, but it is enslaved and devises paths for emotion. But the conclusion from this for Plato is that according to them it is not the thing which is master that is the changer. For look! He says that intellect, which is mastered by something else, does the changing. How then could he say above 20 25

- 30 that what masters changes? But Aristotle believes that changing in respect of place is a peculiarity not of what is cognitive but of what is living. He wants that which is appetitive to be the changer. He says that changing belongs as its own rather to life than to cognition. And in the case of non-rational animals only the appetitive part of the non-rational soul changes, but in the case of rational animals, sometimes it is the appetitive part of the rational soul and sometimes of the non-rational. In the case of those who live in accordance with reason the appetitive part of the rational soul changes, but in the case of the majority of human beings, who live in accordance with sense, it is the appetitive part of the non-rational. So changing in respect of place is a peculiarity rather of what is living than of what is cognitive. For the peculiarity of intellect is cognising only, not changing. For intellect acts in opposition to change. People are not conscious of change, being not conscious even of being stationary, when they are engrossed in objects of intellect. That is why Socrates at the Battle of Delium⁸ stood for a night and a day without perceiving he was stationary, because he was thinking something out. And also because if intellect did change the animal it would not do so to its detriment – for we have said that Thales while thinking about astronomy fell into a well. And perhaps according to Aristotle too the Platonic ordering is right, that the stronger moves. For appetite is the strongest of all powers, so long as its object is the good.
- 573,1 That is the continuous exposition.

432a15 Since the soul is defined by two powers^{8a}

- He says ‘two powers’ either with an eye to animals, for they consist of non-rational and rational, or he says ‘two powers’ with an eye to earlier thinkers. For they mentioned only what is cognitive, for which he says ‘discerns’, and that which changes. Since, then, he says, there are two powers, and we have already spoken of the cognitive and thought and sense, let us go on also to that which changes.

432a19-20 whether it is some one part of it, which is separable either in magnitude or in account, or the whole soul

- 15 We must enquire, he says, whether that which changes is a part of the soul, and if a part, whether separable in subject and substance, which he calls ‘in magnitude’ (and do not be agitated if he calls the substance of the soul ‘magnitude’. He is speaking loosely, and says ‘magnitude’ instead of saying ‘subject’). And if it is not separable in subject and substance, is it separable in power, which he calls ‘in account’? And we must enquire, he says, whether perhaps even the whole soul is that which changes.
- 20

432a21-2 [and if a part, whether a special one] over and above those that are usually mentioned and those that have been said [or some one of these]⁹

By ‘those usually mentioned’ he means the three in Plato, reason, spirit and desire, and by ‘those that have been said’, the ones mentioned by him here, I mean intellect, thought, opinion, imagination and sense both common and special.

432a23 [There is a problem straightaway about] how one should speak of parts of the soul and how many they are 25

In these words he reproaches Plato for two things, saying that the soul has parts, and stating their number, that is, <stating it as> three instead of whatever they are.¹⁰ He says ‘indefinitely many’ in relation to three. But there are eight, including Plato’s three, if you join on also the five mentioned by Aristotle here.

432a26 [For in one way there are plainly indefinitely many, and not just the one which some people say when drawing distinctions, the reasoning, the spirited and the desiring,] and others, the rational and the non-rational 30

Some people say that there are three parts to the soul, as Plato said there are reason, spirit and desire, and some two, non-rational and rational, as does Aristotle. He says there are two souls with an eye to animals, for the other is the soul of plants. 574,1

432a26 For according to the differentiating principles by which they separate them, others appear too, [parts that are more at a distance than these, concerning which we have already now spoken, the nutritive, which belongs both to plants and to all animals]

Again he reproaches Plato. For if, he says, it is because they stand altogether apart from one another, that he calls reason, spirit and desire ‘parts’, that which nourishes should be called a ‘part’ of the soul. It stands further apart than these, and further than spirit and desire, because those both belong to the non-rational soul, whereas that which nourishes belongs to the vegetative; and the vegetative is further from the non-rational than the non-rational¹¹ is from itself. 10

432a30 and that which perceives, which one cannot set down easily either as non-rational or as having reason

That which perceives, he says, or sense, cannot easily be set down as belonging either to the non-rational alone or to the rational; it belongs to both. For because sense has its object of cognition outside and knows it at a distance by way of shape and imprint, and does not, when it thinks the Sun a foot across, give heed to reason, in this respect it belongs to the non-rational. But in that, like intellect, it sees things directly, sense seems to be brought back under reason. And it is also possible to interpret in another way, that insofar as it cognises, it belongs to the rational soul, but insofar as it cognises by being affected, it cannot belong to the rational. For the rational is not affected; being affected belongs to the non-rational.

432a31-b2 And that which imagines is other¹² in being from all, but with which of them it is the same and with which not, is a big problem [if anyone posits separated parts of the soul. And in addition to these, that which is appetitive, which seems to be different both in account and in power from all. It is absurd to tear this apart.]

He compares imagination and appetite with reason, spirit and desire, Plato's parts, and says that appetite is other than these in every way, since there is also appetite in the vegetative soul,¹³ whereas Plato's parts belong to the non-rational and the rational, so that appetite is other than these in every way.¹⁴ But that which imagines, since it belongs to the non-rational soul, is different from those three parts, the rational, spirited and desiring, in account. But with which of those three parts it is the same in subject and than which it is other, is a problem. For perhaps it is the same as spirit and desire, since these too belong to the non-rational. He says well, then, in saying that if the soul has separated parts at all, both that which imagines and that which is appetitive are parts of the soul, which appetitive [part], O Plato, either you have overlooked or, if you mention it, you tear it apart.

432b6-7 If the soul is three things, there will be appetite in each¹⁵

Note what he says, that if there are three souls, there will be appetite in respect of each of them. Therefore there is appetite in the vegetative soul too. But it should be known that Aristotle says this in the heat of polemic. For in the beginning of the assumptions in the next lecture [432b14-18], if you look, you will find that he knows nothing of appetite in plants. And Plutarch does not say either, in his commentary, that there is appetite in plants; on the contrary, he says there is none. And truth to tell, he does not mean that there

is appetite in the case of plants, but the three appetitions he refers to are, one, that of practical intellect, another, the spirited, and another, the desiring. 10

432b8-9 [And then, what our present discussion is about, what is it that changes the animal in respect of place?] For change in respect of growth and decay, [since it belongs to all, would seem to be brought about by what belongs to all, that which generates and nourishes]

Since he is speaking of change, and change is equivocal, he distinguishes the things signified equivocally and says ‘The change I am enquiring into now is not growth and decay. For these fall under [the study of] nature. Now I am enquiring into psychical¹⁶ change in respect of place, and the psychical change, not just of a part, as breathing is, but of the whole animal in moving.’ And elsewhere he plainly says there are two kinds of change in respect of place, that which occurs in moving and that which occurs in changing, meaning by ‘in changing’ that of a part, like breathing. But he is not talking of that now. For he has already enquired elsewhere about breathing;¹⁷ and he raises the problem whether it is physical or psychical. It seems to be physical in that it is not subservient to choice, but psychical in that it occurs through muscles and it is in my power to intensify it. So the discussion is not about that, but about the change in place involved in movement. 15 20

432b11 And concerning breathing in and out, and sleep and waking [we must investigate later] 25

The discussion being about change in respect of place, he mentions sleep and waking either because breathing occurs in sleep more than in waking (and he mentions breathing because it is a particular kind of change), or because sleep and waking are particular changes of place in the eyelid. He says, then, that we are not speaking of these either. For they are particular changes, and we are enquiring in change involved in movement generally. And also there is a book written by him *On Sleep and Waking* in which he speaks of these things.

That, with God’s help, completes the lecture.

[LECTURE 8]

432b14-16 That it is not the nutritive power, is clear. For this change is always for the sake of something, and is either with imagination or with appetite¹⁸ 576,1

The present continuous exposition shows what that which changes with respect to place is not, and what it is. He first shows what it is not. He says it is not the nutritive power nor sense nor intellect, and of intellect not contemplative intellect which uses no instrument, not contemplative intellect which does use an instrument, not practical intellect, not appetite: these things are not that which changes in respect of place.

That it is not the nutritive power he shows through four proofs, of which the first is this. The nutritive has one end, which is nourishing, whereas change has as ends both emotion and reason. When we are moved to what is good, reason is the end, but when to sexual gratification, emotion is the end. So the nutritive power is not what changes in respect of place. This is shown by two proofs.¹⁹ If what is changed must first imagine and reach out perceivingly,²⁰ and only then be changed by appetite, and these things are not in the nutritive soul (for there is neither imagination nor perceiving appetite; for to be changed there is need of perceiving appetite), it follows that that which nourishes is not that which changes in respect of place. Third proof. If that which nourishes changes, plants too must be changed, since they will have the power that changes in respect of place. But plants are never changed in respect of place. It follows that the vegetative soul is not that which changes in respect of place. Fourth proof. If that which nourishes changes, plants should have organs for movement, in order that they may be changed. But they do not have organs for movement; on the contrary, they are actually rooted. It follows that that which nourishes does not change.

So much from the text. But we ought to supply another additional proof. If when the nutritive [soul] is more active, I mean at night, we are not changed in accordance with purposive impulse,²¹ it is not the nutritive [soul] that changes. For even if we undergo change at night, it is not the change in accordance with purposive impulse and the Philosopher is talking about change in accordance with purposive impulse.

But perhaps someone will say that it is the vegetative soul that changes in respect of place, but plants are not changed, though they have the power to change, because they do not have organs suitable for change. To this difficulty we reply, in the first place, that it will result that in the whole species there is a power to no purpose. For if there is in all plants the power to change, but they do not change because of the unsuitability of the organs, then it will be to no purpose in all the species of plants. But that is absurd, to say that anything arises through nature to no purpose. And secondly, if plants have the power to change, but are not changed because of the lack of organs, why has nature not prepared organs for them? For it neither leaves out anything necessary nor creates superfluities. It has become clear,

then, on every side that that which nourishes is not the cause of change in respect of place.

But neither is it sense that changes in respect of place. And sense being part of the non-rational soul, he goes back to what is more general and shows that the non-rational soul is not at all the cause of change. If the non-rational soul were the cause of change in respect of place, all things that have the non-rational soul should be changed. But zoophytes have the non-rational soul and are not changed. It follows that change in respect of place does not belong to the non-rational soul. Neither is it possible here to hold the unsuitability of organs responsible. For of things that have non-rational soul, those lack their share of suitable organs that are incomplete or deformed, for instance babies are incomplete, since they do not have teeth, and those with four fingers are deformed. But zoophytes are not incomplete (for they have growing up, maturity and decline, and babies have none of these things; and again, zoophytes generate things like themselves, whereas babies do not generate while they are babies, because they are incomplete); neither are zoophytes deformed. If they were, the whole species of zoophytes would be deformed. If, therefore, they are neither deformed nor incomplete (for things which do not have something because they are incomplete acquire it later, as children do teeth, but zoophytes do not acquire organs for change either when they are growing or when they are mature), it is clear that they do not have the power to walk at all. If they had it, they would also have suitable organs. For those things have the power but not the organs, which are incomplete or deformed. So if zoophytes have non-rational soul but are not changed in respect of place, it follows that change in respect of place does not belong to the non-rational soul.

That is what we say; the text indicates the incomplete and the deformed with a single example. For it says that zoophytes are not incomplete or deformed since they grow and have maturity and decay and generate things like them. In speaking of generation he intimates that they are not deformed, for eunuchs are deformed and do not produce offspring; and in speaking of growth and maturity and decay he intimates that they are not incomplete. For they would acquire what is missing with time, and we see that they acquire nothing. So he has shown that the non-rational soul is not the cause of change in respect of place.

But neither is sense responsible for change in respect of place. For it would be necessary, when we undergo change of place, that sense should be active. But we also undergo change with our eyes shut, and when we do not hear or smell or taste or feel. It follows that sense is not what changes in respect of place, because we undergo change of place even without sense's being active and because often when we

perceive we break off the change and perceive more in a state of immobility.

578,1 This having been said, the text moves to intellect without enquiring about imagination whether or not it changes. And it is reasonable not to mention it, since there is nothing peculiar to it, but what it has, it has from sense. But we shall show that it is not imagination either
 5 that changes. If it changed, then in sleep when we imagine we should undergo change in accordance with purposive impulse. But we do not. So it is not imagination that changes. This comes from outside [Aristotle's writings].

Next we shall show that intellect is not what changes. It should be known that there are three kinds of intellect, contemplative intellect which does not use an instrument, contemplative intellect that does use an instrument, and practical intellect. Contemplative intellect
 10 that uses a tool cannot change, since it is not occupied with things to be done. For change is something to be done. And also because staying still fits this sort of intellect [more²²] than change. For when we are thinking something out we come to rest. But neither is practical intellect that which changes in respect of place. For even if this has choice, through which change in respect of place occurs, still, it does not change [us]. That is clear from this. We see that even when
 15 practical intellect bids us not to change when an enemy is advancing upon us, the heart is changed; it beats fast with fear. And also in the case of people deficient in self-control when emotion bids them change, even if intellect bids them control themselves, emotion sometimes masters them, and the loins are moved towards sexual gratification. So in the case of those deficient in self-control the change is
 20 actually contrary to intellect. Therefore it is not intellect that changes. And also because practical intellect acts first, and only then are we changed. If practical intellect does not counsel first: 'I shall go down to the harbour and speak to the helmsman and load on my luggage' (and all this occurs when I am stationary²³ – if, then, practical intellect acts first, and after it has ceased, then change in
 25 respect of place occurs, it clearly follows that practical intellect is not what changes us in respect of place either.

But neither is contemplative intellect which does not use an instrument, since this does not have choice, and what changes in respect of place must choose. For if we do not choose there is no change in us, just as often doctors too, when they do not choose to, do not heal someone because it is advantageous that he should remain sick,
 30 either to put a stop to a tyranny or for the sake of philosophy, as they left Theages in sickness because of philosophy²⁴ – whence the dialogue the *Theages*. So it is not this either that changes.

It is possible to show by another argument that this intellect does not change: it is not able to pursue or avoid. For all change is pursuit

of something or avoidance. So it has been shown that none of the things signified by 'intellect' is that which changes in respect of place. And this can also be established from outside [Aristotle's writings] by a nobler proof. If anything whatever signified by 'intellect' were responsible for change in respect of place, then those things should not be changed which do not have any sort of intellect whatever. But non-rational animals which do not have intellect at all are changed in respect of place. It follows that neither contemplative intellect nor practical intellect is responsible for change in respect of place. 35

And altogether neither the rational nor the non-rational soul is what changes. The rational does not change because when we are mastered by licentious emotion we are changed in respect of place, and the emotions are changed by the non-rational. But on the other hand the non-rational is not what changes, since reason sometimes changes us in respect of place, for instance sending us to teachers or to prayer, and because in the case of people with self-control, the non-rational soul is shown clearly not to be changing. For often when it bids them to be moved to sexual gratification they are not moved and do not yield to its bidding. But that which changes ought definitely to be heeded. So we have learnt what the things are that do not change. 579,1 5

It follows next to say what does change in respect of place. That which changes in respect of place is practical intellect and non-rational appetite. This is shown by the fact that in the case of people deficient in self-control, appetite changes, and in the case of the self-controlled, intellect. But since when any two things do some one thing, they must do it by virtue of something common, just as bipeds and quadrupeds are changed by virtue of something common, being footed, so, therefore, intellect and appetite ought to change by virtue of something common. But what is there intermediate between life and cognition?²⁵ To this we reply that these two, intellect and appetite, have that which is appetitive as the common thing in virtue of which they change. [In the case of things that have reason, intellect²⁶] changes as that which is appetitive, which Aristotle also calls 'that which deliberates' [433b3], and in the case of non-rational beings the appetitive part of the non-rational soul. And he is right to credit change to that common thing which is appetitive and not, as is done in the *Timaeus*,²⁷ to intellect, since intellect changes only rightly whereas appetite changes rightly and also deviantly, and it befits change to be right and deviant. That is why supreme power over change in respect of place is to be given to the common thing that is appetitive. 10 15 20

But people raise the difficulty that it is not possible for that which is appetitive to change in respect of place, if we go by what has been said. For if what changes in respect of place is one, and appetitions

are two and not one, it follows that it is not that which is appetitive that changes. A syllogism can be constructed in the second figure like this: that which changes in respect of place is one; that which is appetitive is not one; therefore that which changes in respect of place is not what is appetitive. To this we reply that that which is appetitive is both one and not one, one in genus but two in species. So it changes as one in genus. But how is that which is appetitive one in genus and two in species? Because the appetite of the non-rational [soul] is one thing and that of the rational another. The non-rational [soul] is different in species from the rational, so non-rational appetite is also different in species from the appetite of the rational. So appetite is one in genus but different in species. That appetite must be different in species is clear not only from the dissimilarity of the souls but also from the following. The non-rational soul enjoins the appetite of emotion whereas the rational enjoins the appetite of virtue. And since virtue is contrary to emotion, it will result that there is a single activity of contraries, which is absurd.²⁸ There is completely contrary appetite when reason runs counter to spirit, to speak of human beings; since contrary appetites also occur in the non-rational soul, for example desire contrary to spirit. So there occur contrary appetites when reason runs counter to desire.

Having said this, he states a certain temerarious and hazardous syllogism in the first figure. This is the syllogism. Where there are contrary changes there is consciousness of time, and where consciousness of time, reason and desire. There are two hazardous things in this syllogism. One is that since he says that where there is consciousness of time there must be reason and desire, from this it may be concluded that only human beings have consciousness of time. Against this, we see that non-rational beings too are conscious of time. That is shown by the crane's flying off in winter to Thrace, and the ant's storing up in advance a treasury of nourishment for the winter. And the syllogism contains another absurdity. He says that where there are contrary changes there are reason and desire, reason choosing the future good in place of the present pleasure, and desire looking to the present or to the apparent good. So it may be concluded that according to him, only in human beings are there contrary changes. [But in non-rational animals too there are contrary changes,²⁹] as we have said, from spirit contrary to desire.

Having raised these problems he resolves both, the first through three solutions. One is that non-rational beings do not have consciousness of time. For they do not lay hold of it by sense, for time is incorporeal and better than body, and is not contemplated by sense. And what non-rational beings do not know by sense they do not know by imagination either. So non-rational beings do not have consciousness of time because it does not fall under sense. That is the first

solution. But so far as that goes, neither do we have consciousness of 20
time. For we do not see it either, and that being so, neither do we
imagine it. We should state, then, the second solution, that non-
rational beings lay hold not of time but things in time such as cold,
heat and the like. So Aristotle speaks truly in saying that non-rational
beings are not conscious of time; they lay hold of things in time and 25
not of time. It is because we have rational soul itself that we have
consciousness of time itself, reckoning off both hours and days. That
is the second solution. The third solution is that by 'time' Aristotle
means determinate time, not indeterminate. In this way, at least, he
says in the *de Interpretatione* 'some simply, some in time',³⁰ meaning
by 'simply' indeterminate time, and by 'in time' determinate time. 30
Non-rational beings, then, even if they have consciousness of time,
do not have consciousness of determinate time, but are conscious only
of winter, say, or summer. Human beings have consciousness of
determinate time because they reckon off days and hours. Reckoning
is proper only to the rational soul. On this account, then, he says that 35
only man has consciousness of determinate time, for non-rational
beings too have consciousness of indeterminate. That is how he
resolves the first point.

He resolves the second by saying that where there are contrary 581,1
changes there are also reason and desire, if you add 'changes that
come to be contrary relating to present and future time'. For only man
undergoes contrary changes relating to the present and the future;
non-rational beings [undergo them] only with regard to present time.
The sick man because of his present fever desires cold, his appetite 5
bidding him do this.³¹ But reason because of the future evil [that will
result from doing it] fights back against appetite. Non-rational
animals undergo [only] contrary changes that are not because of
taking thought in advance for the future.

[But someone might say: You speak falsely, O Aristotle.³²] Let us
suppose that a lion attacking a flock is wounded, and then later wants
to attack another flock but fearing the wound it received before it does
not attack lest it should suffer the same thing again. You see that it 10
considers about the future so as not to suffer. So non-rational animals
too occupy themselves with the future. Against this the interpreters
offer the defence that considering about the future on the basis of the
past belongs to reason alone. The lion, at least, does not take thought
in advance for the future on the basis of the past; it is changed in
accordance with imagination, since having a trace left behind of the
[former] wound, it is restrained from attacking the flock for fear of a 15
present wound.³³ So it is active only about what is present. There is
in it no discrimination of time any more than of number. The lion does
not know what 2 is or 3, but only multitude and fewness, as is shown
by its attacking a few but fearing a multitude. So much on that.

- 20 After this Aristotle says that of things which change the body in respect of place, some only change, while others both change and are changed. The object of appetite changes appetite while itself being completely unchanged. Appetition is changed by the object of appetite, and changes the body with a change in respect of place. That is what Aristotle says. Plato, however, does not say that appetite changes; he says that what takes the lead in each thing changes it in respect of place, in man the rational soul, in non-rational beings the non-rational; for it is these that take the lead in each.³⁴ For in human beings when they are at the mercy of their emotions it is not the non-rational soul that moves them to pleasure, but then too it is the rational soul that changes the human being in respect of change of place, though foolishly and as though bewitched and deceived by desire.³⁵ But it should be known that Plato does not disagree with Aristotle. For Plato is stating the efficient cause and Aristotle the final when he speaks of appetite. But appetite itself^{35a} is not genuinely the final cause of change in respect of place; the object of appetite is that. For that is why we move, to attain the object of appetite. So say that Plato and Aristotle both state the efficient causes of change in respect of place, but Plato states the remoter, saying that it is the rational soul, and Aristotle the proximate, saying it is appetite. For indeed the rational soul changes the body with change of place through appetite as an intermediary.

That, with God's help, completes the continuous exposition.

- 582,1 **432b14-16** That it is not the nutritive power, is clear. For this change is always for the sake of something, and is either with imagination or with appetite³⁶

- In the words 'the change is for the sake of something' he hints at the first proof, that the nutritive power has one end and change several. But the text seems to be open to a difficulty. It says that change in respect of place is for the sake of something, and for that reason the vegetative [soul] is not responsible for change. What is this? Does not the vegetative soul change for the sake of something in growth? Perhaps we may say that it is not necessary to break off our reading at 'for the sake of something', but we should join on the words that come next, so that what is said goes like this: 'The vegetative [soul] is not what changes in respect of place, since change in respect of place which occurs for the sake of something occurs with imagination or appetite, and the vegetative [soul], even if it is for the sake of something, is without imagination.'

In the words 'either with imagination or with appetite' he gives the second proof, that what is changed must also reach out, so as to avoid or pursue, and imagine. For change in respect of place must be

either with imagination or with appetite. As many animals as have imagination also have appetite, and those that do not have imagination have appetite alone. In the case of those with imagination it is changed along with appetite; in the case of those without, just appetite suffices. 15

432b16-17 For nothing that does not reach out³⁷ is changed except by violence³⁸

He says this because of those that do not want to be changed, and are changed against their will, like those dragged by someone to court.

432b17-18 Again, plants would be things that change 20

The third proof against those who say that the vegetative [soul] is what changes the animal in respect of place. It is as if he said that if the nutritive [soul] were that which naturally changes, nature would not have deprived plants of organs for change. As nature does nothing to no purpose, so it omits nothing that is appropriate.

432b18-19 and would have an organic part for this change 25

This is the fourth proof, taken from organs. And see how, though the text looks like a single continuum, we have cut it into four proofs.

432b19 Similarly neither is that which perceives 30

Here he shows that neither is sense that which changes, as was said in the continuous exposition. But since the text takes a long time to reach its main clause,³⁹ let us state what comes next as follows. If that which perceives were what changes, since nature neither does things to no purpose nor overlooks or leaves out anything that is necessary, those animals which are in fact immobile would have organic parts for movement, since they are complete and not deformed. It is a sign of their not being deformed that they generate and have maturity and decay. 583,1

432b26 But neither is that which thinks⁴⁰ and what is called 'the intellect' [the changer. For the contemplative [sc. intellect] contemplates nothing that can be done, neither does it say anything about what is to be avoided or pursued, and change [sc. of the kind we are discussing] is always something belonging to what avoids or pursues]

Here he shows that neither is intellect what changes. What Aristotle 5

says, is stated in the continuous exposition. And we supplied an additional proof from outside his works, from history, that often a person stirring up speculative thoughts in himself not only wanders astray from the intended way but is even carried over precipices, as indeed Thales fell into a well. From this it is clear that intellect is not what changes in respect of place.

432b29-30 Neither, even when it does contemplate something of this sort, does it immediately give the order to avoid or pursue

In these words he refers to practical intellect. He says that even when intellect knows something 'of this sort', that is, something to be done, even then it is unable to change because of counteraction by emotion.

433a1 [For instance it often thinks something frightening or pleasant, but does not give the order to be frightened, but the heart is changed,] and or if it is something pleasant, some other part⁴¹

If, he says, something pleasant occupies our thought, another part is changed, the liver.⁴² For when emotion changes [us] that part is changed, even against the bidding of intellect. But observe that he has not made a good use of examples. The discussion is supposed to be about the change of the whole body which is called the change 'in accordance with purposive impulse', but he brings examples of change of parts.

433a1-3 Again, even when intellect does give an order and thought says to avoid or pursue something, there is no change, [but one acts in accordance with desire, like the person deficient in self control]

The last proof that what changes in respect of place is not changed by reason. Even if the rational soul gives an order the body is not changed because it is held back by emotion, as happens with people deficient in self-control. For though intellect tells the man not to be moved towards a prostitute, he is moved.

433a9 Plainly these two change, [either appetite or intellect, if one sets down appetite as a kind of thinking]

Here he wants to say what is responsible for change in respect of place. For hitherto he has been saying what is not responsible. So he says that the causes of change in respect of place are two, intellect and appetite, 'if one sets down imagination as a kind of thinking' [a9-10], since above he has often yoked imagination together with

intellect. For he divides the cognitive powers of the soul according to two things only, acting with the body, which belongs to sense, and acting without body, which he calls 'thinking' in the broader sense. Now he says that if one sets down imagination as a kind of thinking, that is, with intellect, it is these two alone that change, appetite and intellect. If, however, imagination is taken as something apart from intellect it will be found that there are three things that change, intellect, imagination and appetite. 584,1

That is what Plutarch says; and he also says that the name 'appetition' is applied to spirit and desire. But why at all does Aristotle say that imagination is joined on to intellect? Is it because he thinks that non-imaginative thinking is rare, which he intimates when he says 'many [animals⁴³] follow imaginings contrary to their knowledge' [a10-11]? For in many cases we follow imagination, that is, emotions, contrary to what seems good to intellect, and imagination often usurps what belongs properly to intellect. For it belongs properly to intellect that we follow it. Since then we often in fact follow imaginings, abandoning intellect, for this reason he calls them 'intellect'. Or [he does this] because in non-rational beings imagination takes the place of intellect as what changes, as he intimates in saying 'and in other animals there is no thinking or reasoning but [only] imagination' [a11-12]. It is also possible to say that since imagination is also passive intellect in that like intellect it has that about which it is active within, for that reason he calls it 'intellect'. This argument, however, is not in the text. 10 15

433a14 [Both these things, then, change in respect of place, intellect and appetite,] but intellect that reasons for the sake of something and is practical 20

The text seems to say that practical intellect acts for the sake of something. It is worthwhile to raise a problem about that. What? Is not contemplative intellect for the sake of something? (Since he called practical intellect 'for the sake of something' as something peculiar to it.) But in fact, contemplative intellect is for the sake of something better than is practical. To this we reply that contemplative intellect too *is* for the sake of something; but practical intellect has that for the sake of which it is, its end, external to it, for instance becoming rich, sailing or the like, whereas contemplative intellect has its end within. It does everything in order to obtain cognition, which is the right action that belongs properly to soul. And since what is within is not plain, for this reason the common sort of people say that those who contemplate are idle. And the Philosopher is following them in defining as end only what is external. That is why he also applies to it⁴⁴ the phrase 'for the sake of something'. 25 30

433a14-15 It differs from contemplative intellect in end

Here he wants to say that every intellect is the same in subject as every other, but they differ in account. The end of contemplative intellect is the starting point of practical intellect, [and the end of practical intellect is⁴⁵] the starting point of appetite. From this two things can be concluded. First, he is not talking about the Intellect from outside when he says ‘contemplative’. For look! He says that this is the same in subject as practical intellect. The Intellect from outside is not the same as practical intellect. And a second thing we can conclude from this is that practical intellect is immortal, since it is the same as contemplative intellect which is agreed to be immortal.

433a15-17 [And appetite is all for the sake of something.] For that of which there is appetite is the starting point of practical intellect; and the last thing is the starting point of action

Take ‘of which’⁴⁶ in place of ‘of which, whatever it is’, and read it with a rough breathing. He is saying that of whatever thing there is appetite, that is the starting point of practical intellect, and the end of intellect is the starting point of action. What is said will be clarified by an example. In summer one very much wants a covering so as not to be burnt by the sun. That wanting is for the sake of something, not to be burnt. That covering comes to be the starting point of practical intellect. It begins to conceive a roof for the sake of shade, and then conceives walls holding it up. And beginning to make this, it starts from the foundations. And we see that the end of practical intellect, which is the foundations, comes to be the starting point of action.

433a18 [So it is reasonable that these two appear as things that change,] appetite and practical thought⁴⁷

See that he calls practical intellect ‘practical thought’. Again he is taking intellect or thought together with imagination.

433a21 [For the object of appetite changes, and on account of this thought changes, because the object of appetite is its starting point. And when imagination changes, it does not change without appetite.] That, then, which changes in respect of the object of appetite is some one thing.⁴⁸ [For if two things, intellect and appetite, did the changing, they would change by virtue of a common form. But as it is, intellect clearly does not change without appetite (for rational wish is appetite, and when one is changed in accordance with reasoning one

is changed also in accordance with rational wish); but appetite changes even contrary to reasoning, for desire is a kind of appetite. All intellect is correct. But appetite and imagination are both correct and incorrect. Hence it is always the object of appetite that changes, but this is either the good or the apparent good]

What he wants to say is something like this. If there were two things other than one another, intellect and appetite, and both changed [us], there would be some other power common to both which, being common to both, changes the animal, as being footed is common to biped and quadruped. But in fact both do not change. For intellect is not without appetite when it changes, for rational wish is appetite and whenever a thing is changed in accordance with reasoning it is changed in accordance with rational wish, whereas appetite also changes contrary to reasoning; for we are changed by desire, and desire is appetite. 20

And that appetite is not the same as intellect is clear from this. What is truly intellect is always right and never runs into falsity, whereas appetite, even if it occurs with imagination and we call it [sc. imagination] 'intellect', is both right and not right. For the object of appetite is what must change appetite. But this is either what is truly good, setting in motion the appetite that is in intellect, or an apparent good setting in motion non-rational appetite. By 'apparent' [a28] understand that which could be otherwise.⁴⁹ 25 30

And if these things are so it is clear that what changes is appetite, that of the rational and that of the non-rational soul. For, says Aristotle, that it is not the case that the two powers change [independently], is clear. For intellect always changes along with appetite, but appetite also changes separately from intellect, when we follow non-rational desires. Therefore one power changes, not two, since [if there were two] they would change by virtue of a common genus, which he himself calls 'species' [a22]. 586,1

433a29 Not every [sc. good], however, but the good that can be done^{49a}

He does well to say 'not every good'. For the primary good, the divine, is not under our control. He then says 'and what can be done is capable also of being otherwise' and he does right to say that. For what is good for one is bad for another, which is why he calls it 'capable of being [otherwise]'. These things, I mean good and bad, follow upon practical intellect, whereas true and false follow not upon practical but on contemplative. 5 10

433a31 But for those who divide the parts of the soul [if they divide according to powers and separate them, a great many parts arise]

- 15 Here he hints at Plato and says that according to him it is not possible to say that what changes is one, since he partitions souls, and how can we find⁵⁰ anything common according to him? And he goes wrong not only in this but in leaving many things out, and in saying all he does not mention change in respect of place – either because it comes back under appetite and is included, or because it falls outside the scope of the discussion.

433b5 And since there occur appetitions contrary to one another, [and this happens whenever reason and desires are contrary, and comes about in those that have sense of time (for intellect on account of the future gives the order to resist, but desire [sc. gives its order] because of what is now; for what is now pleasant appears pleasant without qualification and good without qualification]

- 20 Here he states the temerarious syllogism. And he uses a bad order. For he states the conclusion before the premisses. The syllogism is this: where there are contrary appetitions there is consciousness of time, and consciousness of time is in things which have reason and desire.⁵¹ Then he states the first premiss, that there is consciousness of time where there are contrary changes, but does not mention the second premiss.

433b10 because we do not see what is future)⁵²

- 25 Desire, he says, does not see future things, since it is an Aristotelian doctrine that the non-rational soul is not occupied with the future, and desire belongs to the non-rational soul.

433b10-11 that which changes would be one in species, that which is appetitive [as appetitive ...]

- 30 [He is saying] that appetite is many in number but one in species. Again he says 'species' in place of 'genus'. For properly speaking they are one in genus and many in species. For both the souls and the appetitions that can be seen in them are different in species. But he has demonstrated that this appetite which is one in genus is what changes animals in respect of place, whether it does so with reasoning or with spirit or with desire. For just as nothing prevents the perceiv-
- 587,1

ing source from being one, though the senses are five, so nothing prevents the appetitive power from being one, though the activities are three by which appetite is shared out into intellect, desire and spirit. 5

433b11 but first of all the object of appetite

Then he lays it down that not only does that which is appetitive change, but also the object of appetite, such as food. There is the difference, however, that that which is appetitive is itself changed when it changes, whereas the object of appetite is not changed and changes as an end. For an end changes without being changed, just as God, who is an end, changes without being changed. You have here the last point, that of causes which change in respect of place, some only change without being changed and some both change and are changed, such as appetite. 10

433b12-13 But in number there is a plurality of things that change 15

Since he has said that what changes is one in genus, for this reason he says that they are many in number. For the things that change are imagination, intellect, appetite, the object of appetite: so they are many.

That, with God's help, completes the lecture.

[LECTURE 9]

433b13-14 But since there are three things, one that which changes, a second, that with which it changes, and a third,⁵³ the thing changed, etc. [and that which changes is twofold, that which is without change and that which changes and is changed] 20

Here, having said what that which changes is not, and what it is, he collects together all the things that contribute to change and says that they are three, that which changes, the object of appetite, and the changed body, and that with which it changes, that is, the instrumental. He calls 'instrumental' the pneuma moving from the heart through the sinews.⁵⁴ For Aristotle thinks that the ruling part⁵⁵ is in the heart. And he calls this instrumental thing both 'that by which it is changed', because it is by the pneuma itself that the body is changed, and also he sometimes calls it 'that with which it changes', that is, with the pneuma the soul changes the body. These are the things that contribute to change. And he starts his teaching with the instrumental in order to preserve the continuity of the discussion,⁵⁶ 25

30 and likens it to a beginning and an end, to a joint, to change in
 accordance with nature, to change contrary to nature [both of] which
 he brings under pushing and pulling; and he also likens it to a circle.
 588,1 And we can state the reason why he does this in every case.

He likens it to a beginning and an end because the pneuma is both
 the end of the irradiations of soul and the beginning of the bodily
 subsistences; or because the pneuma both begins together with the
 5 change and ends together with it. For if the efficient [cause] begins
 and ends together with the change, all the more does the instrumental
 march with it. It is also possible to say that he is calling it not
 'beginning and end' but [cf. 433b22] 'where there is beginning and
 end'; that is, the pneuma is in the heart, which, being intermediate,⁵⁷
 is beginning and end. For what is intermediate is the limit of what
 has gone before and the beginning of what comes after, by the law of
 10 intermediates. So where the pneuma is, there are beginning and end.

It should be known that doctors say that the sinews are the organs
 of change, but philosophers say that innate heat is the organ of
 appetite. And this pneuma, this heat, is in every part of the body,
 since in change of place the whole of our body is changed as a whole;
 15 so it is in every part of the body since it has to change every part of
 the body. For even if he says it is in the heart, still it is in all the body,
 but as provided initially from the heart.

He also compares this pneuma to a joint. A joint is an arrangement
 together of two bones, the convex sticking into the concave. And
 20 these⁵⁸ are different in account (for the convex is in one body and the
 concave in another) but the same in subject. For they fit into one
 another, and the change which takes place is not of the two but of the
 convex only; the change of the convex occurs round the concave which
 stays still and is unchanged. The articulation of our arms at the elbow
 is like that. Since, then, the pneuma is both endowed with life and
 25 simply pneuma, and these are different in account and in how they
 are related but the same in subject (for the life is in the pneuma, and
 this is changed as pneuma, not as pneuma endowed with life; for
 Aristotle says that the soul is not changed), for this reason he likens
 it to a joint, since just as in a joint there is something that changes
 and is unchanged <and something changed>,⁵⁹ and these are different
 30 in account and in how they are related but the same in subject, so too
 in the pneuma there is something unchanged, that which is endowed
 with life, and something changed, the pneuma, and they are different
 in account but not in subject.

He likens it also to natural change. For as in natural change, there
 is something that stays still and something that is changed. For we
 human beings are not changed in respect of all of ourselves, since the
 35 change involved in walking is composed of pushing and pulling. For
 one of our feet pushes the ground. Indeed, if we find ourselves in a

muddy place our foot, since the ground does not resist the push, sinks deep into the mud. But with the other foot we pull the body. And the pneuma which is in the stationary foot stays still while that which is in the foot that is being changed is changed. The foot that is pulling is changed. For one foot must push and the other pull, and it is the latter that makes the change. And it may be said that even in a single foot there is pushing and pulling, if you take as pulling the gathering of the foot to us, and as pushing the extending of the foot away from us. For pulling is the change that occurs towards us and pushing that which occurs away from us. Since, then, in natural change there is something that remains still and something else that is changed, and the same also in the pneuma, for this reason he likens it in this way. And see how here he brings natural movement under pushing and pulling, like change which is contrary to nature, whereas in *Physics* 6 he brings under pushing and pulling only change that is contrary to nature.⁶⁰

And he also likens it to change that is contrary to nature, since this too has something remaining still and changed and comes about by pushing and pulling. For what is changed by violence is either pushed from us or pulled towards us. And if anyone says that rotation does not occur by pulling and pushing he speaks falsely. In this also, there being two semicircles, the first pulls the one behind, and the one behind pushes the one in front. Concerning movement in a vehicle one might say that it [what is carried] is changed incidentally, because the vehicle is changed. It is not pulled or pushed; but since the vehicle is changed in itself, it is either pulled like a waggon or pushed like a ship by the winds. In change which is contrary to nature too, then, there is something that remains still, what pushes, and something that is changed, what pulls, and for that reason he likens it to the organ.

And he also likens the pneuma to a circle, because in a circle the change takes place with the centre remaining still,⁶¹ just as the pneuma is changed around the life⁶² that remains still. And this model is more apt [than the others]. For in every part of the circle there is a point which both as first is able to pull and as later is able to push; for to each point it belongs to be both first and later. Since, then, the pneuma is in every part of itself and endowed with life,⁶³ it is rightly likened to a circle.

Having said this about that by which it changes he proceeds also to that which is changed, and says that the things changed are animals and zoophytes. And he raises a difficulty about zoophytes: how can they be changed if what is changed ought certainly to have appetite, and where there is appetite there is also imagination, since as appetite relates to what is absent, so too imagination occupies itself with what is absent? And if anyone says: 'How can

appetition be occupied with what is absent if we have appetite for present health?' we reply that we have appetite for health for the sake of future enjoyment. So what is the conclusion of the argument?

35 That if zoophytes are changed they also have imagination.

Resolving this he says that they have the imagination that is ranged along with sense. This leads to a division of imagination. Imagination, he says, comprises on the one hand deliberative imagination, on the other, that which is ranged along with sense. The deliberative belongs only to human beings. That which is ranged along with sense is either confused or unconfused. The unconfused is
 590,1 either open to teaching or unteachable. Confused imagination is like that of grubs: their change [in respect of place] is wandering. Unconfused and open to teaching is like that of dogs and parrots; unteachable like that of ants and the spider. Zoophytes, then, have that which
 5 is ranged along with sense and is unconfused⁶⁴ and unteachable: the imagination, that is, which goes with the sense of touch.

Having said this about the thing changed, he proceeds also to that which changes and says this is threefold. First, the object of appetite changes appetite without itself being changed as a final cause, as also does the divine. Appetite too changes contrary appetite; and that which masters and obtains control changes the body. So there
 10 are three sorts of changer. Appetite is like a sign in a sphere; this sign, when it is in the hemisphere above the earth, prevails and is in mid-sky and holds the mastery, but when it comes to be in the hemisphere below the earth it is mastered.

And since, when contrary appetitions are fighting it out, we are changed through syllogising, and when we syllogise about whether
 15 we should go to a prostitute or run to a teacher, either emotion or reason gains the mastery, and what gains the mastery changes, for this reason he enquires which premiss of the syllogism changes, and says that each does, both the major and the minor, but more the minor than the major. For the minor being the inferior, the conclusion follows it; for the conclusion is always [of the same form as] the inferior. From a universal premiss and a particular, a particular
 20 conclusion follows, and from an affirmative and a negative, a negative. Since the change, then, occurs according to the conclusion, and this follows the minor, on this account the minor changes more. For example we have a syllogism like this. So-and-so is a philosopher – that is the minor. Every philosopher is to be honoured – that is the major. It follows that So-and-so is to be honoured. What premiss is it
 25 that changes appetite in the direction of honouring the philosopher? Clearly both. For it is not the minor alone: the honour would not be paid if we did not know the major, that every philosopher is to be honoured. But neither would we reach out at all to honour this man if we did not know the minor, that he is a philosopher. For how could

we honour him, no matter how much we know that every philosopher is to be honoured? So both change, but the major premiss changes without being changed (for it is unchanged because it is universal, since what is universal does not change);⁶⁵ whereas the minor changes, itself being changed. For the minor can change its subject, so that it can say that Socrates is a philosopher or, in place of Socrates, Plato or Themistius. And see: the minor is changed and thereby changes. But the major changes from further off, the minor from near at hand. For the minor is particular, and since change belongs to things that are particular, not to things that are universal, because of that the minor changes proximately. 30 35

That is the continuous exposition.

433b13-14 But since there are three things, one that changes, a second, that with which it changes, and also a third, the thing changed⁶⁶

Alexander says that there is no main clause for the connective 'since'.⁶⁷ But Plutarch thinks we should understand the sentence in the following way. 'Since,' he says, 'there are three things, one, that which changes, a second, that with which it changes, and a third, the thing changed, and since that which changes is twofold, either something which is unchanged' (the object of appetition, which he also calls 'the good to be done'), 'or something which is changed' (that which is appetitive), – then supply 'it follows that there are four things that contribute to change,' that is, since there are three, and one is divided into two, it follows that there are four. That is Plutarch's defence of the 'since'. 591,1 5

433b15-17 and that which is unchanged is the good to be done, while that which changes and is changed is that which is appetitive⁶⁸

We have said that it is the object of appetition he calls 'good to be done'. He adds the words 'to be done' to separate it from the good which subsists by itself. And what he calls 'that which is appetitive' is appetition which changes and is changed. 10

433b17 for that which changes⁶⁹ is changed insofar as it reaches out, [for appetition is either change or activity,⁷⁰ and the thing changed is the animal; and the organ with which appetition-changes, this is already bodily]⁷¹

He says that that which is appetitive is changed when it changes, and that is clear. What changes is changed insofar as it reaches out, since

15 appetite⁷² is a kind of change. Then, since he said that appetite is a change, but he wants the soul to reach out, indeed, yet not to be changed, for this reason he corrects what he has said and says that 'for appetite is either change or activity' [433b17-18]. And we should agree that it is activity, because the soul is not changed, and because change is incomplete activity, whereas appetite is complete. That is why, having said it is change, he does not stand by that.

20 **433b19-21** which is why they are also to be contemplated⁷³ in the works⁷⁴ common to body and soul

We are to investigate the things which contribute to change, he says, in the works common to body and soul, that is, in the *Historia Animalium*.⁷⁵ For the animal is the common product of body and soul;
25 and change in respect of place belongs neither to soul alone (for that is unchanged) nor to body alone. But the present treatise is about soul alone. It should be known that the pneuma which is appetitive and changes is in the sinews.

433b26-7 [For all things are changed by pushing and pulling,] which is why there must, as in the circle, be something that stays still, and the change must start from there⁷⁶

Then, he says, if change occurs by pushing and pulling, there must be something that remains still and something that is changed, just
30 as in a circle too the change occurs around the centre which remains still. And it should be noted that he is forgetful in his establishing that with animals that go forward the change always occurs around something that remains still. In the case of fish, reptiles and the like the change is not analogous to going round in a circle: in their case the change does not occur around something that remains still.

592,1 **433b28** But a thing is not appetitive without imagination; [and all imagination is either reasoning or perceiving;]

This is well said; for it is necessary that what is reaching out should reach out after having imagined the object of appetite. But this is well said [only] in the case of those things that reach out with imagination. For to have appetite is common [to other things]. There is appetite even without consciousness; this is present in the
5 case both of plants⁷⁷ and of inanimate objects. For instance a stone has appetite by which it makes for the place below, and fire has appetite by which it makes for the place above. Again, there is appetite with imagination. And again, there is another sort of appetite with practical intellect, which differs from appetite with

imagination. For where there is appetite with thinking there is also
 appetite with imagination, for instance with human beings there
 are both sorts of appetite, both that with thinking and that with
 imagination; but the other animals have appetite with imagination,
 and that is all – if, indeed, they have imagination. And there is
 another difference we can state, that appetite with practical intel-
 lect is capable of deliberation. To deliberate is to choose, and to choose
 is to take one thing in preference to another: for instance whether or
 not one should visit a friend, and one takes it as one should; and
 whether to stay in the place where one is or to go abroad, and one
 takes going abroad; and whether by sea or by land, and one takes
 going by land; and by land in what way, whether on foot or otherwise.
 Then from all these things one gathers one conclusion, that one
 should see the friend going abroad by land on foot.⁷⁸ That is how
 appetite with practical intellect differs from appetite with imagi-
 nation. And note that these two, practical intellect and what is
 genuinely imagination, he calls by the common name ‘imagination’.

433b29-30 of the latter other animals also have a share⁷⁹

The connective ‘also’ is added because of human beings. Of the latter
 imagination, he says, both other animals and also man have a share.
 What sort of imagination does he mean? That which is linked to sense.

434a5 [But we must see concerning incomplete things, what it
 is that changes; to those that have sense only by touch, is it
 possible or not for imagination to belong, and desire? Distress
 and pleasure are plainly present, and if these are, desire must
 be. But how could imagination be present? Or as they are
 changed in an indefinite way, these things too are present,] but
 are present in an indefinite way⁸⁰

In zoophytes, he says, imagination is present in an indefinite way, as
 the indefiniteness of their change makes clear. He calls the change
 of zoophytes ‘indefinite’ because they do not close up and open out in
 a constant way, but sometimes more and sometimes less. Or he says
 ‘in an indefinite way’ in place of ‘in a dim and wandering way’.

434a8-9 [Perceiving imagination, as has been said, belongs in
 the other animals too, but deliberative [sc. imagination belongs
 only] in those that reason (for whether to do this or that is the
 function of reasoning [sc. to determine]) and it is necessary to
 measure with a single thing; for the greater is pursued⁸¹

As carpenters with the same cubit measure measure longer and

shorter pieces of wood so also, he says, that which is appetitive in human beings measures contrary appetitions by the same good, and takes the greater good, and is changed in the direction of that.

- 35 **434a9-10** so that it is able, out of many phantasms, to make one.) [And that is the reason why they [sc. animals other than human beings] are not thought to have opinion, that they do not have the opinion that comes from syllogism. Therefore their appetite does not have what is deliberative; and sometimes the one appetite conquers the other and changes, sometimes the other the one, as sphere [sc. conquers] sphere]⁸²

Since, he says, imagination in human beings is deliberative (the sentence should be taken as having this as its main clause),⁸³ for this reason it can also make one out of many phantasms, that is, one common phantasm out of many particular phantasms, as a little way back we said that one ought to see the friend going abroad by land on foot. Deliberative imagination makes one common phantasm in this way, but that is beyond the non-rational. And he gives the reason

593,1 himself, saying that non-rational beings do not have opinion, and they do not have opinion because they do not syllogise [434a10-11]. For an opinion is an end-point of thought, and thought finds out the thing to be done through a syllogism. There are four things, imagination, that which deliberates, opinion and that which reasons, but some people think that that in us which deliberates is the same as that which reasons. That is absurd. For if imagination and opinion are not the

10 same thing in us, neither are those things that follow these the same as one another, what deliberates and reason. For what deliberates follows on imagination in us, and what is rational upon opinion.

434a14 when deficiency occurs in self-control

- Deficiency in self-control is one thing, and being out of control another.⁸⁴ Deficiency in self-control is the battle between emotions and reason when neither has yet obtained the mastery and the battle hangs in the balance. Being out of control is the state in which emotions have completely mastered reason.
- 15

434a16 But that which knows is not changed; it stays still

What he calls 'that which knows' is contemplative intellect. Being stationary is natural for this, as has been said often; for when we are standing still we think more.

- 20 **434a16-17** But since one supposal and statement is universal

and one is of what is particular,⁸⁵ [(for the one says that this sort of person should do this sort of thing, the other that this thing is of that sort, and I am such a person,) either the latter opinion changes, not the universal one, or both, but the one rather keeping still, and the other not]

Here he brings forward a syllogism and enquires which of its premisses is the one that changes. The supposals, he says (that is, the premisses), being two, one universal and one particular (or one minor, which he calls 'particular', and one major, which he calls 'universal'), we must enquire after the one that changes. He hints at a syllogism like the following. I routed my adversary; anyone who routs his adversary is a champion; therefore I am a champion. Every champion should be crowned. Therefore I too should be crowned.⁸⁶ Here the major premiss is the one which says 'Every champion should be crowned', and the minor the one saying 'I am a champion'. For the discussion we are now holding is about the second syllogism; it was for the sake of the second that the first was taken. Among these premisses, then, the minor is more the one that changes [the person deliberating], as has already been said. The major, if it is extremely universal, is altogether without change, or rather it changes less than the minor so far as the minor is less universal than it. For that reason we ought to credit the change more to the minor. And he hints at the two syllogisms through giving three premisses. For he takes one as common, being the conclusion of the first and a premiss of the second. For he says this: 'The one says that this sort of person should do a certain sort of thing' [434a17-18]. This is the major premiss of the first syllogism, which says that routing your adversary is being a champion. 'And I am such a person' [a19]: that is the common premiss, which is the conclusion of the first syllogism and a premiss of the second, the one that says 'I am a champion'. And see that he neither uses the order of premisses that we use nor states the same terms, but his terms are very like ours in meaning.

'Either the latter opinion changes, not the universal one' is as if raising a problem: is it the case that this opinion in the minor changes and the major does not? Then he resolves it and says: 'or do both?'; but then, he says, of these premisses the universal stays still more – as we said.

That is the lecture.

[LECTURE 10]

434a22-3 Everything that lives and has soul must have nutritive soul from its coming to be right down to its passing away, etc.

20 Of animate beings some are completely without change [in respect of place], like plants, and some are changed, like animals, and of those that are changed, some are changed in respect of the whole of themselves, such as animals that move, and some with a change proceeding from a part; and of the latter, some are sublunary, such as zoophytes, and some superlunary, like the heavenly bodies. That being so, for the present the Philosopher in the present continuous exposition differentiates animals that move from things that are completely without change and things that are changed, indeed, but with a change proceeding from a part. Necessarily, then, the differentiation for that which moves will be threefold – I mean in relation to plants, zoophytes and heavenly bodies.

He starts with the differentiation of animals that move and plants. Even though both have the nutritive soul, he says, still, plants do not have perceiving [souls] and animals that move do. And he shows each of these things by two proofs, and first, that it is reasonable that plants do not have sense. Of his arguments [for this], one proceeds from the body of plants and one from the soul. The one from the body is this. Plants, he says, seem to be something simple. For even if they are composed of the four elements, still, the earthy so far holds the mastery in them that they seem to be of this alone. The earthen in kind is unperceiving, as is attested by the fact that the earthen parts in us, who are perceiving things, do not perceive, I mean bones and hairs and nails. For how could things that fall closer to the earthy obtain sense if such things as these are not able to have [the sense of] touch? This, which lays hold of many oppositions⁸⁷ ought to be composed of many, and perhaps of the same number. This is the first proof, which is from the body of plants.

That from the soul is something like this. Plants, he says, do not have sense. For they would have to lay hold of perceived forms without matter. And in fact they do not. For they would lay hold to no purpose, since being rooted and without change they can neither go towards what is pleasant nor turn aside from what is unpleasant.

10 That animals that move rightly and necessarily have sense may be demonstrated by two arguments, of which the first goes like this. If animals that move did not have sense, he says, they would be changed [in respect of place] to no purpose and to their detriment; on the one hand they would not know where the end was of their change, and on the other they would be carried over precipices, since they could not differentiate by sense. But nature does nothing in the way of plotting against animals, but everything it does is definitely either for the sake of something or a side-effect of what is for the sake of something. Assurance on each of these things can be derived from hair. The hairs on the head and in the eyelashes and in the beard occur for the sake of something: some are for shelter, like those on the

head, some for protection, like those in the eyelashes, and some for beauty, like those in the beard. But the hairs in the armpit and the grey hairs on the head in old age are not for the sake of something, but are side-effects of things that are for the sake of something. The one lot come to be because of the abundance of warmth and moisture in the armpit, and the other because of the abundance of phlegm at that age. 20

The second proof is like this. Animals that move must have consciousness. For consorting with many kinds of nourishment because of being changed, they have need of a cognitive power that can differentiate their own nourishment from what belongs to others. Plants do not need this because they are not changed and because they have what nourishes them, that is, earth, lying ready for them. 25

Having thus differentiated animals that move from plants he differentiates them also from zoophytes. Zoophytes, he says, do not have the more perfect senses, sight, hearing and smell, whereas animals that move have obtained these too. For the blind-rat has sight, even if it is hidden by a fine covering because of its continuous burrowing into earth. For grubs, though they are changed without having sight, still have their need supplied by nature through their softness. 30

Having thus differentiated animals that move also from zoophytes he goes on to differentiating them from the heavenly bodies too, and says that those differ from animals that move in that animals that move also have a vegetative and a perceiving soul, and heavenly bodies have only a rational soul. 35

Having said this about the heavenly bodies he goes on to say 'For why will it [sc. what is not generated, 434b5] have a non-rational [soul]?'⁸⁸ Alexander interprets this gobbet in one way and Plutarch in another. Alexander says: 'For why will the heavenly bodies have sense? Neither for the body of these things is it better to have sense, nor for the soul. Not for the body, because sense would be helpful to bodies that are affected, keeping them away from what is destructive, but it is no help to heavenly bodies since they are unaffected – and also things which perceive do so through being affected, but these are unaffected and immortal. But neither will it help their soul, because those that have sense have obtained it in order to recollect universals, so that from the things they find through the senses in particulars they may be led back to the universal accounts present in them;⁸⁹ but the heavenly bodies have no need of sense. They always act intellectually and never desert universals. But sense is a thing that lays hold of particulars. Being distracted concerning these and entangled in them it does not allow intellect to be engrossed in universals, but is like a garrulous neighbour that keeps consorting with a reader and distracting him.' So Alexander: according to him the passage does not 596,1 5 10

have the negative 'not', but is 'For why will it have it?' and he interprets it as a question.

- 15 Plutarch, however, goes the contrary way, adds the negative 'not' and says: 'For why will the heavenly bodies not have sense? For it is not better for the body not to have it: it is better to be a thing that perceives than to be unperceiving, since the perceiving is superior to the unperceiving. And if you should say "Then they perceive through
20 being affected and are no longer unaffected and immortal", I say no. For things beneath the Moon this statement is true, that things perceive through being affected, but those things [being superlunary] perceive without being affected in any way. So sense is helpful to their body. And it is also helpful to their soul. It does not impede it in knowledge of universals, because through the senses we know particulars and from the particulars we are led back to universals, and
25 because even if in our case it is right that reasoning should be distracted by sense as by a garrulous neighbour, since with us there is the horse of vice,⁹⁰ in the case of the heavenly bodies reason is not distracted, since there is no horse of vice with them – for horses of gods, as Socrates says in the *Phaedrus*⁹¹ are good and of good stock, a statement making plain the consonance in the souls of the heavenly bodies. It acts at the same time on the upward and on the downward path,⁹² and sense is no impediment there. So sense helps the soul towards cognition of particulars and universals.' Then Plutarch does not read the text in the same way as Alexander but thus: 'Why will the heavenly bodies not have sense? Either it will be better for the soul of them not to have sense [or better for the body].'⁹³

- 30 So much on the text and the disagreement of the interpreters about it. But it is possible for us, starting from the Aristotelians, to demonstrate that the heavenly bodies lack a share in sense, and it is also possible to bring a refutation of all the proofs from the Platonists. Come now, if you please, let us do this.

- 597,1 That the heavenly bodies have a rational soul, is clear to all from their change. For change in a circle in the same place could occur through the agency of nothing but reason. But about the soul that perceives there is disagreement. The Aristotelians say that sense is not present in these things, since they are unaffected, and the subject
5 of sense is affected. 'But, O Aristotle', the Platonists would say, 'in our case the subject is affected and the power discerns the affection, but in the case of the heavenly bodies there is just discernment of the forms without an affection. For surely it would be absurd that air and water should serve to carry the forms of sense-objects and should receive them without an affection, but the heavenly bodies should be unable to lay hold of sense-objects apart from an affection.'

- 10 'But if the heavenly bodies have sense,' say the Aristotelians, 'they will definitely have touch too. For this takes the lead of all the senses

since it is inferior, and where there is the better there is also the worse. But how could they have touch, since if touch is to arise it needs several elements because it lays hold of several, while the heavenly bodies consist of the fifth element alone. And if the heavenly bodies were of the [four ordinary] elements, they would also be destructible.' To this the Platonists reply that it is not necessary for the heavenly bodies to have touch. With us, perhaps, the worse takes the lead of the better and exists with it, but in their case Aristotle himself has rejected the statement. He says that they have rational soul without having non-rational. But so far as that statement goes, even in the body of luminous form⁹⁴ there will have to be both the non-rational soul and the vegetative, if indeed where there is the better there is also the worse; and that is absurd. So it cannot be true in all cases that where there is the better there is also the worse. 15 20

The Aristotelians in turn rejoin: 'If the heavenly bodies have sense, they will definitely also have organs. For every sense acts through organs. But the heavenly bodies are homeomerous.'⁹⁵ To this the Platonists reply: 'Laying hold of sense-objects does not have to occur through organs, since even in us the common sense, which is in a single pneuma,⁹⁶ knows the sense-objects of the five senses, and the non-rational soul through a single pneuma grasps all the sense-objects. That is why you yourself said: "What is genuinely sense is one, and what is genuinely sense-organ is one".'⁹⁷ 25

But the Aristotelians say in turn that it is not necessary, where there are vital powers, that there should be cognitive, as is shown by the fact that plants have life but not cognition; but where there are cognitive powers there definitely are vital powers too. If, therefore, the heavenly bodies have the cognitive power of the non-rational [soul], it is clear that they will also have its vital power, I mean spirit and desire. But it is absurd to say that the heavenly bodies either desire or become spirited, since they could also be destroyed. To this the Platonists reply that the heavenly bodies do have desire. For they strive to imitate intellect, since that *is* everywhere, and they come to be everywhere, if not at the same time, then bit by bit. But they do not have spirit; for that is not necessary. For see: even zoophytes have desire. They feel pain and pleasure. But they do not become spirited: for they plainly do not defend themselves. 30 35

And through a fifth proof the Aristotelians establish that the heavenly bodies do not have sense. If all sense is occupied with external things, and nothing is external to the heavenly bodies, it follows that they do not perceive. To which it may be replied that even for the heavenly bodies there is something external. For the centre is external to the periphery. So they do perceive. And the Platonists establish that they perceive in the following way. If to perceive is also to know, the heavenly bodies also, being superior, perceive. 598,1 5

Having said this, he proceeds also to differentiate animals that move from zoophytes. But this, with God's help, completes the continuous exposition.

434a22-3 Everything that lives and has soul must have nutritive soul⁹⁸

10 He states a differentiation of animal and plant, that even if both have the nutritive soul, still, they do not both have the perceiving. For every living thing must have the nutritive. If it is not nourished right from its coming to be down to its passing away it will pass away rather swiftly, and not reach maturity. But it is not necessary for all living things to have sense. Those that have a simple body, like plants, do
15 not have to have sense. Plants are said to have a simple body because it is characterised only by the earthen. But there cannot be an animal apart from sense.

434a27 But it is not necessary that there should be sense in all living things⁹⁹

20 There are two readings for this passage. One has 'in all animals', the other 'in all living things'.¹⁰⁰ But if we have 'animals' it is in place of 'living things' so as to include also plants. For what is he saying? That it is not necessary that everything which has life should also have sense. If, however, we take the reading 'in all living things' that would be well; the thought will have been better expressed so.

434a27-8 For it is not possible for those that have¹⁰¹ a body which is simple to have touch¹⁰²

This is the establishing argument from the body to show that there is not touch in plants.

25 **434a29-30** nor for as many as do not receive form without matter

He is talking about plants. These do not receive form without matter, as do the senses, but [only] with matter. So as many things, he says, as do not receive forms by themselves, like plants, do not have sense. But animals have sense because [otherwise] change in them would
30 be to no purpose. If they did not perceive they would be changed to their detriment and fall into pits. But nature does nothing to no purpose or to [an organism's] detriment; it is either for the sake of something or a side-effect of what is for the sake of something – and

what sort of things the latter are has been said [595,15-22]. But plants, being immobile and without change, do not need sense.

But people raise a difficulty and say that not only do plants not receive forms without matter, but neither do some senses. For in truth only sight and hearing lay hold of forms, the one of colours, the other of sounds, and sight does not become colour, such as white or black, neither does hearing become sound, such as high or low. But touch lays hold not only of the form but also of the matter. For it does not lay hold of cold unless the body becomes cold, and similarly with hot and the like. To this we reply that the soul lays hold of the form, and the matter acts on the body. So all the senses lay hold of form only and of matter not at all. But plants not only lay hold of the form but clutch the very matter too, and are affected by it and react on it. And perhaps it may be said that in their case too, just as the soul of animals lays hold of the form and the body of the matter, so also in the case of plants the power of touch lays hold of the form of earth, and the body of plants is affected by the matter of the objects of touch, so it may be concluded that plants too have the power of touch. Except that when we go so far as to conclude this, it refutes the other proofs.¹⁰³

434a33-b1 [If, then, every body that moves, if it did not have sense,] would pass away and not reach the end which is the function of nature – for how would it be nourished? [Those that are immobile have this present for them from where they naturally grow]^{103a}

If animals, he says, do not have sense, they do not reach the end, that is, maturity, but pass away. For if it is through touch that they know suitable nourishment and take it, and turn away from what is distressing, then if they do not have sense, animals will not be nourished, and not being nourished will pass away. But plants, since they are immobile, have no need of sense. They have their nourishment lying ready in the earth in which they also are – which is what he means by ‘from where they naturally grow’ [434b2]. The nourishment of plants, then, is marked off for them, and on that account plants do not need sense, but that of animals is undifferentiated and indeterminate. They do not always consume the same nourishment and require sense to differentiate their own from what belongs to others.

434b3-4 but it is not possible for a body to have a soul and discerning intellect, and not to have sense, though it is not immobile and is a thing that is generated

It is right, he says, that animals should have sense, because it is

impossible that things which have soul, and are generated, and not immobile, should not have sense. He says ‘which are not immobile’ because of plants, for these have soul and are generated. But because they are immobile, for that reason they do not have sense. He says
 30 ‘discerning intellect’ and not simply ‘intellect’ in order that he may seem to be differentiating not animals but rational animals from plants; for sense is more necessary in the latter, since they differentiate more. ‘Nor indeed do things that are not generated’, he says [434b4-5], have sense, such as the heavenly bodies. For this is Aristotle’s opinion: having sense would not be helpful to them either
 35 in soul or in body. And we have said in the continuous exposition how this is, and that Alexander and Plutarch read the sentence in different ways. Aristotle, then, is of the opinion that the heavenly bodies both
 600,1 are alive and move (for he calls them ‘always in motion’¹⁰⁴) but nevertheless do not have sense because they are not generated in time.

434b7-8 – it follows that no body which is not immobile has soul without sense¹⁰⁵

This passage shows Aristotle as more of Plutarch’s opinion. It says
 5 that there is no body, apart from plants, which has soul and does not have the senses. Unless perhaps one were to say that it is the conclusion of what was said higher up and not of what is near at hand to it; for if anyone says that, Plutarch gets nothing from the present passage.¹⁰⁶

That, with God’s help, completes the lecture.

[LECTURE 11]

434b9-11 But if it does have sense, the body must be either
 10 simple or mixed. It cannot be simple. For it will not have touch, and it is necessary to have that

Having differentiated animals from plants and the heavenly bodies, Aristotle now differentiates animals that move from zoophytes. And wanting to show that differentiating them is urgent, he first states
 15 what they have in common; and he calls both animals that move and zoophytes by the common appellation ‘animals’, since they both satisfy the definition of animal. Both are animate perceiving substances.

It is common to all animals to be mixed and not simple, and common to them also to have touch. For both animals that move and zoophytes are mixed and have touch. And this thing they have in
 20 common belongs neither to plants nor to heavenly bodies. For plants

are not composite, but as if they were simple; they are characterised by the earthen alone; and neither do they have touch. And again, the heavenly bodies are not mixed; according to Aristotle they are not composed of the elements but of the fifth substance, so they are simple; and neither, according to Aristotle, do the heavenly bodies have touch. These are the things animals have in common. Then, after [stating] the things in common, he shows that it is true that animals both are mixed and have touch. He shows this both before the differentiation and after it, and not by the same proofs. But let us first state the differentiation and then, after that, join on the proofs that conclude that animals are mixed and have touch. 25

What is the differentiation? Zoophytes either have touch alone, like the sponge, or touch and a sort of taste, if they have something analogous to a stomach and a mouth, like animals with shells. But animals that move have all the senses or things analogous to sense. For the grub, because it does not have sight, is soft-fleshed. Animals that move tend to have both sight and hearing, so that they may turn aside also from evils that are at a distance. That is why it is said 'The beat of swift-footed horses strikes about my ears',¹⁰⁷ and 'The cry of indomitable Odysseus has reached me'.¹⁰⁸ In this, then, animals that move differ from zoophytes. That is the differentiation. 30 601,1

Next, then, let us state the proofs that come before the differentiation by which it can be shown that animals both are mixed and have touch. First we shall show that they are mixed, as follows. It should be known that every animal that perceives has touch. For it is not possible for that which does not have touch to have any other sense: for the inferior should form a mattress [for the rest]. But everything that has touch is mixed. Therefore every animal too is mixed. That everything that has touch is mixed is clear. For touch lays hold of those things of which it is composed. If it lays hold of hot and cold and wet and dry, and not just of one element, clearly it is composed of these and must be mixed. 5 10

Since in this proof it is shown both that animals are mixed and also that they have touch, but we showed that they also have touch [only] by the way, let us now show in a primary fashion that animals have touch. It should be known, then, that we are genuinely nourished by objects of touch. For flavours provide the equivalent of a savoury sauce and nourish incidentally, and the other things, the objects of smell, hearing and sight, do not nourish even incidentally. If, then, we are nourished by objects of touch, and it is necessary to lay hold of the things by which we are nourished, it follows that it is necessary to perceive them by touching,¹⁰⁹ and touch is in us necessarily in order that we may lay hold of them. For it alone lays hold immediately, and the others act through an intermediary. So touch is present in animals. 15 20

These [proofs] show before the differentiation that there is touch in us and that animals are mixed. After the differentiation he shows again that animals are mixed. For he says that if it has been shown
 25 that every animal is a thing that perceives, necessarily it has an organ through which it perceives. And the organ must be mixed. For it cannot be of fire alone (since fire rather destroys than constitutes a part), neither can it be of air or water (for these are entrusted with other powers, in that through them things can be seen, heard and smelt); nor can they be of earth alone, since the earthen parts of us,
 30 such as hair, nails and bones, are unperceiving; and also because we lay hold not only of the opposites which belong to earth, dry and cold, but also hot and wet. That which perceives, then, must be composed of all, in order that it may lay hold of all as an intermediate. So it is mixed.

And that animals also have touch he shows through five proofs.
 35 The first is this. Touch, he says, is necessary for animals. For those deprived of sight live; further, those live also who are deaf and deprived of smell, for instance anyone with a nasal polyps; and in addition people too whose tongues have been cut out live; on the other
 602,1 hand it is not possible for someone to live who has lost the sense of touch, for instance someone with palsy. It follows that touch is necessary more than all [the rest] and is present in us.

Second proof. If the definition of animal is thing that perceives, and this converts with animal,¹¹⁰ and we are called 'things that perceive' by virtue of touch, it follows that touch is present in us.

5 The third proof is like this. Touch is necessary if the other senses are, since the other senses are [each] in a single part, whereas touch is in the whole body.

The fourth proof is like this. Touch is necessary because its subjects, the objects of touch, destroy the whole body if they are excessive; and rightly, since touch is in the whole body and excesses of the other
 10 sense-objects hurt only that sense-organ to which they are sense-objects. For if you say that objects of taste destroy the whole body I reply to you that taste too is a kind of touch, and destroys the whole body more as touch than as taste. And if someone raises the difficulty 'What? Do not objects of smell destroy the whole body, like mephitic vapours?' we reply that these too destroy incidentally through touch.
 15 They destroy by making infection, and infection acts by touch. Again, people say that what is an object of hearing also destroys the whole body, such as extraordinary sound. But that again acts by touch. For it acts by pushing, and pushing is touch. Again, people say that objects of sight destroy the whole body. For sometimes seeing something
 20 frightening we die of terror. To this it may be replied that terror too destroys by making chill, and chill belongs to touch. That is the fourth proof.

Fifth proof. Touch, he says, is necessary because it alone contributes to being, whereas the other senses help towards well-being. But people say that non-rational animals too have sight and hearing and smell and taste. Surely in their case there is no learning of music or astronomy? To this we reply that taste and smell, inasmuch as they make animals more perfect, are said to help towards well-being, and hearing and sight help towards well-being even in the case of non-rational animals. In the first place, since they hear their offspring and see them they care for them, and caring for their offspring is well-being for them. And besides, through hearing non-rational animals are tamed, so they have need of hearing that through hearing they may become tame. Being tame is well-being, and they have it through hearing and sight. For seeing in the light the things we bring to be, they are tamed. That is clear from the fact that the beasts that are nocturnal are wild.

And when that has been said, that, with God's help, completes the continuous exposition and the present treatise concerning soul.

434b9-10 But if it does have sense, the body must be either simple or mixed. [It cannot be simple; for it will not have touch; and it is necessary it should have this]¹¹¹

He states the things animals have in common. He does not advance the argument as was said in the continuous exposition, but the idea is the same. He advances the argument in three syllogisms, of which the first is this. If bodies which have sense, such as animals, are necessarily either simple or composite, and they are not simple, it follows that they are composite. That is the first syllogism. And whence is it clear that they are composite? That is shown by the second syllogism. If they were not composite, neither would they have touch. For where there is touch there is also composite, since things perceive by touching what they are composed of, and they perceive by touching a plurality of things. And whence is it clear that animals have touch? He shows that through another syllogism. If an animal is an animate body, and every body is an object of touch, and every object of touch is grasped by touch, it follows that there is in us touch that perceives by touching.¹¹²

These are the three syllogisms. It is right, he says, that there should be touch, so that through it animals may be preserved. If they did not have it they would fall into pits and perish. But down to where [in the text 434b9-11] is each syllogism? We say that the first goes down to these words: 'But if it has sense, the body must be either simple or mixed.' Then the second syllogism is this: 'It cannot be simple. For it will not have touch.' And the third syllogism is the one saying 'It is necessary it should have this.' And that this is necessary

20 he establishes saying ‘This is clear from the following’ [434b11], and then he says what has been said: if every body is an object of touch, and every object of touch is grasped by touch, it follows touch lays hold of these things, and sight, hearing and smell [do so only] through the medium. If that is so, it is impossible that an animal should be preserved if it does not have touch; it will fall over a precipice and be destroyed.

434b18 And because of this taste too is like a kind of touch

25 Since he said above that touch alone perceives by touching, lest anyone should say ‘What? Does not taste lay hold by touching?’, on this account he says that taste too, being touch, lays hold without an intermediary. That taste is a kind of touch he shows through three syllogisms, of which the first is this. If touch is necessary to animals
30 and taste is necessary (for we are nourished through it) it follows that taste is touch. He discloses this syllogism in saying ‘Because of this taste too is a kind of touch’ – that is, because of its being necessary like touch. For the words are construed with what goes before. He gives a second syllogism, that if taste is of nourishment it is touch [cf. 434b18-19]. And he shows the same thing by a third syllogism too: if
35 the body which is an object of touch is nourishment (for flavour nourishes incidentally, but the actual substance is what is put into [the organism], the body that is an object of touch) – if, then, the body
604,1 which is an object of touch nourishes, and sound or odour or colour does not nourish or, by not being there, cause decay, necessarily taste too is touch, since object of touch and thing that nourishes are the same. He hints at this syllogism when he says: ‘And nourishment is the body that is an object of touch’ [434b19]. And he is establishing this down to ‘These are necessary for the animal’ [434b22-3], where
5 he starts to say something different.

434b22-3 These are necessary for the animal

Having stated what is common to animals and at the same time established through the two proofs prior to the differentiation that they both are mixed and have touch, he here differentiates animals
10 and says that touch, being necessary, belongs to all animals, whereas the other senses do not belong just to any animal but only to animals that move and are not zoophytes. For, he says, if an animal that moves wants to avoid evils which are at a distance as well, it does not need only touch, that it may perceive by touching; it also needs the other senses, in order that it may lay hold from a distance, and this will be through a medium.

15 People enquire how we can say that [animals] lay hold of some

things through a medium and others by touching, since even when they lay hold of things through a medium they are in contact with the intervening air and lay hold immediately of that. So how can we say it is through an intermediary? Reply to this that they lay hold of the sense-object through an intermediary, and 'through an intermediary' is said in relation to the sense-object. For that medium is affected by the sense-object and changed, and the sense-organ itself is affected by the medium. 20

434b29 For just as that which changes in respect of place makes the change up to a certain point

Having said that we lay hold of certain things through an intermediary, he gives assurance about what is through an intermediary by providing a model, and says that just as when things are changed in respect of place, some things only change, as the hand changes the rod, and that is changed by the hand and changes the stone, and the stone only is changed, and the first only pushes (one ought not to say 'changes', for the hand is also changed);¹¹³ just as, then, in that case the first only pushes, the middle one pushes and is pushed, and the last only is pushed, so too in the cases of alteration the sense-object only pushes or at least changes,¹¹⁴ the medium both is changed by the sense-object and changes the sense, and the sense only is changed. But there is the difference that in the case of the hand and the rod the change was in respect of place, whereas in the case of alteration the change occurs with the sense-object's being unchanging.¹¹⁵ 25 30 605,1

434b31 and what pushes makes something else such as to push, [and the change is through an intermediary, and the first thing that changes pushes without being pushed, and the last is pushed only, without pushing, and the intermediate does both]¹¹⁶

This is well said. For the hand, having pushed, makes something else, the rod, such as to push. So that is what he is saying.

435a1 and there are many intermediaries^{116a}

This too is well said. The intermediary through which it changes [in respect of place] can be a rod and wood and iron;¹¹⁷ and in the case of things that are not changed there can be as intermediaries both air and certain other things. That is why he says that the intermediaries are many. 5

435a1-2 [so in the case of alteration,] except that it alters with the thing remaining still¹¹⁸ in the same place¹¹⁹

The power, he says, which changes [the organism] in respect of place does not allow the thing changed to stay in the same place, but when the sense-object alters the sense it lets it stay in the same place.

- 10 **434a2-3** For instance if someone dips something in wax, it is changed to the depth to which he dips

Since he is talking about the media which pass through the forms,¹²⁰ for this reason he also states a difference in media which receive imprints. Wax, he says, receives an imprint up to a certain point and not all through, whereas water receives more than wax; it receives forms very nearly all through itself. But air genuinely receives forms all through itself; it is easily imprinted. And some things do not receive imprints at all, such as stone. Air receives an imprint so long as it remains one and continuous. For if it is broken up it does not pass [forms] through. It is broken up by a rough sense-object, and is divided into parts when things are rough and not when they are smooth. That is why what is genuinely reflection¹²¹ occurs from smooth things, because the air in between is not broken up. And if the air remains one it both is affected by the sense-object and acts on the sense.

435a5-6 For that reason, too, in connection with reflection, better than that sight goes out and is broken¹²² [is [sc. to say] that the air is affected by the shape and colour]^{122a}

Look! Here Aristotle is plainly of the opinion that there is reception.¹²³

- 25 For what does he say? If what is genuinely reflection occurs from what is smooth, such as a mirror, because the air is not broken up, it is better in that case to say that there is reflection from the sense-object than that the sight, or the optic pneuma, goes out as far as the sense-object, and is reflected back, as those say who say it happens by emission. For if the sense-object is smooth the air is found to be one and carries the colour or shape or whatever it is through the whole of itself, as I might suppose wax imprinted all through the whole of itself, impossible as that is. He plainly says this also in the *de Sensu et Sensibilibus*.¹²⁴ We should read the text with its words reordered, as follows: 'For that reason it is better [to say] that air is affected by the colour or the shape than to suppose that sight goes out and is reflected.'
- 30
- 606,1

435a11-12 That the body of an animal cannot be simple, is plain

He gives the statement of what is had in common that comes after 5
the differentiation: animals are mixed. For it is not possible that the
sense-organs should be of fire (for it destroys), nor of air, water or
earth. The reason for all this is stated in the continuous exposition.

435b4 It is plain that deprived of this sense alone animals must
die

Here he starts the five proofs that touch is necessary: because 10
deprived of this animals perish. If they are deprived of any other they
do not perish.

435b6 Nor is it necessary for something that is an animal to
have any [sense] except this

The second proof, that touch converts with animal, and so is neces- 15
sary.

435b7-8 And because of this the other sense-objects do not by
their excesses destroy the animal

The third proof is that excess in touch destroys the whole animal. And
from this is generated also the other proof, that touch is in every part 20
of the body, whereas the other senses are [each] in one sense-organ:
because they also harm one sense-organ when they are excessive and
not the whole body – unless incidentally, by pushing. And it is said
in the continuous exposition how these too destroy through touch.

435b19 Because this is the only one it is necessary to have

He states the fifth proof, that touch helps towards being, which is 25
necessary, whereas the other senses help towards well being, like
sight, since through sight we get to know the sciences, and those 607,1
beasts that are wild are domesticated and undergo a conversion
through sight, and are taught. But the other senses help not only
towards well-being but towards simply being too, in that by seeing or
hearing or smelling dangerous things from afar they avoid their 5
attacks. So if he says sometimes that the other senses help towards
being and sometimes towards well-being he does not contradict
himself: they contribute in both ways.

435b21 For instance [the animal has] sight since it is in water or air, so that it may see

- 10 Sight, he says, is for well-being. For it is for the sake of seeing through the transparent in air and water. If it did not see through them, water and air would be transparent to no purpose.

435b22 and taste because of the pleasant and unpleasant

Taste too, he says, helps towards well-being, in order that the animal may perceive the pleasant and the unpleasant in food, and select the pleasant.

- 15 **435b24** and hearing in order to signify something to it [the animal]¹²⁵

This seems not to be said with regard to non-rational animals. For what can they have signified? Unless you might say that, hearing their progeny, they care for them, and there is meaning of a kind. Or say that non-rational animals by hearing also our meaningful utterances are tamed

435b24-5 and a tongue to signify something to another¹²⁶

- 20 This does not apply to non-rational animals. They do not have a tongue to signify anything but, if for any purpose at all, to taste. So this is not safely said.

That, with God's help, completes the lecture.

Notes

1. Aristotle uses a verb, *kinein*, which is often aptly translated 'to move'. It covers, however, all kinds of change, and Aristotle often expresses movement, as here, by 'change in respect of place'. When he and the Commentator use the verb in the active voice it is always transitive and means 'to make to change' even when there is no expressed direct object. I usually translate this simply 'change', though sometimes, when the effect is extremely awkward and an English reader might feel sure it is being used intransitively, I supply an object in square brackets. There is not the same ambiguity in Greek, since when the verb is used intransitively it is used in the passive or middle voice.

2. i.e. the elements; these are called 'principles' in *Physics* 1.

3. Hayduck thinks this is corrupt; but the Commentator is prepared to say that intellect is a final cause when we act for the sake of what it tells us is good: see 576,11-12.

4. 3a29-32.

5. This is not distinguished from the first when the Commentator speaks of three charges.

6. viz. the vegetable, the non-rational and the rational.

7. cf. 524,11 and note.

8. The Commentator is confusing two stories in *Symposium* 219E-221A, one about Delium and one about Potidaea.

8a. Not printed as a lemma by Hayduck

9. Not printed as a lemma by Hayduck.

10. Reading *hoiaper êi* with t in place of *ê haper êi* at 573,27.

11. Correcting *ê hê phutikê* to *ê hê alogos* at 574,9, as Hayduck suggests.

12. OCT: which is other.

13. Aristotle does not say this. The Commentator is perhaps attributing the doctrine to him on the basis of the statement at 432b6-7, 'If the soul is three things, there will be appetition in each' – see below 575,2-4; though, as he acknowledges at 575,8-10, this is a misinterpretation of the statement.

14. i.e. in subject as well as in account.

15. Not printed as a lemma by Hayduck.

16. i.e. purposive: see lines 19-22 below.

17. In the *de Respiratione* (470b6-480b3); see also *MA* 703b4-13, which the Commentator may have particularly in mind here.

18. OCT: is with imagination and appetition.

19. An awkward way of introducing the second proof.

20. *aisthêtôs* at 576,15 should be understood in an active sense.

21. *hormê*, a Stoic term.

22. There is a case for supplying *mallon* in the text at 578,11.

23. Hayduck thinks that some words have fallen out here, but the loose construction does not seem to me uncharacteristic.

24. See *Republic* 6 496B-C: bad health prevented Theages from going into politics and therefore kept him in philosophy, though Plato does not suggest his doctors kept him enfeebled for this purpose.

25. Hayduck does not punctuate this sentence as a question.

26. Accepting Hayduck's suggestion that words to this effect have dropped out.

27. In the *Timaeus* Plato makes intellect and necessity responsible for change in the universe at large (48A). It is less clear that it has sole responsibility for the movements of human beings: see 69C-D, 70D-E.

28. The thought is that if that which urges us to gratify emotion is not different from that which urges us to act virtuously, one thing will be urging us in contrary ways; this is not, however, clearly expressed.

29. Accepting Hayduck's suggestion that words to this effect have dropped out.

30. In *de Int.* 16a13-18 Aristotle says that a noun or a verb by itself, though it signifies something, does not signify anything true or false; even 'goat-stag' does not signify anything true or false unless one adds 'is' or 'is not' 'either simply or with regard to time'. The distinction he probably has in mind is between a temporal (e.g. 'Plato is in Sicily now') and an atemporal use of verbs (e.g. 'mercy is superior to justice'). Stephanus *ad loc.* (6,30-2) takes the distinction to be between the present, on the one hand, and the past and future on the other, but here it is taken to be between specifying a time precisely ('It froze for two weeks after the winter solstice') and specifying it imprecisely ('It froze for a while in the winter').

31. i.e. to drink something cold or plunge into cold water.

32. Hayduck is right that words introducing an objection has dropped out; those he suggests are a bit lifeless.

33. The point is not made clearly, but the interpreters may mean that the lion when it sees the flock is afraid of being wounded then and there; the wound lest it suffer which it refrains from attacking does not appear in its thought as something future; whereas a human predator turns from brigandry to a different form of crime because he calculates that if in the future he attacks travellers he will be shot by their postillions. The difference is like that between opening a bottle to drink now (untensed) and restocking the cellar to drink when the guests arrive (future tense).

34. cf. *Phaedo* 94C where he says the soul takes the lead (*hêgemoneuei*) over our physical components and the changes caused in them by other bodies.

35. cf. *Laws* 9 863B.

35a. Reading *autê* for *hautê* at 581,32.

36. Not printed as a lemma by Hayduck.

37. OCT: reach out or avoid.

38. Not printed as a lemma by Hayduck.

39. The Commentator uses the rare word *makroapodotos*; the main clause of the sentence beginning at 432b21 is delayed to 432b25.

40. OCT: that which reasons.

41. Not printed as a lemma by Hayduck.

42. The authority for this is not Aristotle but Plato, *Timaeus* 70D-71B; contrast *MA* 703b7-8.

43. The text at 584,11 has *polla ... akolouthēi*, and I have translated taking *polla* as subject with *zōa* understood. OCT, following Bywater, reads *polloi akolouthousi*, 'many people follow'. The Commentator, however, may have taken the subject of *akolouthēi* to be 'the soul' or 'the animal', and understood *polla* as meaning 'in respect of many things': 'in many cases the animal follows ...'

44. i.e., presumably, to practical intellect, since its end is not for the sake of something but that for the sake of which.

45. The words *to de telos tou praktikou nou* have probably dropped out. *orexeôs*, ‘appetition’, may be a slip for *praxeôs*, ‘action’, cf. 585,13.

46. *hou*; the Commentator goes on to warn us against reading this as the negative particle, i.e. with a smooth breathing.

47. Not printed as a lemma by Hayduck.

48. OCT: That which changes is some one thing, that which is appetitive.

49. See 586,6-8.

49a. Not printed as a lemma by Hayduck.

50. Reading *pôs ekhomen* at 586,13 with Dt. Hayduck amends *to ou pôs ekhomen*, ‘there is no way in which we can find’

51. The conclusion, which the Commentator thinks temerarious, would be that wherever there are contrary appetitions there are reason and desire. What Aristotle actually says, however, is: ‘There are appetitions contrary to one another, and this happens whenever reason and desires are contrary, and that happens in things that have awareness of time.’ This does not imply that animals without reason or awareness of time cannot have contrary appetitions. It may be noticed also that where the Commentator uses *sunaisthêsis*, ‘consciousness’ or ‘conscious awareness’, Aristotle (b7) uses *aisthêsis*, ‘awareness’ or ‘perception’; the ‘temerity’ is largely read into him by the Commentator.

52. Not printed as a lemma by Hayduck.

53. OCT: and also a third

54. Aristotle does not mention *pneuma* here, although it plays an important part in his theory of animal movement in the *de Motu Animalium*, chapter 10. The Commentator in this section is doubtless drawing on medical writers later than Aristotle.

55. *hêgemonikon*, a Stoic term.

56. The idea may be that Aristotle has already discussed that which changes, and is going to go on (see 589,27ff.) to discuss the things changed.

57. Presumably, like Descartes’ pineal gland, between the soul or appetition that changes and the body that is changed.

58. Not the bones, but convex and concave. Aristotle often uses ‘convex’ and ‘concave’ to illustrate how a single thing can be conceived or described in two ways, but when he does so he chiefly has in mind a curved mathematical line, not a curved surface: see *Phys.* 4.14, 222b3, *EN* 1.13, 1102a31.

59. Inserting *kai ti kinoumenon* after *akinêton* at 588,29.

60. By change that is ‘contrary to nature’ or (589,11) the Commentator means only change that does not have its source in the matter or form of the thing changed. As Hayduck observes, the *Physics* passage he seems to have in mind is *Physics* 7.2, 243a11ff.

61. The circumference may be thought of as the path of a point moving around, or at a distance from, a fixed point.

62. i.e. the soul, as often in Neoplatonic writing.

63. Hayduck thinks that the text should be ‘in every part of itself both endowed with life and simply *pneuma*’ and that the later words have dropped out. The Commentator’s thought, however, may be that just as a circle has a circumference with a point in every part of it and a centre, so the *pneuma*, as simply *pneuma*, is in every part (of itself and of the body), but as endowed with life has a centre (at the heart) about which it moves. If this is what makes the model so apt, the text can perhaps stand.

64. So the text at 590,5, *asunkhuton*; but it is tempting to amend to ‘confused’, *sunkhuton*; the word is not in Liddell and Scott, but it is a natural formation, and

could easily have been corrupted to *asunkhuton*. How could the Commentator think that barnacles, sea anemones etc., are more like ants than grubs?

65. The Commentator here uses *metaballein* in place of *kineisthai*, and a line below, where he says that the minor can change its subject, he uses *ameibein*.

66. Not printed as a lemma by Hayduck.

67. At 587,19 our text has *epei de*, as has OCT, but at 590,38 and here we have *epeidê*. The meaning is not affected.

68. Not printed as a lemma by Hayduck.

69. OCT: that which is changed.

70. OCT: and appetition in actuality is a kind of change.

71. Not printed as a lemma by Hayduck.

72. The word I translated 'appetition', *orexis*, is the noun corresponding to the verb I translate 'to reach out', *oregesthai*.

73. OCT: which is why it is to be contemplated in.

74. Aristotle probably means 'to be found among the functions that are common to body and soul', but the Commentator seems to understand him to mean 'to be investigated in the books that deal with both body and soul'.

75. The Commentator may be using this title to refer to the biological treatises generally. The *Parva Naturalia* is more concerned than the *Historia Animalium* with the common functions.

76. Not printed as a lemma by Hayduck.

77. Contrast 575,5-6.

78. Perhaps a traditional example to which writers could each give their own twist; cf. Sophonias 144,6-16.

79. Not printed as a lemma by Hayduck.

80. Not printed as a lemma by Hayduck.

81. Not printed as a lemma by Hayduck.

82. Not printed as a lemma by Hayduck.

83. i.e. we should understand: 'Imagination in human beings is deliberative with the result that it is able to make one phantasm out of many'.

84. This distinction between *akrasia*, here translated 'deficiency in self-control', and *akrateia*, 'being out of control', is introduced by the Commentator. The word *akrasia* is usually used to cover both.

85. *tou kath' hekasta*. The OCT has *tou kath' hekaston*. The sense is not affected.

86. *stephanousthai*. Possibly a joke, playing on the Commentator's name. The routing of the adversary might be in war, in a boxing match or even in a philosophical debate.

87. At *DA* 2.11, 422b25-7 Aristotle says that by touch we grasp hot and cold, dry and wet, hard and soft, and other such 'oppositions'.

88. The OCT has a negative particle here: 'It is not possible for a body to have soul and intellect that discerns, but not to have sense, though it is not immobile and a thing that is generated – nor, indeed, if it is not generated: for why will it not have it?' (434b3-5). The Commentator discusses the question whether or not to read a negative particle here in what follows.

89. i.e. in themselves: on this interpretation knowledge of universals is innate in us.

90. A reference to *Phaedrus* 247B.

91. 246B.

92. cf. Plato, *Republic* 6 511A-C.

93. Hayduck suggests inserting these words into the text.

94. *augoeidês*. For this luciform body, which occurs in light and the stars, see Philoponus' Introduction, 18,26-8.

95. That is, divisible into parts satisfying the same description as the whole. Aristotle regularly (e.g. *PA* 2 *passim*) contrasts homeomerous with organic parts.

96. i.e. uniform, undifferentiated; compare the air that is one and continuous, 605,17-18.

97. A paraphrase of *de Somno* 455a20-1.

98. Not printed as a lemma by Hayduck.

99. Not printed as a lemma by Hayduck.

100. The reading 'in all animals' is reported only here.

101. OCT: for as many as have.

102. Not printed as a lemma by Hayduck.

103. This treatment of the lack of sentience in plants may be compared with that of Philoponus at 440,13-23.

103a. Not printed as a lemma by Hayduck.

104. In fact this is a Platonic term. See *Phaedrus* 245C.

105. Not printed as a lemma by Hayduck.

106. The Commentator says it supports Plutarch only if it is taken closely with the lines immediately preceding: 'Nor, indeed, is there anything ungenerated that does not have sense; for why should it not have it? There would be no advantage. So nothing (sc. ungenerated) which is not immobile is without sense.' It does not support Plutarch, he thinks, if it is taken with 434a32-b1: 'If every body that moves and does not have sense will perish and not reach maturity, it follows that no body which is not immobile is without sense.' The OCT, however, prints it like this, but still accepts 'Plutarch's opinion' that we should read 'Why will it *not* have it?' at 434b5.

107. Homer, *Iliad* 10.535.

108. *Iliad* 11.466.

109. The one Greek verb *haptesthai* means both 'touch' and 'perceive by touching'.

110. That is, if everything that perceives is an animal, and conversely everything that is an animal is a thing that perceives.

111. Not printed as a lemma by Hayduck.

112. This does not follow, and Aristotle's argument at 434b11-14 is, as Hamlyn puts it, 'somewhat obscure'. Hamlyn is probably right that he is trading on the fact that the word *hapton*, which I am translating 'object of touch', also means 'thing that comes into contact with other things'. Aristotle is arguing that since the body of an animal comes into contact with other things, the animal must perceive them to survive, and it must perceive them by the sense of touch.

113. i.e. it does not change without being changed, but it pushes without being pushed.

114. The Commentator here uses *metaballein* and *metabolê* in place of *kinein* and *kinêsis* when speaking of alteration.

115. sc. in respect of place. The Commentator here uses the late and rare verb *akinêtein*. Liddell and Scott report this only in an intransitive sense, 'to be unchanged, immobile', but there is no need to say here that the sense-object is not changed, and I think the Commentator is using the verb in a transitive sense: the sense-object is not changing anything in respect of place.

116. Not printed as a lemma by Hayduck.

116a. Not printed as a lemma by Hayduck.

117. The thought is probably that the rod can be of wood or iron, rather than that it can push something wooden which pushes something made of iron.

118. OCT: except that things are altered remaining still.

119. Not printed as a lemma by Hayduck.

120. *parodeuonta*: in the examples in Liddell and Scott this word is used in an intransitive sense ('the forms pass through the medium'), but here it should be understood transitively ('the medium passes through the forms to the sense-organ').

121. i.e. what we today think of as reflection, as contrasted with the alleged bending back of the visual ray.

122. OCT: reflected.

122a. Not printed as a lemma by Hayduck.

123. i.e. that seeing occurs through reception (*eisdokhê*) of stimuli, not through the emission (*ekpompê*, see below 605,27) of a visual ray.

124. 437b10ff.

125. OCT: in order that something may be signified to it.

126. This is bracketed in the OCT: see Ross 1961, p. 326. The words are not printed as a lemma by Hayduck.

English-Greek Glossary

abstract: *en aphairesei*
abstraction: *aphairesis*
absurd, absurdity: *atopon*
abundance: *pleonazein*
account: *logos*
accurately: *akribôs*
 speak accurately: *kuriolektein*
accusative (case): *aitiakê*
across, lead across: *metagein*
act: *energein*
act on: *dran*
act together: *sunergein*
acting: *hupokrisis*
 not by way of acting: *anupokritôs*
action: *pragma*
 right action: *katorthôma*
actuality: *energeia; entelekheia*
 in actuality: *kat' energeian;*
 energeiai; entelekheiai
acute: *drimus*
addition: *prosthêkê*
adduce: *enistasthai*
adjudicate: *epikrinein*
advocate, plead as an advocate:
 sunêgorein
afar, from afar: *telaugôs*
affect, be affected: *paskhein*
 be affected in turn: *antipaskhein*
affection: *pathos*
age, old age: *gêras*
agent: *poioun*
agitate: *tarattein*
 be agitated: *ptoeisthai*
agree with: *suntithesthai*
aim: *skopos*
air: *aêr*
alien: *allotrios*
alive, be alive: *zên*
all cases, not in all cases: *ou pantôs*
alongside, appear alongside:
 paremphainesthai
always in motion: *aeikinêtos*
always living: *aeizôos*

alter: *alloioun*
alteration: *alloiôsis*
alternando: *enallax*
ambiguous, in an ambiguous way:
 amphibolôs
analogous to: *analogos*
 be analogous to: *analogein*
analogy: *analogia*
analytically: *kat' analusin*
angel: *angelos*
angelic: *angelikos*
anger: *thumos*
angle: *gônia*
animal: *zôon*
animate: *empsukhos*
animation: *empsukhia*
ant: *murmêx*
appear alongside: *paremphainesthai*
appetition: *orexis*
 have appetite for: *oregesthai*
 object of appetite: *orekton*
appetitive: *orektikos*
approach: *epiballein; prosballein*
aquatic: *enudros*
arbitrary: *apoklêrôtikos*
argument: *epikheirêsis; logos*
aristocracy: *aristokratia*
aristodemocracy: *aristodêmokratia*
arithmetical discourses: *arithmêtikoi*
 logoi
arrange in order: *diakosmein*
arrangement, good arrangement:
 eukosmia
article (gr.): *arthron*
articulate fully: *diarthroun*
articulation: *diarthrôsis*
ascent: *anabasis*
assent (v.): *sunkatatithesthai*
assent (n.): *sunkatathesis*
assertion: *kataphasis*
assumption (preliminary):
 lêmma
assumptions: *keimenon*

assurance, derive assurance, obtain
 assurance: *pistousthai*
 astronomy: *astronomia*
 think about astronomy: *astronomein*
 atemporally: *akhronôs*
 attach: *sunagein*
 attack (v.): *apoteinesthai*
 attack (n.): *epiboulê; katadromê*
 attempt: *prosbolê*
 attending to: *katanoêsis*
 attentive: *prosektikon*
 attunement: *harmonia*
 audition: *akousis*
 awkward: *phortikos*

baby: *paidion*
 back away: *anapodizein*
 bad: *kakos*
 balance, that hangs in the:
ampheristos
 bath: *loutron*
 be: *einai; huparkhein*
 in being: *tôi einai*
 thing that is: *on*
 coming to be: *genesis*
 beard: *geneion*
 bee: *melissa; melitta*
 belong: *huparkhein*
 belonging to another: *allotrios*
 belonging properly to: *oikeios*
 bending: *prosklisis*
 between, what has been said in
 between: *metaxulogia*
 bewitch: *goêteuein*
 bid: *epitrepein*
 black: *melas*
 blind: *ektuphloun*
 blind rat: *aspalax*
 blow: *plêgê*
 blunt: *ambluôttein*
 be blunted: *amblunesthai*
 bodily: *sômatikos*
 body: *sôma*
 of body: *sômatikos*
 body-loving: *philosômatos*
 book: *logos*
 boundary: *horos*
 brain: *enkephalos*
 bread: *artos*
 break: *klan*
 break off: *apokoptein; diakoptein*
 break up: *diakoptein; ekluein*

breast: *mastos; mazos*
 breathing: *anapnoê*
 breathing (gr.), with a rough
 breathing: *daseôs*
 brief, in brief: *suntomôs*
 bring about, that brings about:
poiêtikos
 bright: *lampros*
 bring along: *khoregein*
 bring forth: *proagein*
 bring forward: *epagein*
 bring into use: *proskhrêsthai*
 bring out: *prokheirizesthai*
 bring together: *sunathroizein*
 bring under: *anagein*
 build into: *enkatoikodomein*
 burden: *phortion*
 burrowing: *katadusis*
 business, attend to the business of
 another: *allotriopragein*
 attend to one's own business:
idiopragein
 camel: *kamêlos*
 capture, try to capture: *thêreuein*
 careless: *rhaithumos*
 carpenter: *tekton*
 carry: *bastazein; diakonein*
 serve to carry: *diakonein*
 such as to carry: *diakonêtês*
 case (gr.): *ptôsis*
 categorical: *katêgorikos*
 cause: *aitia; aition*; see efficient, final,
 instrumental, material, primary
 cave: *spêlaion*
 censure: *kakizein*
 centre: *kentron*
 certainly: *pantôs*
 champion: *aristeus*
 change (v. tr.): *kinein; metaballein;*
ameibein
 (n.): *kinêsis; metabolê*
 that changes: *kinêtikos*
 be without changing: *akinêtein*
 without change: *akinêtos*
 change along with: *sunkinein*
 character: *êthos*
 characterise: *kharaktêrizein*
 chewing: *masêsis*
 chill: *psuxis*
 chime in with: *sumphônein*
 choice: *proairesis*

choose: *proaireisthai*
 circle: *kuklos*
 in a circle: *kuklikos*
 citizen of heaven: *ouranopolitês*
 clarify: *saphênizein*
 clarity, lack of clarity: *asapheia*
 clause, main clause: *apodosis*
 clean up: *anakathairein*
 close, come close to: *prosomilein*
 close up: *sustellesthai*
 clutch: *drassasthai*
 coarse-grained: *pakhumerês*
 cohere: *sumphuesthai*
 cold: *psukhros*
 collect together: *sunagein*
 colour (n.): *khroa; khroia; khrôma*
 (v. tr.): *khrômatizein*
 colouring: *khrômatismos; khrôsis*
 comb: *smênê*
 come before: *protereuein*
 come close to: *prosomilein*
 come in: *epiphôitan*
 commensurability: *summetria*
 commensurable: *summetros*
 comment: *hupomnêmatizein*
 commentary, detailed commentary:
 lexis
 commentators: *hupomnêsantes*
 common: *koinos*
 thing in common: *koinônia*
 have something in common:
 koinônein
 community: *koinônia*
 compact: *sunkrinein*
 compare: *sunkrinein*
 complete (a differentiation, v.):
 holotelôs eipein
 complete (adj.): *teleios*
 completely perfect: *panteleios*
 composite: *sunthetos*
 composition: *sunthesis*
 concave: *koilos*
 conceive: *epinoein*
 conception: *epinoia*
 conclude, draw conclusion: *sunagein*
 conclusion: *sumperasma*
 concurrent: *sundromos*
 condition, further condition:
 prosdiorismos
 conditional premiss: *sunêmmenon*
 confirm: *sumbebaïousthai*
 confuse: *sunkhein*

confused: *sunkekhumenos*
 confusion: *sunkhusis*
 conjure: *horkoun*
 conjuration: *horkos*
 connective: *prosthesis; sundesmos*
 conscience: *sunesis*
 conscious, be conscious:
 sunaiasthanesthai; suneidenai
 heautôi
 consciousness: *sunaisthêsis*
 consistent: *amakhos*
 consonance: *sumphônia*
 constellations, make into
 constellations: *katasterizein*
 constitution: *politeia*
 construct: *plekein*
 construction: *plokê*
 contact: *thixis*
 container: *angeion*
 contemplate: *theôrein*
 thing we contemplate: *theôrêton*
 contemplative: *theôrêtikos*
 contemplatively: *theôrêtikôs*
 contemporary: *homokhronos*
 contemptuous, be contemptuous of:
 kataphronein
 continuity: *sunekheia*
 continuous: *sunekhês*
 contradict: *enantiousthai*
 contradiction: *enantiotês*
 contradistinction: *antidiastolê*
 contradistinguish: *antidiairein;*
 antiastellein
 contrary: *enantios*
 be contrary to: *enantiousthai*
 contribute: *suntelein*
 contributory cause: *paraition*
 control: *kuria*
 control oneself: *enkrateuesthai*
 being out of control: *akrateia*
 convention, by convention: *nomôi*
 conversion: *antistrophê*
 undergo a conversion: *tropeisthai*
 convert: *antistrephein*
 convex: *kurtos*
 convict: *dialenkhein; exelenkhein*
 conviction, rational conviction: *pistis*
 convince, be rationally convinced:
 pisteuein
 cooking: *mageirikê*
 cooking term: *mageirikon onoma*
 cool: *psuktos*

corollary: *porisma*
 correct: *diorthoun*
 cosmos: *kosmos*
 above the cosmos: *huperkosmios*
 in the cosmos: *enkosmios*
 counter, run counter to: *enantiousthai*
 counteract: *antiprattein*
 cover, be covered over: *epikaluptesthai*
 covering: *khitôn*; *skepê*
 crane: *geranos*
 creator: *dêmiourgos*
 credited, be credited: *philotimeisthai*
 crowbar: *mokhlos*
 crown: *stephanoun*
 crystalline, of crystalline form:
 krustalloeidês
 cube: *kubos*
 curve round: *epikampein*
 curved: *epikampês*; *kampulos*; *kukloterês*
 customary, what is customary: *nomos*
 cut into: *enkolaptein*
 cutting: *tomê*

dark, darkness: *skotos*
 dative (case): *dotikê*
 deaf: *kôphos*
 debase: *notheuein*
 debauched: *akolastos*
 declare: *apophainesthai*
 decline: *parakmê*
 defect: *endeia*
 defence: *apologia*
 make a defence, plead in defence:
 apologeisthai
 deficiency in self-control: *akrasia*
 definitely: *pantôs*
 definition: *horos*
 deformed: *pêrôma*, *pêros*
 deliberate: *bouleuesthai*
 that which deliberates: *bouleutikon*
 deliberation: *boulê*
 democracy: *dêmokratia*
 demon: *daimôn*
 demonstrate: *apodeiknunai*
 demonstration: *apodeixis*
 denial: *apophasis*
 denouement: *peripeteia*
 depict: *anazôgraphhein*
 depression: *melankholia*
 depth: *bathos*
 derange, be deranged in judgement:
 paraphronein

derangement: *paraphrosunê*
 derive: *sunagein*
 descent: *katabasis*
 desire: *epithumia*
 desiring: *epithumêtikos*
 destroy: *phtheirein*
 destructive: *phthartikos*
 destructible: *phthartikos*
 detailed commentary: *lexis*
 deviant: *diestrammenos*
 devise: *mêkhanasthai*
 dialogue: *dialogos*
 diameter: *diametros*
 difference: *diaphora*
 differentiate: *diakrinein*
 differentiating feature: *diaphora*
 differentiation: *diakrisis*
 further differentiation: *prosdiorismos*
 difficulty: *aporia*
 raise a difficulty: *aporein*
 dig: *oruttein*
 digest: *pettein*
 digestion: *pepsis*
 digression: *metaxulogia*
 dim: *amudros*
 diminish: *meioun*
 dimly: *amudrôs*
 dimness of vision: *amblyôpia*
 disagree: *diaphônein*
 disagreement: *diaphônía*
 disappear, make to disappear:
 aphanizein
 discern: *krinein*
 in a discerning way: *kritikôs*
 discernment: *krisis*
 discovery: *heuresis*
 discrepant, be discrepant: *diaphonein*
 discrete: *diorismenos*
 disease: *nosos*
 disposed, in how disposed: *skhesei*
 disposition: *hexis*
 dispositional: *kath' hexin*
 disproportionate: *ametros*
 disputable, be disputable:
 amphiballesthai
 distance: *diastasis*; *diastêma*
 distich: *distikhion*
 distinction, draw a distinction:
 diastellein
 without drawing distinctions:
 adioristôs
 further distinction: *prosdiorismos*

distract: *ekkrouein*
 distress: *lupê*
 distressing: *lupêros*
 distribute: *aponemein*
 divide: *diairein*
 divide in parts: *merizein*
 divide off: *diakrinein*
 divided, divisible: *diairetos*
 divine (v.): *manteuesthai*
 divine (adj.): *theios*
 divisible in parts: *meristos*
 division: *diairesis*; *tmêma*
 doctor: *iatros*
 doctrine: *dogma*
 dodekahedron: *dôdekaedron*
 dog: *kuôn*
 domesticate: *tithaseuein*
 door: *thura*
 double: *diplasio*
 downward, on the downward path:
 katagôgos
 drag: *surein*
 dream (v.): *oneirottein*
 dream (n.): *enupnion*; *onar*; *oneiros*
 drop: *rhanis*
 drug: *pharmakon*
 drunkenness: *methê*
 dry: *xêros*

 earth: *gê*
 earth-dwelling: *epikhthonios*
 earthen: *geôdês*
 earthy: *gêinos*
 effect, side effect: *sumptôma*
 efficient cause: *poiêtikon aition*
 egg: *ôion*
 eikosahedron: *eikosaedron*
 elbow: *ankôn*
 elegant: *asteios*
 element: *stoikheion*
 embryo: *embruon*
 emission: *ekpompê*
 emit: *ekkrinein*
 end: *telos*
 loose end hanging: *ekkremês*
 end point: *apoteleutês*; *peras*
 end together: *sumperatoun*
 endow with life: *zôoun*
 engage, be engaged with: *endiatribein*
 engrave on: *enkharattein*
 engross, be engrossed:
 apaskholeisthai; *askholeisthai*

enjoyment: *apolausis*
 enquire: *zêtein*
 enquiry: *zêtêsis*
 object of enquiry: *zêtêma*
 enslave: *andrapodizein*
 enumerate: *aparithmeîn*
 equine: *hippeios*
 equivocal: *homônumos*
 thing said equivocally: *homônumia*
 error: *apatê*
 be in error: *apatasthai*
 systematic error: *anepistêmosunê*
 essence: *to ti ên einai*
 establish: *kataskeuwazein*
 establishing argument,
 establishment: *kataskeuwê*
 eternal: *aïdios*
 eternity: *aïdiotês*
 ether: *to aitherion*
 etymology: *etumologia*
 give the etymology of: *etumologeîn*
 eunuch: *eunoukhos*
 evident facts: *enargeia*
 example: *paradeigma*
 excellence: *aretê*
 excess: *huperbolê*
 excursus: *parekbasis*
 exist, really exist: *huparkhein*
 experience pain: *aniasthai*
 experience pleasure: *hêdesthai*
 explanation: *paramuthia*
 exposition: *diexodos*; *ekthesis*
 expressed: *kata prophoran*
 expression: *prophora*
 extending: *ekstasis*
 extension: *ektasis*
 extraordinary: *exaisios*
 extreme: *akros*; *akrotês*
 extremely: *akrôs*
 eye: *ophthalmos*
 eyelash: *blepharis*
 in the eyelashes: *blepharitis*
 eyelid: *blepharon*

 fact: *pragma*
 fails to reach: *atukhês*
 fall under: *hupopiptein*
 false: *pseudês*
 false opinion: *pseudodoxia*
 falsehood: *pseudos*
 run into falsehood: *pseudesthai*
 fate: *heimarmenê*

faults, one who loves to find faults:

philenklêmôn

fear: *tremein*

fewness: *oligotês*

fifth substance: *pemptê ousia*

fight: *makhesthai*

fight back against: *anakrouesthai*

figure: *skhêma*

fill out: *platunein*

final cause: *telikon aition*

finished state: *apotelesma*

first cause: *prôtê aitia; prôton aition*

fish: *ikhthus*

fit, thing that does not fit:

anharmodios

flash: *proaugasma*

flavour: *khumos*

flavouring: *khumôsis*

flesh: *sarx*

follow: *parepesthai; sunageisthai*

in the following way: *toioutotropôs*

follow upon: *parakolouthēin*

folly, practical folly: *aphrosunê*

food: *khortos*

foot: *pous*

a foot across: *podiaios*

footed: *pezos*

force: *epagôgê*

foregoing: *ta prolabonta*

force apart: *diakrinein*

forget: *epilanthanesthai*

forgetfulness, forgetting: *lêthê*

form: *eidos*

make to have form: *eidopoiein*

formidability, acquire formidability:

deinousthai

formless: *aneideos*

forthwith: *exapînês*

forward, that goes forward: *badistikos*

foundations: *themelia*

fragrance: *euôdia*

friendship: *philia*

frown: *ophrus*

fruit: *mêlon*

function: *ergon*

further condition, differentiation,

distinction: *prosdiorismos*

fuse: *sunkhein*

gap: *kenon*

gaze, direct gaze at: *atenizein*

generated: *genêtos*

not generated: *agenêtos*

genus: *genos*

geometry: *geômetria*

go astray: *planasthai*

going astray: *planê*

going up: *anabasis*

go back to: *anatrekhein*

go to make up: *sumplêroun*

go over again: *epanalambanein*

goat: *tragos*

goatstag: *tragelaphos*

gobbet: *rhêseidion; rhêsidion*

God: *theos*

good: *agathos*

goodness: *agathotês*

govern: *gubernan*

grasp: *katalambanein*

grow, growing up: *anabasis*

grow together, make to grow together:

sumphuein

grub: *skôlêx*

habitation, underground habitation:

katadusis

habituate, be habituated, become

habituated: *ethizein*

habituation: *ethismos*

hair: *thrix; trikhês*

be long haired: *koman*

hand: *kheir*

give one's hand to: *dexiousthai*

having to hand: *prokheirisis*

hazardous: *parabolos*

head: *korsê*

heading: *programma*

health: *hugieia*

healthy, be healthy: *hugiainein*

hearing: *akousis*

of hearing: *akoustikos*

can be heard through: *diêkhês*

heart: *kardia*

heat: *to thermon; thermotês*

heaven, citizen of heaven:

ouranopolitês

heavenly body: *ouranian*

heed, give heed to: *enakouein*

hello, say 'hello' to: *proskunein*

heterogeneous: *heterogenês*

hint at: *ainittesthai; hupainittesthai*

hive: *smênos*

hold: *katekhein*

keep hold of: *katekhein*

homeomerous: *homoioimerês*
 honey: *meli*
 honeyed wine: *oinomeli*
 horse: *hippos*
 horse-breaker: *pôlodamnês*
 hostage: *homêros*
 hot: *thermos*
 hour: *hōra*
 house: *katoikizein*
 human, *anthrôpeios*; *anthrôpinos*
 human being: *anthrôpos*
 hunt, hard to hunt down: *dusthêratos*
 hypothesis: *hupothesis*
 hypothetical: *hupothetikos*
 by hypothetical reasoning:
 hupothetikôs

idea: *ennoia*
 idle: *argos*
 ill-written: *kakographos*
 illuminate: *phôtizein*
 illumination: *eklampsis*
 image, become an image of:
 exeikonizein
 image-maker: *eidôlopoios*
 imagination: *phantasia*
 imaginative, non-imaginative:
 aphantastos
 non-imaginatively: *aphantastôs*
 imagine: *phantasiousthai*;
 phantazesthai
 that which imagines: *to phantastikon*
 imitating: *mimêsis*
 immediately: *amesôs*
 immobile: *monimos*
 immortal: *athanatos*
 impartially: *adekastôs*
 impede: *empodizein*
 imprint (v.): *entupoun*; *tupoun*
 easily imprinted: *eutupôtos*
 imprint (n.): *tupos*
 receive imprints: *tupousthai*
 resisting imprints: *dustupôtos*
 by way of imprint: *tupôtikôs*
 thing for which there can be no
 imprints: *atupôtos*
 impulse, purposive impulse: *hormê*
 inactivity: *hêsukhia*
 inanimate: *apsukhos*
 inarticulate: *adiarthrôtos*
 incidental, incidentally: *kata*
 sumbebêkos

incline: *rhepein*
 include: *sumperilambanein*
 incommensurable: *asummetros*
 incomplete: *atelês*
 incorporeal: *asômatos*
 increase: *auxanein*
 indefinite: *aoristos*
 in an indefinite way: *aoristôs*
 indestructible: *aphthartos*
 indicate: *eisagein*
 individual: *atomos*
 individualise: *atomoun*
 indivisible: *adiairetos*
 in an indivisible way: *adiaretôs*
 indivisibly: *adiaretôs*
 induction: *epagôgê*
 inductive: *epagôgikos*
 inerrant: *anamartêtos*
 infection: *sêpsis*
 infer: *sullogizesthai*
 inference: *sullogismos*
 infinity, to infinity: *ep' apeiron*
 innate: *emphutos*
 inscribe: *katagraphein*
 already inscribed: *engraphos*
 insect, winged insect: *muia*
 inseparable: *akhôristos*
 instant: *to akhares*
 instrument: *organon*
 instrumental: *organikos*
 instrumentality of sense: *aisthêtikon*
 organon
 intellect: *nous*
 object of intellect: *noêtos*
 intellectual: *noeros*
 intellectually: *noerôs*
 intelligence: *noêsis*
 intelligible: *noeros*
 intermediary, without an
 intermediary: *amesos*
 interpretation: *exêgêsis*
 interpreter: *exêgêtês*
 interrogatively: *erôtêmatikôs*
 interweave: *sumplekein*
 interweaving: *sumplokê*
 intimate: *ainittesthai*
 intuit: *epiballein*; *prosballein*
 intuition: *prosbolê*
 intuitively: *epiblêtikôs*
 irradiation: *ellampsis*
 join on: *sunaptein*

joint: *ginglumos*
 judge (v.), exercise judgement: *phronein*
 judge (n.): *dikastês*
 judgement, practical; judgement: *phronêsis*
 jump ahead: *propêdan*
 junction, natural junction: *sumphuia*
 juxtaposition: *parathesis*

kind, of the same kind: *homogenês*
 know, get to know: *gignôskein*
 hard to know: *dusgnôstos*
 that is known: *epistêtos*
 knower: *epistêmôn*
 knowledge: *eidêsis*; *epistêmê*
 object of knowledge: *epistêton*
 have prior knowledge of: *progignôskein*
 systematic knowledge: *epistêmê*

labour, direct labour: *kamaton poieisthai*
 labyrinthine: *laburinthôdês*
 ladder: *klîmax*
 last part: *eskhatia*
 law: *nomos*
 law abiding: *ennomos*
 lay hold of: *antilambanesthai*
 that lays hold of: *antilêptikos*
 laying hold of: *antilêpsis*
 lead, take the lead of: *protereuein*
 lead across: *metagein*
 learning: *mathêsis*
 leave open: *amphiballein*
 length: *mêkos*
 letter: *stoikheion*
 written letter: *gramma*
 level up: *exomalizein*
 licentious: *aselgês*
 lie ready for: *prokeisthai*
 lie with: *sunousiazein*
 life: *zôê*
 endow with life: *zôoun*
 life-giving: *zôogonos*
 light: *lampas*; *phaos*; *phôs*
 like: *homoios*
 become like: *homoiousthai*
 make completely like: *exomoïoun*
 very like: *paramoios*
 liken: *apeikazein*; *eikazein*; *exeikazein*;
 pareikazein

likeness: *eikôn*
 limb: *skelos*
 limber, make limber: *gumnazein*
 line: *grammê*; *stikhos*
 straight line: *eutheia*
 linkage: *suzeuxis*
 lion: *leôn*
 little, too little: *meiôsis*
 live: *zên*
 liver: *hêpar*
 living in water: *enudros*
 logical sequence: *akolouthia*
 location relatively to one another: *katasterismos*
 lodging: *katagôgion*
 loftiness of genius: *megalophuia*
 lofty speculation: *hupsêlon theôrêma*
 logical: *logikos*
 loins: *aidoion*
 long, make too long: *mêkunein*
 look (n.): *thea*
 look at: *theôrein*
 loose (speaking), loosely: *katakhrêstikôs*
 speak loosely, use words loosely: *katakhrêsthai*
 love of pleasure: *to philêdonon*
 love of wealth: *to philokhrêmaton*
 luminous, of luminous form: *augoeidês*

main clause: *apodosis*
 taking a long time to reach the main clause: *makroapodotos*
 make up, go to make up: *sumplêroun*
 maniac: *mainomenos*
 manifest, make manifest: *phaneroun*
 many-powered: *poludunamos*
 marching with: *prosekhês*
 marginal, of marginal importance: *parergos*
 marvellous: *thaumasios*
 master (v.): *kratein*
 master (n.): *despotês*
 mastery, gain the mastery: *epikratein*
 material, material cause: *hulikon aition*
 in a material way: *hulikôs*
 mathematics: *mathêmata*
 objects of mathematics: *mathêmata*
 mathematicise: *katamathêmatikeuein*
 mature, be mature: *akmazein*
 maturity: *akmê*

have maturity: *akmazein*
 mean: *legein*
 meaning: *sêmasia*
 measuring rod: *kalamos*
 mid-sky, be in mid-sky: *mesouranein*
 mind: *phrên*
 in the mind: *endiathetos*
 persuade to change one's mind:
 metapeithein
 be in two minds: *distazein*
 minor premiss: *elaton*; *proslêpsis*
 mirror: *esoptron*, *katoptron*
 mistake: *hamartia*
 mixed: *miktos*
 mixing with: *epimixia*
 mixture: *krama*; *krasis*
 mnemonic, using a mnemonic system:
 mnêmonikos
 model: *paradeigma*
 moisture: *hugrotês*
 moment, for the moment: *teôs*
 monarchy: *basileia*
 mortal: *thnêtos*
 motion, always in motion: *aeikinêtos*
 mountebank: *goês*
 mouth: *stoma*
 move, that moves: *poreutikos*
 move up and down: *donein*
 movement: *poreia*
 change in movement: *poreutikê*
 kinêsis
 organ for movement: *organon*
 poreutikon
 mud: *ilus*
 muddy: *epitholoun*
 multiform: *polumorphos*
 multipartite: *polumerês*
 multitude: *plêthos*
 music: *mousikê*
 mussel: *pelôris*

nail: *onux*
 name: *onoma*
 have a name: *katonomazesthai*
 natural: *phusikos*
 natural junction: *sumphuia*
 natural science, do natural science:
 phusiologein
 nature: *phusis*
 near at hand: *prosekhês*
 necessarily: *anankaiôs*
 necessary: *anankaïos*

necessity: *anankê*
 neckless: *anaukhên*
 negation, conversion with negation:
 antistrophê sun antithesei
 negative (n.): *arnêsis*
 negative, establish negative point:
 anatrepein
 negatively: *apophatikôs*
 neighbour: *geitôn*
 neuter, in the neuter: *oudeteros*
 new, introduce a new classification:
 kainotomein
 new-born: *neogenês*
 night: *nux*
 noble: *gennaios*
 nocturnal: *nukterinos*
 non-imaginative: *aphantastos*
 non-imaginatively: *aphantastôs*
 non-material: *aïlos*
 non-planetary: *aplanês*
 non-rational: *alogos*
 nose: *rhis*
 nostril: *muktêr*
 note: *sêmeiousthai*
 nourish: *trephein*
 nourishment: *trophê*
 now: *nun*
 nowhere, getting nowhere:
 aprosphoros
 number: *arithmos*
 have the same number: *isosthenein*
 nursling's dues: *tropheia*

oar: *kopê*
 oath: *horkos*
 occupy, be occupied with:
 katagignesthai
 octahedron: *octaedron*
 odour: *osmê*
 offspring: *gennêma*
 old age: *gêras*
 oligarchy: *oligarkhia*
 one, as being each one: *henoeidês*
 one or the other: *thateros*
 open, leave open: *amphiballein*
 open out: *diastellesthai*
 opinion: *doxa*
 be of the opinion: *doxazein*
 subject of opinion, object of opinion,
 thing opinion is about: *doxastos*
 of the same opinion as: *homodoxos*
 optic: *optikos*

order, arrange in order: *diakosmein*
 good order: *eutaxia*
 out of order: *skolios*
 words out of order: *huperbaton*
 ordering: *diataxis*
 otherness: *heterotês*
 outline: *prokharattein*
 outside, from outside: *thurathen*
 overbright: *huperlampros*
 overcome: *kataballein*
 overlay: *katakruptein*
 overlook: *paroran*
 own, its own, belong as its own: *oikeios*
 make its own: *spheterizesthai*

pain: *ania*
 experience pain: *aniasthai*
 painful: *aniaros*
 paintbrush: *grapheion*
 painter: *grapheus*
 painting: *zôgraphia*
 palsy, someone with palsy: *parêtos*
 papyrus, sheet of: *khartion*
 paraphrase: *paraphrazein*
 parrot: *psittakos*
 part: *meros*
 thing of similar parts: *homomereia*
 without parts: *amerês*
 in parts (adj.), divisible into parts:
meristos
 in parts (adv.), part by part: *meristôs*
 divide in parts: *diamerizein*
 particular: *merikos*
 partition (v.): *diamerizein*
 partless: *ameristos*
 in a partless way: *amerôs*
 pass away: *phtheiristhai*
 pass through: *parodeuein*
 passage: *agôgê*
 (in text): *rhêton*
 passing away: *phthora*
 passion, have a passion for: *truphan*
 passive intellect: *nous pathêtikos*
 patient: *paskhôn*
 patrol: *peripolein*
 peculiar, peculiarity, way peculiar to:
idiôma
 perceive: *aisthanesthai*
 perceiving, that perceives: *aisthêtikos*
 perceivingly: *aisthêtôs*
 perfect (v.): *teleioun*
 perfect (adj.): *teleios*

perfective: *teleiôtikos*
 periphery: *periphereia*
 perish: *apollusthai*
 person, famous person: *lampros*
 persuade: *peithein*
 persuade to change one's mind:
metapeithein
 persuasion: *peithô*
 pervade: *phoitan*
 pestilential: *loimôdês*
 philosopher: *philosophos*
 phlegm: *phlegma*
 physical: *phusikos*
 physicist: *phusiologos*
 picture: *graphê*
 pious: *eusebês*
 pit: *bothros*
 place: *topos*
 plain, make plain: *phaneroun*
 plaiting together: *epiplokê*
 plane: *epipedon*
 planetary, non-planetary: *aplanês*
 plant: *phuton*
 plea: *sunêgoria*
 plead: *dikaiologeisthai*
 something to plead: *dikaiologia*
 plead for, plead as advocate:
sunêgorein
 please: *hêdein*; *hêdunein*
 pleasant: *hêdus*
 pleasantness: *hêdutês*
 pleasure: *hêdonê*
 experience pleasure: *hêdesthai*
 pledge: *parakatathêkê*
 plotting against: *epiboulê*
 pneuma: *pneuma*
 pneumatic body: *pneumatikon sôma*
 point: *kephalaion*; *sêmeion*; *stigmê*
 to the point: *prosphoros*
 point at issue: *prokeimenon*
 pointlike, in a pointlike way: *kentrikôs*
 poison: *dêlêtêrion*
 polemic, be in the heat of:
apomakhesthai
 polyps: *polupous*
 poor: *penês*
 positively: *kataphatikôs*; *ek*
kataphaseôs
 potential, in potentiality: *dunamei*
 potbellied: *progastôr*
 pound up: *anamattesthai*
 power: *dunamis*

supreme power: *kuros*
 practical: *praktikos*
 practical folly: *aphrosunê*
 practical judgement: *phronêsis*
 prayer: *eukhê*
 preceding: *proteraios*
 precipice: *krêmnos*
 predicate (v.): *katêgorein*
 predicate (n.): *katêgoroumenon*
 premiss: *protasis*
 conditional premiss: *sunêmnenon*
 major premiss: *meizon*
 minor premiss: *elaton; proslêpsis*
 prepare: *eutrepizein*
 prevail: *authentein*
 principle: *arkhê; logos*
 prior deliberation: *probouleusis*
 prior imagining: *prophantazesthai*
 prior knowledge: *prognôskein*
 privation: *sterêsis*
 problem: *aporia*
 raise problem: *aporein*
 produce: *paragein*
 proof: *epikheirêma*
 proper: *idikos*
 belonging properly to: *oikeios*
 proportion: *logos*
 proportional: *summetros*
 proportionality: *logos*
 proportionally: *summetrôs*
 proportional to: *analogos*
 proposition: *problêma; protasis*
 supplementary proposition: *porisma*
 prostitute: *porneia*
 go to a prostitute: *porneuein*
 protect: *skepazein*
 Providence: *pronoia*
 proximate: *prosekhês*
 proximately: *prosekhôs*
 psychical: *psukhikôs*
 pull: *helkein*
 pulling: *helxis*
 pupil (of eye): *korê*
 pupil (learner): *mathêtês*
 pure: *eilikrinês*
 purpose, to no purpose: *matên*
 purposive impulse: *hormê*
 push (v.): *ôthein*
 push (n.), pushing: *ôsis*
 put forth, put forward: *proballein*
 put together: *suntithenai*
 pyramid: *puramis*

qualitative, make qualitative: *poioun*
 quality: *poiotês*
 quantitative, make quantitative:
 posoun
 question, as a question: *erôtêmatikôs*

 rag: *rhakos*
 ranged along with: *sustoikhos*
 rational: *logikos*
 rational in form: *logoeidês*
 non-rational: *alogos*
 reach, reach out: *oregesthai*
 fails to reach: *atukhês*
 react: *antidran*
 read: *anaginôskein*
 reading: *anagnôsis*
 (textual) reading: *graphê*
 reason: *aitia; logos*
 that reasons: *logistikos*
 reasoning: *logismos*
 reassurance: *paramuthia*
 reassure: *paramuthein*
 reception: *diadokhê*
 receptive: *dektikos*
 réchauffé, be réchauffé:
 anakhlazesthai
 reckon, reckon off: *arithmein*
 recollection: *anamnêsis*
 recognise: *epigignôskein; gignôskein*
 reduction: *elleipsis*
 reference: *anaphora*
 reflect: *epistrephein*
 reflection: *epistrophê*
 reflection: *anaklasis*
 refute: *anatrepein; elenkhein*
 refutation: *anatotê; elenkhos*
 reject: *athetein*
 related, way of being related: *skhesis*
 in how related: *skhesei*
 relation: *emphereia; skhesis*
 relationship: *logos; skhesis*
 remain still: *menein*
 reminiscent: *anamnêstikos*
 repetitive, be repetitive: *dittologeîn*
 repository: *dokheion*
 representation: *anaplasma*
 from a representation of: *anaplattein*
 reproach: *elenkhein*
 reptile: *herpeton*
 resist: *antibainein*
 resisting imprints: *dustupôtos*
 resolve: *epiluesthai*

- responsible: *aitios*
 hold responsible for: *aitian*
 restrain: *anakhaitizein*
 right, set right: *epidiorthoun*
 right action: *kathorthôma*
 rod: *rhabdos*
 measuring rod: *kalamos*
 rooted, be rooted: *rizousthai*
 rope: *kalôs*
 rotation: *dinêsis*
 rough, with a rough breathing: *daseôs*
 roughness: *trakhutês*
 round: *strongulos*
 rout: *phobein*
 rove: *phoitan*
 rule: *kanôn*
 ruling part: *hêgemonikon*
 run out beside: *pareistrekhein*
- safe, what is safe: *asphaleia*
 safer: *asphalesteros*
 savoury sauce: *karukeuma*
 say: *legein*
 thing said: *dialekton*
 say against: *epilegein*
 say 'hello' to: *proskunein*
 saying: *logion*
 scent-making: *murepsikê*
 science: *epistêmê*
 do natural science: *phusiologeîn*
 screen off: *antiphrattein*
 seafight: *naumakhia*
 secondary: *deuteros*
 section: *kephalaion*
 see, can see: *theôrein*
 can be seen through: *diaphanês*
 thing seen: *oraton*
 see directly: *autoptein*
 seeing: *orasis*
 seeing sparks: *marmarugai*
 self-controlled, person with
 self-control: *enkratês*
 semen: *sperma*
 semicircle: *hêmikuklion*
 seminally: *spermatikôs*
 send on: *eisballein*
 sense: *aisthêsis*
 sense-object: *aisthêton*
 sense-organ: *aisthêtêrion*
 common sense: *aisthêsis koinê*
 special sense: *aisthêsis idikê*
- incidental sense-object: *aisthêton kata sumbebêkos*
 instrumentality of sense: *aisthêtikon organon*
 way distinctive of sense: *aisthêtikon idiôma*
 senses, come to one's senses:
ananêphein
 sentence: *logos*
 separable, separate (adj.): *khôristos*
 separate (v.): *khôrizein*
 serve to carry, serve: *diakonein*
 serviceable: *euerghês*
 set out: *gumnazein*
 set right: *epidiorthoun*
 setback to arise: *antipiptein*
 sever: *diaskhizein*
 sexual gratification: *aphrodisia*
 sexual indulgence: *aphrodisiazesthai*
 sink deeper into: *embathunein*
 shade, shadow: *skia*
 shape: *morphê; skhêma*
 have shape: *skhêmatizesthai*
 by way of shape: *morphôtikôs*
 shaped, easily shaped: *euplastos*
 share, lack a share: *amoirin*
 shell, animal with a shell:
ostrakodermon
 shell-like: *ostreinos*
 shoulder: *ômos*
 shout aloud: *boan*
 shrewd, very shrewd: *polumêtis*
 shrewdness: *mêtis*
 shut eyes: *kleiein ophthalmous*
 have eyes shut: *muein ophthalmous*
 sick, be sick: *nosein*
 side: *pleura*
 side effect: *sumptôma*
 sight: *opsis*
 of sight: *oratikos*
 sign: *sêmeion*
 signify: *sêmainein*
 way of signifying: *sêmasia*
 silent, be silent: *sgan*
 similar, thing of similar parts:
homoiomereia
 simple: *haplous*
 sinew: *neuron*
 size: *megethos*
 sketch: *skiagraphia*
 skill: *tekhnê*
 man of skill: *tekhnitês*

thing in the field of skill: *tekhnêton*
 sky, as tall as the sky: *ouranomêkês*
 be in mid-sky: *mesouranein*
 sleep (v.): *katheudein*
 sleep (n.): *hupnos*
 smell: *osphrêsis*
 object of smell: *osphranton*
 can be smelt through: *diosmos*
 snake: *ophis*
 snow: *khîon*
 snubnosed: *simos*
 snubnosedness: *simotês*
 so-and-so: *deina*
 soft-fleshed: *hapalosarkos*
 softness: *malakotês*
 solid: *stereos*
 solution: *lusis*
 sophist: *sophistês*
 source: *arkhê*
 soul: *psukhê*
 sound (adj.): *spoudaios*
 sound (n.): *phônê*; *psophos*
 sounding: *psophêsis*
 sparks, seeing sparks: *marmarugai*
 speak, speak of: *legein*
 speak accurately: *kuriolektein*
 speak truly: *alêtheuein*
 special (sense, sense-object): *idikos*
 species: *eidos*
 speculation, speculative thought:
 theôrema
 speech: *logos*
 sphere: *sphaira*
 spider: *arakhnês*
 spider's web: *arakhnion*
 spirit: *thumos*
 spirited: *thumikos*; *thumoeidês*
 become spirited: *thumousthai*
 spoken sound: *phônê*
 sponge: *spongos*
 spring: *pêgê*
 stag: *elaphos*
 stand firm: *rhônnusthai*
 starting point: *arkhê*
 state: *diathesis*
 statement: *logos*
 stay still: *êremein*
 staying still: *êremia*
 staying unchanged: *stasis*
 still, remain still: *menein*
 stir up: *diegeirein*
 stomach: *gastêr*

straight line: *eutheia*
 straight off: *autothen*
 strand: *plegma*
 strife: *neikos*
 stronger: *kreitton*
 strongest: *kratistos*
 structure of argument: *diaskeuê logou*
 subject: *hupokeimenon*
 be subject: *hupokeisthai*
 sublunary: *huposelênos*
 subreal: *metousios*
 subsistence: *huparxis*; *hupostasis*
 subsistence-giving: *hupostatikos*
 subsistent: *huphistamenon*
 substantive: *huparktikos*
 subsume: *anagein*
 succession: *diadokhê*
 suck at: *bdallein*
 suitability: *epitêdeiotês*
 suitable: *epitêdeios*
 summer: *theros*
 sun: *hêlios*
 superficially: *epipolaiôs*
 superfluity: *peritton*
 superior: *entimoteros*; *timios*
 superlunary: *huperseleinos*
 supernatural: *daimonios*
 super-real: *huperousios*
 supplementary proposition: *porisma*
 supply further, supply additional:
 proseuporein
 supposal: *hupolêpsis*
 suppose: *hupolambanein*; *hupotithenai*
 supreme power: *kuros*
 surface: *epiphaneia*
 surmise: *stokhazesthai*
 sweet: *glukus*
 switch: *metabolê*
 sword: *xiphos*
 syllable: *sullabê*
 syllogise: *sullogizesthai*
 syllogism: *sullogismos*
 syllogistically: *sullogistikôs*
 systematic knowledge: *epistêmê*
 with systematic knowledge:
 epistêmonikôs
 talking about: *logos*
 tall, as tall as the sky: *ouranomekês*
 tame: *hêmeroun*
 task: *agôn*
 taste: *geusis*

object of taste: *geuston*
 Taurus: *tauros*
 teachable: *didaktos*
 teaching: *didaxis*
 temerarious: *tolmêtias*
 tempering: *epitasis*
 tense: *khronos*
 term: *horos*
 terminate together: *sumperatoun*
 termination: *apoperatôsis*
 bring a termination: *apoperatoun*
 termwise, in a termwise manner:
 horikôs
 terror: *deilias*
 text: *lexis*
 theological: *theologikos*
 thesis: *problêma*
 thing: *pragma*
 think: *dianoeisthai*; *noein*
 that which thinks: *dianoêtikon*
 think out: *ennoein*
 thinking: *noêsis*; *pronoêsis*
 thought: *dianoia*; *noêsis*
 exercise thought: *noein*
 take thought in advance:
 pronoeisthai
 taking thought in advance: *pronoia*
 tight rope: *artêmenos kalôs*
 think (discursively) *dianoeisthai*
 that thinks: *dianoêtikon*
 thought: *dianoia*
 object of thought: *dianoêton*
 thunder: *brontê*
 together, act together: *sunergein*
 put together: *suntithenai*
 two together: *sunamphoteron*
 tomb: *taphos*
 tooth: *odous*
 torch light: *phruktos*
 touch (v.), perceive by touching:
 haptesthai
 object of touch: *hapton*
 touch (n.): *haphê*
 trace left behind: *leipsanon*
 tragedy, said in a tragedy: *tragikos*
 tragic actor: *tragoidos*
 transcend: *epanabainein*
 transition, not transition-making:
 ametabatos
 transparent: *diaphanês*
 traveller, fellow traveller:
 sumparatheon

treasury, store up a treasury in
 advance: *prothêsaurizein*
 true: *alêthês*; *alêthinos*
 be true: *alêtheuein*
 truly, what is truly: *alêthinos*
 speak truly: *alêtheuein*
 truth: *alêtheia*
 attain truth, achieve truth:
 alêtheuein
 try out: *gumnazein*
 turn aside from: *ekklinein*;
 metatrepesthai
 turn away from: *apostrephesthai*
 two together: *sunamphoteron*

 unaffected: *apathês*
 being unaffected: *apatheia*
 unchanging: *akinêtos*
 unchangingly: *akinêtôs*
 unclear: *asaphês*
 unconfused: *asunkhutos*
 underground habitation: *katadusis*
 undermine: *paratherein*
 understand: *hupakouein*
 understand along with: *sunupakouein*
 undifferentiated: *adiaphoros*
 undivided: *adiairetos*
 undividedly: *adiaretôs*
 unfold: *anaptussein*
 unification: *henôsis*
 unit: *monas*
 unite: *henopoiein*; *henoun*
 unitive: *heniaios*
 unity: *henôsis*
 universal (n.): *katholou*
 universal (adj.): *katholikos*
 universe: *to pan*
 unmixed: *amigês*
 unperceiving: *anaisthêtos*
 unpleasant: *lupêros*
 unspoken difficulty: *sigêtheisa aporia*
 unsuitability: *anepitêdeiotês*
 unteachable: *adidaktos*
 unutterable: *arrêtos*
 upward, on the upward path: *anagôgos*
 urgent, be urgent: *katepeigein*
 usage: *kh rêsis*
 common usage: *sunêtheia koinê*
 usurp: *apolambanein*

 vegetative: *phutikos*
 vehicle: *to okhoun*

movement in a vehicle: *okhêsis*
 vice: *kakia*
 virtue: *aretê*
 vision, dimness of vision: *ambluôpia*
 vital: *zôtikos*
 voice: *phônê*
 having no voice: *aphônos*
 with a bad voice: *kakophônos*

 waking: *egrêgoris*
 walk, power to walk: *badistikê*
 dunamis
 walking: *badisis*
 in walking: *badistikos*
 wall: *toikhos*
 wander: *planasthai*
 wander astray: *paraplanasthai*
 warm: *thermantos*
 waste: *têkein*
 water: *hudôr*
 living in water: *enüdrois*
 wax: *kêros*
 way, by the way: *parergos*
 in some way or other: *hamôsgepôs*
 wealth, love of wealth: *to*
 philokhrêmaton
 weaving: *huphantikê*
 web, spider's web: *arakhnion*
 welcome: *dekhesthai*

well: *phrear*
 whip: *mastix*
 width: *platos*
 will, against one's will: *akousios*
 winged: *ptênos*
 winged insect: *muia*
 winter: *kheimôn*
 wish, rational wish: *boulêsis*
 within, from within: *oikothên*
 write
 writing tablet in which nothing is
 written: *grammateion agraphon*
 written letter: *gramma*
 ill written: *kakographos*
 wooden horse: *dourios hippos*
 wool-gathering, be wool-gathering:
 rhemnêsthai
 word: *lexis*
 in a word: *logôi eipein*
 in so many words: *diarrêdên*
 words out of order: *hyperbaton*
 work: *ergon*

 yellow: *xanthos*
 yield: *eikein*
 yoke together with: *suzeugnunai*

 zoophyte: *zôophuton*

Greek-English Index

- adekastôs**, impartially, 519,29
- adiairetos**, indivisible, 459,5; 484,15
542,27.28; 543,5.6.10.13.14.16.18;
(division of) 544,5-16;
549,4.9.10.23-5; 550,24;
551,1.9.22; 552,2-4.10
undivided, 543,12;
549,5-6.8.13-16.30; 550,3
- adiairetôs**, indivisibly, in an
indivisible way, 542,29-543,4;
551,5
undividedly, in an undivided way,
550,7.30
- adiarthrotos**, inarticulate, 499,1
- adiaphoros**, undifferentiated, 599,21
- adidakto**, unteachable, 590,1.3.5
- adioristôs**, without drawing
distinctions, 472,2
- aeikinêtos**, always in motion, 461,28;
511,1; 528,28; 535,10.11; 600,1
- aeizôos**, always living, 528,28-9
- aêr**, air, 448,18.20.21.40; 449,1.2.4;
452,18.28
- agathos**, good, 554,18.31-7; 559,5;
560,6; 580,11.12 etc.
- prôton agathon**, the First Good,
586,5
- agathotês**, goodness, 536,12-13
- agenêtos**, not generated, 599,32; 600,2
- agraphos**, on which nothing is
written, 469,18; 516,24; 524,14;
533,25.30
- agreuein**, stalk, 525,8
- agôgê**, passage, 558,30
- agôn**, task, 539,11
- aïdios**, eternal, 466,24; 516,14.18;
517,6.20; 518,7; 519,13.14; 520,34;
521,12; 537,4.5; 541,5-16;
545,25.28.36
- aïdiotês**, eternity, 517,18-19; 521,27
- aidoion**, loins, 578,18
- ainittesthai**, hint at, 475,23; 540,30;
582,2; 584,9.16
- intimate, 543,25
- aisthanesthai**, to perceive, 447,28;
462,29-32; 463,1.3; 467,16;
489,13-15; 522,6; 596,19-21
- aisthêsis**, sense, (as contrasted with
intellect and imagination) 446,21;
485,30; 487,29,30; 488,1;
490,6.10.15; 491,7.9.15.16;
492,6.15; 494,5; 498,13.15; 501,13;
506,26; 509,4-5; 512,31; 513,33;
514,15.17.18; 516,19; 521,37;
522,9.10; 554,39; 568,1; see also
kata dunamin, **kat'energeian**
(a particular sense-faculty), 446,22;
447,3.17-19.27.31.35; 449,8-11;
450,14; 451,3.4; 453,26; 455,13;
456,15; 459,15; 462,31.32;
463,2.11; 469,9-10
- aisthêsis idikê**, special sense,
454,1-2; 573,24
- aisthêsis koinê**, common sense,
446,11; 447,1; 455,21-2.26.34;
456,1.3; 460,16-20; 465,25.26.28;
477,23-5.28; 479,8-9; 480,5.7;
481,3.6.15; 483,3-4; 555,5.7;
560,20.26.28; 561,5
- aisthêtêrion**, sense organ, 447,18;
448,3.4.25; 449,8-10.29; 452,1.8.9;
453,20-2; 457,13; 466,11.14;
482,11-13; 601,25; 602,10;
606,6.20.21
- aisthêtikos**, (that) which perceives,
perceiving, 474,29; 574,13; 587,3
- aisthêtikê psukhê**, perceiving soul,
594,29.31; 595,36; 598,10
- aisthêtikon idiôma**, way
distinctive of sense, 458,13.16
- aisthêtikon organon**, the
instrumentality of sense, 530,9
- aisthêton**, sense-object, 447,5,
449,30; 452,2; 469,9.11; 561,26;
567,8; 568,19

- aisthêton idikon**, special sense-object, 509,7
- aisthêton idion**, proper sense-object, 456,30.33; 457,3-6; 458,4; 459,10-12; 462,13.27; 509,10; 513,17,19; 514,9
- aisthêton kata sumbebêkos**, incidental sense-object, sense-object incidentally, 454,2.18; 455,3; 457,28; 458,5-6; 460,29-30; 509,10-11.24-5; 513,23.24; 514,8-9; 553,32-3
- koinon aisthêton**, common sense-object, 453,28.32.34; 454,1.5; 455,6; 456,17.19.23; 457,3-5.27.29; 458,10.17.19; 459,22; 462,8.12.14; 509,11.24.26; 510,2.4; 514,7
- aisthêtôs**, perceivingly, 576,15
- aitherion, to**, the ether, 450,29
- aitia**, reason, 488,2; 489,22; 558,13; 588,1; 593,4
cause 486,36
- aitiatikê**, accusative, 529,12.14
- aitian**, hold responsible, 448,38
- aitios**, responsible for, 578,36.39
- aition**, cause, see **hulikon**,
organikon, **poiêtikon**, **prôton**,
telikon
- akares, to**, an instant, 549,11.13
- akhrîstos**, inseparable, 483,30.31; 532,15; 566,21
- akhrômatistos**, colourless, 519,29
- akhronôs**, atemporally, 477,25; 479,22; 480,13.18; 484,30; 487,33.35; 488,4
- akinêtein**, be without changing, 595,8; 604,33-605,1
- akinêtos**, unchanging, without change, 594,19.24; 598,32
- akinêtôs**, unchangingly, 458,35
- akmazein**, be mature, have maturity 577,20.27.29
- akmê**, maturity, 577,13; 583,3; 598,12; 599,15
- akoê**, hearing, 472,22-473,7; 474,18.19
- akolastos**, debauched, 486,30
- akolouthia**, logical sequence, 548,15
- akousios**, against one's will, 497,22-6
- akousis**, hearing, 470,11; 472,24
audition, 474,18.32
- akoustikos**, of hearing, 463,11
- akrasia**, deficiency in self-control, 593,13
- akrateia**, being out of control, 593,13
- akratês**, deficient in self-control, 578,16.19; 579,11
- akribês**, accurate, 456,29.36
- akribôs**, accurately, 456,24
- akros**, extreme, 492,20; 504,1.9
- akrotês**, extreme, 472,5; 476,8-9
- akrôs**, extremely, 477,17
- alêtheia**, truth, 544,20-31; 545,3.6.10
- alêtheuein**, attain truth, achieve truth, 491,13.16.19.26; 495,32; 496,24-6; 502,19-21; 513,12; 514,1.31; 545,13; 553,28.32.33; 554,3-5; 556,11.16.25.27; 569,19.20
speak truly, 545,27
to be true, 492,13
- alêthês**, true, 491,30-1; 504,23; 505,20; 506,7; 555,18.20.24.25;
- alêthinos**, true, 506,6
what is truly, 585,25.28
- alloioun**, alter, 526,13.17; 558,20.22.28; 605,8
- alloiôsis**, alteration, 457,29; 526,14
- allotriopragein**, attend to the business of another, 528,23; 554,4; 557,13
- allotrios**, belonging to another, 478,19; 595,25
alien, 523,15-16
- alogos**, non-rational; 496,27.29-33; 503,11.13.14; 507,15; 511,27; 515,9.11
- alogos gnôsis**, non-rational cognition, 525,12.15.18
- alogos psukhê**, non-rational soul, 446,5; 450,11.13; 485,11.12.14; 494,7.10-11; 507,1.2.5; 541,8.12; 577,4-8; 597,19.26.31-2
- amakhos**, consistent, 509,27
- amblunesthai**, be blunted, 487,4
- ambliôpia**, dimness of vision, 487,10
- ambliôttein**, blunt, 455,8; 517,9
- ameibein**, change, 590,32
- amerês**, without parts, 504,10; 543,12; 544,8.9.13; 551,33
- ameristos**, partless, 546,37
- amerôs**, in a partless way, 546,37
- amesôs**, immediately, 447,35; 451,13
etc.

- without an intermediary, 451,16;
558,14; 601,21; 603,27
- ametabatos**, transition-making,
562,31
- ametros**, disproportionate, 469,14;
517,10-11
- amigēs**, unmixed, 521,11-18;
523,5-11; 526,22
- amoirein**, lack a share of, 577,10;
596,37
- amphêristos**, that hangs in the
balance, 593,15
- amphiballein**, leave open, 551,24.27
- amphiballesthai**, be disputable;
447,20-2
- amphibolôs**, in an ambiguous way,
466,22-3
- amudros**, dim, 495,14.15.17; 496,5;
500,13
- amudrôs**, dimly, 456,34.35; 592,29
- anabasis**, ascent, 473,23
going up, 473,24
growing up, 577,13
- anakhaitizein**, restrain, 581,15
- anakhlazesthai**, be réchauffé, 455,29
- anagein**, subsume, 543,33
to bring under, 589,8.9
- anaginôskein**, read, 568,12; 596,32-3
- anagnôsis**, reading, 582,6
- anagôgos**, on the upward path,
596,30
- anaisthêtos**, unperceiving, 594,35;
596,17.18
- anakathairein**, clean up, 515,17
- anaklasis**, reflection, 605,20.22.24
- anakrouesthai**, fight back against,
581,6
- analambanein**, restate, 496,36
- analogein**, be analogous to, 511,27;
535,34.36; 537,28; 538,14;
539,27-32; 557,12-13; 600,33
- analogia**, analogy, 556,5; 560,26.30
- analogos**, analogous to, 493,9
proportional to, 514,22
- analysis**
kat' analusin, analytically, 532,27
- anamartêtos**, inerrant, 491,12
- anamattesthai**, pound up, 515,29
- anamnêsis**, recollection, 518,23-4;
533,33-4; 596,6
- anamnêstikos**, reminiscent,
495,25.28
- ananêphein**, come to senses, 466,34
- anankaios**, necessary, carry
necessity, 449,19; 503,24
- anankê**, necessity, 447,30 etc.
- anaphora**, reference, 482,23
- anaplasma**, representation, 497,25
- anaplattein**, form representation of,
488,17; 495,33; 503,31-2; 508,1-6;
534,7
- anapnoê**, breathing,
575,15-16.18.19.26.28
- anapodizein**, back away, 488,35
- anaptussein**, unfold, 477,31
- anarmodios**, thing that does not fit,
548,11
- anatrekhein**, go back to, 577,4-5
- anatrepein**, establish the negative
point that, 457,14; refute 477,29;
480,31; 481,2; 569,28; 599,12
- anatropê**, refutation, 484,18; 569,27
- anazôgraphein**, depict, 509,17-21
- andrapodizein**, enslave, 572,26-7
- aneideos**, formless, 519,30.31.36.37;
543,29
- anepistêmosunê**, systematic error,
491,33
- anepitêdeiotês**, unsuitability, 448,35;
511,36; 576,33-4; 577,9
- angeion**, container, 508,22
- angelikos**, angelic, 535,6.38;
536,13.18.23; 537,15
- angelos**, angel, 527,27
- ankôn**, elbow, 588,23
- ania**, pain, 559,29
- aniaros**, painful, 559,3; 560,5; 562,8
- aniasthai**, experience pain, 559,1;
561,28
- anoikeios**, inappropriate, 529,10
- anôlethros**, imperishable, 541,13
- anomogenês**, heterogeneous, 478,25;
480,6; 482,15.22; 561,5.7.8
- anomoeidês**, different in species,
579,30-2; 586,3
- anomoieidês**, heterogeneous, 478,3
- anomos**, lawless, 565,37
- anomoïlos**, not of the same matter,
526,18-19
- anous**, non-intellect, 525,22.23.24
- anthrôpeios**, human, 539,24
- anthrôpinos**, human, 535,8.32.38;
536,2; 539,1.4-5.9

- anthrôpos**, man, 450,14.16; human being, 490,34; 541,7
- antibainein**, resist, 588,36-7
- antidiairein**, contradistinguish, 477,22
- antidiastellein**, contradistiguish, 457,24; 543,17.22.26.28.32.36
- antidiastolé**, contradistinction, 545,11
- antidran**, react, 599,7
- antilambanesthai**, lay hold of, 449,32 et passim
- antiléptikos**, (thing) that lays hold of, 464,22.23; 596,10
- antilépsis**, laying hold of, 597,24
- antipaskhein**, be affected in turn, 526,24-8
- antiphrattein**, screen off, 515,33
- antipiptein**, setback to arise, 572,24
- antiprattein**, counteract, 583,15
- antistasis**, counter, 563,31
- antistrephein**, convert, 527,12-14.20.39; 532,33; 602,3; 606,14
- antistrophê**, conversion, 528,2
- sun antithesei**, conversion with negation, 450,2
- anupokritôs**, not by way of acting, 492,29
- aoristos**, indefinite, 580,28
- aoristôs**, in an indefinite way, 592,26.29
- aparithmeisthai**, enumerate, 505,23
- apaskholeisthai**, be engrossed, 596,11
- apatasthai**, be in error, 487,9.12-13 err, 488,1-8
fall into error, 461,20; 522,22; 539,35.37
- apatê**, error, 455,31; 487,8.13-18; 488,6; 490,1.3
- apatheia**, being unaffected, 526,33
- apathês**, unaffected, 453,21; 521,11-12.18.21; 542,4; 596,3.4.19; 597,3
- apeikazein**, liken, 537,27; 555,1; 589,19.20
- apeiron**
ep' apeiron, to infinity, 463,25
- aphairesis**, abstraction
en aphairesei, abstract, 532,3.5; 566,8-16
- aphanizein**, obliterate, 508,18
make to disappear, 546,35; 551,10
- aphantastos**, non-imaginative, 542,10; 563,14.20; 584,9
- aphantastôs**, non-imaginatively, 568,15
- aphônos**, having no voice, 533,31
- aphrodisia**, sexual gratification, 576,12; 578,18; 579,6
- aphrodisiazesthai**, sexual indulgence, 560,5
- aphrosunê**, practical folly, 491,33
- aphthartos**, indestructible, 518,4.5
- aplanês**, non-planetary (sphere), 511,4; 527,28
- apodekkesthai**, agree with, 570,14; 591,17
- apodeiknunai**, demonstrate, 447,24.25.26; 457,23.25; 469,29; 525,9; 538,2; 587,1; 595,10; 596,36
- apodeixis**, demonstration, 447,19; 500,18
- apodosis**, main clause, 489,9.10; 490,13.16
- apoklêrôtikos**, arbitrary, 463,20-1; 468,12
- apokoptein**, break off, 582,7
- apolambanein**, usurp, 584,13
- apolausis**, enjoyment, 589,33-4
- apologeisthai**, plead in defence, 486,34; 565,22
to make a defence, 536,31
- apologia**, defence, 536,34; 572,10.16
- apollusthai**, perish, 603,13
- apomakkesthai**, be in the heat of polemic, 575,4
- aponemein**, distribute, 481,12
- apoperatoun**, bring to termination, 455,21; 483,4
- apoperatôsis**, termination, 555,7.25.27
- apophainesthai**, declare, 455,24; 456,7; 464,17
- apophasis**, denial, 459,3.7; 466,5.6; 478,26-7; 546,4-10; 547,1-5; 548,12.17.19.24-5; 559,31
- apophatikôs**, negatively, 547,8-9.15
- aporein**, raise problem, raise difficulty, 448,24 etc.
- aporía**, problem, difficulty, 448,25 etc. lack, 576,37

aporon, difficulty, problem, 495,18;
532,29

apostrephesthai, turn away from,
554,28; 599,16

apoteinesthai, attack, 463,28

apotelesma, finished state, 500,23

apoteleutêsis, end-point, 593,6

apotiktein, bring to birth, 495,23

aprosphoros, getting nowhere, 486,12

apsukhos, inanimate, 490,9 etc.

arakhnês, spider, 500,38; 590,4

arakhnion, (spider's) web, 501,1

aretê, virtue, 555,20; 579,34.35
excellence, 563,40

argos, idle, 584,29

aristeus, champion, 593,27-30; 594,9

aristodēmokratia, aristodemocracy,
565,37

aristokratia, aristocracy, 565,34

arithmein, reckon, reckon off, 580,26

arithmêtikoi logoi, arithmetical
discourses, 457,25

arithmos, number, 453,30; 457,24.25

arkhê, starting point, 488,12 etc.

principle, 570,22

source, 587,3 etc.

arnêsis, negative, 596,13.15

arrêtos, unutterable, 504,20

arthron, (definite) article, 475,29;
476,3-6

artos, bread, 558,2

asapheia, lack of clarity, 451,8.20

asaphês, unclear, 467,23

aselgês, licentious, 579,2

askholeisthai, be engrossed,
466,30-6; 573,1

asômatos, incorporeal, 463,37; 464,5;
466,9.22; 477,24; 483,19; 571,29

aspalax, blind rat, 450,21; 453,6;
595,30

asphaleia, what is safe, 452,5

asphalesteros, safer, 513,16

asteios, elegant, 488,27
charming, 562,13

astronomein, think about
astronomy, 571,6; 573,4

astronomia, astronomy, 461,28

asummetros, incommensurable, 548,1

asunkhutos, unconfused, 589,39;
590,2

atelês, incomplete, 558,27; 577,11-30

atenizein, direct gaze at, 508,33.35

athanatos, immortal, 466,23.24;
516,1.21; 536,21-537,5; 541,6-16;
596,4.19

athetein, reject, 597,17

atimos, inferior, 464,25-7

atomos, individual, 481,14; 509,29.35;
510,8; 557,25

atomoun, individualise, 491,28

atopon, absurd, absurdity, 467,26 etc.

atupôtos, thing for which there can
be no imprints, 542,11

atukhês, fails to reach, 498,7; 516,27;
564,24

augoeidês, of luminous form, 597,18

aûlos, non-material, 461,31;

525,13-24; 543,15; 547,17;

563,23.29,31; 564,15-18

aûlôs, in a non-material way, 567,19

authenthein, prevail, 487,12

autothen, straight off, 473,12 etc.

autoptein, see directly, 574,17

auxanein, increase, 458,33.34 etc.

badisis, walking, 544,34

badistikos, that goes forward, 591,32
in walking, 588,34

badistikê dunamis, power to walk,
577,20-1

basileia, monarchy, 565,34-5

bastazein, carry, 472,33-4

bathos, depth, 552,16-18

bdallein, suck at, 494,31; 495,4

bia, violence, 589,11

blepharis, eyelash, 595,16

blepharitis, in the eyelashes, 595,18

blepharon, eyelid, 503,28; 575,29

boan, shout aloud, 466,23; 517,19;
521,27; 563,35

bothros, pit, 598,30; 603,13

boulê, deliberation, 490,32.33

boulêsis, rational wish, 464,35;
585,22-3

bouleuesthai, deliberate, 490,34;
592,14

bouleutikos, that which deliberates,
deliberative, 579,17; 589,37.38;
593,3-11

brontê, thunder, 476,21

daimonios, supernatural, 535,6.31;
536,13.18.23; 537,11.14

daimôn, demon, 500,33

- supernatural being, 537,19.20.23
daseôs, with a rough breathing 585,5
deilia, terror, 602,19.20
deina, so-and-so, 590,22.23
deinousthai, acquire formidability, 480,15
dekhesthai, welcome, 559,2.4
dektikos, receptive, 507,17.20.27.29; 508,9.17
dêlêtêrion, poison, 476,22
dêmiourgōs, creator, 474,2; 507,9; 526,26.35; 527,29; 557,31; 558,4
dēmokratia, democracy, 565,35
despotēs, master, 513,26.28
dexiousthai, give one's hand to, 528,18
diadokhê, succession, 539,2
diairein, divide, 481,9
diairesis, division, 467,17-18.20; 546,5
 of a concept, 490,19; 544,4; 589,36
diaretos, divisible, divided, 484,14; 549,5
diakonein, serve to carry, 449,2; 597,7
 carry, 449,4; 519,29; 605,29
 serve, 508,12.14
diakonêtês, such as to carry, 449,25
diakoptein, break off, 577,38
 break up, 605,18.20.25
diakosmein, arrange in order, 564,1
diakrinein, differentiate, 483,26; 493,25.26; 494,4.5; 507,4.5
 force apart, 472,17; 481,28; 510,4; 517,15; 547,6
 divide off, 479,4.5
diakrisis, differentiation, 461,12.13; 494,14.17.25.26; 495,5
dialogesthai, speak, 460,18
dialektos, thing said, 500,32
dialogos, (Platonic) dialogue, 578,31
diamerizein, partition, 586,13; divide in parts, 605,19
diametros, diameter, 547,35
dianoeisthai, think (sc. discursively), 465,1.21; 550,6
dianoêtikon, that which thinks, 515,14.23
dianoêton, object of thought, 555,27.32.40; 556,2.3; 557,10.12
dianoia, thought, 446,9; 486,1.2.5; 487,39; 488,1-15; 489,29; 490,28.29.31; 491,9.10.12.15; 492,8.10.11; 496,23.28; 515,15.16; 545,13.14.17; 546,7.24.27.30; 550,6.8; 553,23.27-30; 556,32.34; 593,6
diaphanês, transparent, 464,15; 519,29; 607,9-10
 can be seen through, 601,28
diaphora, difference, 478,1 etc.
 differentiating feature, what
 differentiates, 446,7.9 etc.
diaphônein, be discrepant, 471,21
 disagree, 581,30
diaphônia, disagreement, 596,35-6
diaporein, go through a problem, 463,6
diarthroun, articulate fully, 498,30
diarthrôsis, articulation, 588,23
diarrêdên, in so many words, 563,35
diaspan, tear apart, 484,22; 566,3.5.7; 572,15; 575,1
diastasis, distance, 574,15
diastellein, draw a distinction, 471,31.32
diastellesthai, open out, 592,28
diastêma, distance, 491,17
diaskhizein, sever, 572,12
diataxis, ordering, 573,5
diathesis, state, 458,1
 mental state, 556,11
didaktos, teachable, 495,25.29
didaxis, teaching, 469,32.34
diegeirein, stir up, 512,14
diêirêmenôs, dividedly, in a divided way, 550,8.11
diêkhês, can be heard through, 601,28
dielenkhein, convict, 489,16
diestrammenos, deviant, 579,20.21
diexodos, exposition, 570,29
dikaiologeisthai, plead, 536,2
dikaiologia, something to plead, 535,19
dikastês, judge, 478,36
dinêsis, rotation, 589,12
diôrismenos, discrete, 459,4
diorthoun, correct, 591,16
diosmos, can be smelt through, 601,28
diplasio, double, 472,8-12
distazein, be in two minds, 521,6
distikhion, distich, 486,23.26
dittologeîn, be repetitive, 558,7
dôdekaedron, dodekahedron, 450,31

- dogma**, doctrine, 529,29; 542,2.3; 586,25
- dokheion**, repository, 509,17
- donein**, move up and down, 545,1
- dotikê**, dative, 529,12.14
- dourios hippos**, wooden horse, 482,17.18
- doxa**, opinion, 446,9, 465,18.19; 488,15.21; 490,29.30; 492,15-21; 496,28-32; 500,3.8; 502,27.32; 503,2.4; 593,5.6
- doxastos**, subject of opinion, thing opinion is about, 502,28.31.35; 506,11
- object of opinion, 555,27-556,3
- doxazein**, be of the opinion, 487,14-16; 488,18-20; 492,26-9; 502,28.29.31.34
- dran**, act on, 599,4
- drassasthai**, clutch, 599,6
- drimus**, acute, 455,33; 469,29
- dunamis**, power, 446,7; 465,12; 597,29.31
- dunamei, kata dunamin**, in potentiality, potential, 469,9; 519,19.20.22.24-6; 522,23.27; 558,20.21.26.28.30; 564,30-2.34.35; 567,9-11
- aisthêsis**, potential sense, 469,10; 475,18; 498,14.15; 558,16
- nous**, potential intellect, 491,7; 518,11; 534,31; 558,6
- dusgnôstos**, hard to know, 462,20
- dusthêratos**, hard to hunt down, 462,18
- dustupôtos**, resisting imprints, 448,10
- egrêgoris**, waking, 575,27.29
- eidêsis**, knowledge, 518,14; 520,19; 596,23
- eidopoiein**, make to have form, 547,5-6; 552,24
- eidōs**, form, 529,34; 531,12; 543,14; 562,20.22
- species, 579,28.29.32
- eidôlopoios**, image-maker, 493,8.9
- eikazein**, liken, 538,6; 539,35
- eikein**, yield, 579,7
- eikosaedron**, eikosahedron, 450,31
- eikôn**, likeness, 519,10
- eilikrinês**, pure, 477,6.7
- einai**, to be, 537,7
- on**, thing that is, 567,8.12
- tôi einai**, in being, 484,12
- to ti ên einai**, essence, 531,11
- eisagein**, indicate, 523,32
- eisballein**, send on 482,13
- eisdokhê**, reception (in optics), 605,23-4
- ekklinein**, turn aside from, 595,9; 601,1
- ekkremês**, loose end hanging, 494,12
- ekkrinein**, emit, 513,6
- ekkrouein**, distract, 596,10.12.26
- eklampsis**, illumination, 486,38-487,1
- ekluein**, break up, 476,29
- ekpompê**, emission (in optics), 605,27
- ekstasis**, extending, 589,3
- ektasis**, extension, 550,25
- ekthesis**, exposition, 499,28
- ektuphloun**, to blind, 453,9
- elatton**, minor premiss, 590,17
- elaphos**, stag, 508,5
- elenkhein**, refute, 467,20
- reproach 573,26; 574,5
- elenkhos**, refutation, 596,38
- ellampsis**, irradiation, 539,3; 588,3
- elleipsis**, reduction, 472,11.14.15
- embathunein**, sink deep into, 588,37
- embruon**, embryo, 558,1
- empodizein**, impede, 517,30; 596,23
- be an impediment, 596,31
- emphereia**, relation, 446,26
- emphutos**, innate, 588,12
- empasukhia**, animation, 524,11; 572,8
- empasukhos**, animate (being), 464,10
- enakouein**, heed, give heed to, 574,16; 579,7
- enallax**, *alternando*, 561,17
- enantilogia**, contradiction, 519,17
- enantios**, contrary, 553,7.13 etc.
- enantiousthai**, contradict, 456,26.29
- be contrary to, 536,15
- run counter to, 579,37.39
- enargeia**, evident facts, 495,23
- endeia**, defect, 472,17
- endiathetos**, in the mind, 556,10.15
- endiattribein**, be engaged with, 467,3
- energeia**, activity, 463,1.3.11-12; 464,4.23; 465,7.24; 466,6.7; 469,11; 528,21
- actuality, 557,30; 558,19.27
- energeiai, kat' energeian**, actual, actually, in actuality, 469,8.9;

- 471,5; 475,10; 480,33; 533,24;
549,5.6; 557,18; 558,1.2; 559,15;
567,10.11
aisthêsis, actual sense, 469,10;
470,1; 471,4; 472,5.6; 473,21;
475,9.19; 498,14-15
nous, actual intellect, 490,27;
491,11.14; 518,27.30; 520,18;
524,19; 534,30; 558,6
energein, act, 467,6; 470,25; 535,9.30;
540,7
energêma, activity, 486,14
engraphos, already inscribed, 524,15
enistasthai, address, 501,12
enkatoikodomein, build into, 448,20;
449,3
enkephalos, brain, 565,29; 566,2
enkharattein, engrave on, 534,30-1
enkolaptein, cut into, 511,14-15
enkosmios, in the cosmos, 528,20
enkratês, self-controlled, person with
self-control, 579,5.6.12
enkrateuesthai, control oneself,
560,6; 578,17
ennoein, think out, 573,2; 578,11
ennoia, idea, 459,31; 486,25; 500,25;
570,18
consideration 541,30
ennomos, law-abiding, 565,37
entelekheia, actuality, 558,3
entelekheiai, in actuality, 557,29
entimoterios, superior, 446,8
entupoun, imprint, 534,30
enudros, living in water, 449,13
aquatic, 452,28
enulos, in matter, 525,13 etc.
enulon eidos, form in matter,
517,22 etc.
enulos zoê, matter-bound life,
486,30
enulôs, as being in matter, 486,33;
567,19
enupnion, dream, 486,35
epagein, bring forward, 567,7
epagôgê, induction, 449,31
force, 454,32
epagôgikos, inductive, 448,2.23.27;
449,19.28.29
epagôgikôteros, on the inductive
side, 450,8
epanabainein, transcend, 521,7;
553,8-9
epanalambanein, go over again,
527,18-19
epiballein, intuit, 487,32
approach, 495,3
epiblêtikôs, intuitively, 547,9
epiboulê, plotting against, 595,13;
attack, 607,5
epigignôskein, recognise, 454,19
epidiorthoun, set right, 525,26.28.30
epikaluptesthai, be covered over,
515,31; 516,2
epikampês, curved, 526,7
epikamptein, curve round, 526,9
epikheirêma, proof; 450,20.26;
516,17; 576,9.14.18; 578,35;
596,37
argument, 584,19
epikhthonios, earth-dwelling, 486,32
epikratein, gain the mastery, 590,15
epikrinein, adjudicate, 522,14; 525,17
epilanthanesthai, forget, 534,32;
537,39.40; 541,20.25.32; 542,1.5
epilegein, say against, 519,17
epiluesthai, resolve, 451,31; 526,22;
533,15
epilusis, solution, 462,10-11; 543,27
epimixia, mixing with, 528,15-16
epinoein, conceive, 458,29; 476,22-3;
562,29
epinoia, conception, 520,33; 527,25;
532,14.16; 543,36-544,1; 563,4;
566,19
epipedon, plane, 552,9
epiphaneia, surface, 552,8.12.17.20
epiphoitan, come in, 450,10
epiplokê, plaiting together, 501,13
epipolaiôs, superficially, 570,6
epistêmê, knowledge, 487,20 etc.
systematic knowledge, 490,31 etc.
science, 461,27; 607,1
epistêmonikôs, with systematic
knowledge, 524,19-20
epistêmon, knower, 538,12-19
epistêtos, what is known, 534,4
object of knowledge, 557,18-24;
564,29.32; 567,9
epistrephein, reflect, 466,19-27;
527,7; 528,13
epistrophê, reflection, 541,30
epitasis, tempering, 477,14

epitédeios, suitable, 511,31
epitédeiotês, suitability, 521,19 etc.
kat' epitédeiotêta, by virtue of
 suitability, 516,31; 519,25;
 524,29; 558,16-17
epitholoun, muddy, 523,18
epithumetikos, desiring, 565,26;
 574,28
epithumia, desire, 565,29.30.35;
 566,3; 571,20.24; 574,6 etc.
epitrepein, bid, 578,17
êremein, stay still, 494,24.25
êremia staying still, 453,29.31;
 457,32.34; 458,3; 461,28; 510,38
ergatês, craftsman, 467,12
ergon, function, 464,24
 work, 467,11
erôtêmatikôs, interrogatively,
 530,29.34
 as a question, 596,14
esoptron, mirror, 605,25
eskhatia, last part, 500,6.8
ethismos, habituation, 497,8.9;
 500,28.30.37
ethizein, become habituated, be
 habituated, 497,7-12
êthos, character, 486,28
etumologeîn, give the etymology of,
 515,7
etumologia, etymology, 515,5
euergês, serviceable, 511,30
eukherôs, readily, 448,11; 517,18
eukhê, prayer, 579,4
eukosmia, good arrangement, 564,11
eunoukhos, eunuch, 577,28
euôdia, fragrance, 571,11.13
euplastos, easily shaped, 469,22
eusebês, pious, 527,30
eutaxia, good order, 563,40; 564,11
eutheia, straight line, 481,8;
 526,5.6.8.9
eutrepizein, prepare, 576,37
eutupôtos, easily imprinted, 469,21;
 605,16
exaisios, extraordinary, 602,16
exapinês, forthwith, 544,34
exêgêsis, interpretation, 464,32
exêgêtês, interpreter, 464,30
exeikazein, liken, 587,29.31; 588,2
exeikônizein, be an image of, 564,38
exelenkhein, convict, 465,26
exomalizein, level up, 490,20

exomoïoun, make completely like,
 553,3; 557,20; 563,25
exôthen, from outside (his works),
 503,9; 525,25; 526,29
gastêr, stomach, 600,31
gê, earth, 448,9.14; 452,8
gêinos, earthy, 453,2; 594,34; 595,2
geitôn, neighbour, 596,12.26
geneion, beard, 595,16.18
genesis, coming to be (the world of),
 487,9-10; 563,6; 566,31; 567,1
genêtos, generated, 599,27.28
gennaïos, noble, 578,35
gennêma, offspring, 471,37; 602,28.29
genos, genus, 579,27.28.32
geôdes, earthen, 594,35.36; 598,15;
 600,21
geômetria, geometry, 461,31
geranos, crane, 580,7
gêras, old age, 491,4; 524,22
geuesthai, taste, 455,15 etc.
geusis, taste, 448,13 etc.
geuston, object of taste, 602,11
ginglumos, joint, 587,30; 588,17.28
gignôskein, know, get to know,
 454,21
 cognise, 528,30.31
 recognise, 454,22
glukus, sweet, 454,17 etc.
gnôsis, cognition, 490,14 etc.
gnôstikos, cognitive, 465,12 etc.
gnôston, object of cognition, 541,22
 (see note); 572,21 etc.
goês, mountebank, 504,15
goêteuein, bewitch, 581,29
gônia, angle, 511,6
gramma, written letter, 533,30
grammateion agraphon, writing
 tablet on which nothing is
 written, 469,19; 516,24-5; 520,4-5;
 524,14; 533,25-30
grammê, line, 552,8-20 etc.
graphê, reading, 598,17.21
 picture, 488,32; 511,14
grapheion, paintbrush, 538,6 (see
 note)
grapheus, painter, 538,6 (see note);
 538,7
gumnazein, set out, try out (an
 argument), 463,34; 467,15;
 472,21-7; 480,20.24; 481,8

- make limber, 517,6.13.17
- hamartia**, mistake, 519,15.38
- hamósgepós**, in some way or other, 468,30; 469,3
- hapalosarkos**, soft-fleshed, 600,33-4
- haphê**, touch, 448,13.32; 450,36; 451,16.17; 489,29-34; 595,2; 597,10; 598,24.37; 600,18.19.22; 601,5.7-10; 602,1-9; 603,7-12.20.21.25.27.29-32; 604,2.9.12
- haplos**, in general, 465,2
- haplous**, simple, 450,32; 527,9; 532,26
- haptesthai**, touch, perceive by touching, 601,19; 603,8.11
- haptos**, object of touch 449,33; 451,16
- harmonia**, attunement, 473,14
- hêdeîn**, please, 476,23
- hêdesthai**, experience pleasure, 559,1.20; 560,1; 561,25.28
- hêdonê**, pleasure, 559,15.18.30.32; 572,25
- hêduneîn**, please, 477,18
- hêdus**, pleasant, 458,22; 554,28; 559,17.18; 560,4.5; 562,8; 607,14
- hêdutês**, pleasantness, 477,9
- hêgemonikon**, ruling part, 587,25
- heimarmenê**, fate, 486,24-5
- hekatonebdomêkontaplasios**, 170 times as big as, 503,37
- hêlios**, the Sun, 537,28
- helkein**, pull, 588,37.39; 589,1.12-19
- helxis**, pulling 588,35, 589,2.4.8-13; 591,29
- hêmeroun**, tame, 497,4; 602,30.31.32; 607,19
- hêmikuklion**, semicircle, 589,13
- hêmisphairion**, hemisphere, 590,11.12
- heniaios**, unitive, 515,28; 549,1
- henoeidós**, as being each one, 545,14
- henopoieîn**, unite, 542,31-2
- henôsis**, unity, 471,29
unification, 551,3
- henoun**, unite, 471,24; 547,31
- hêpar**, liver, 565,30; 566,3
- herpeton**, reptile, 591,32
- hêsukhia**, inactivity, 486,4
- heterogenês**, heterogeneous, 452,3
- heterotês**, otherness, 521,22
- heuresis**, discovery, 525,1; 569,2
- hexis**, disposition, 534,28; 537,27.34; 539,27.33; 558,16
- nous kath' hexin**, dispositional intellect, 490,27; 518,13.16-17.27.28; 520,17
- hippeios**, equine, 539,24
- hippos**, horse, 488,35; 489,4; 497,4.6; 500,26.36; 596,28
- dourios hippos**, wooden horse, 482,17.18
- hippos tês kakias**, horse of vice, 596,26.27
- holikôs**, on a holistic view, 540,31
- holotelôs**, in a wholly complete way, 553,21
- homêros**, hostage, 570,23
- homodoxos**, of the same opinion as, 533,34-5
- homogenês**, of the same kind, 478,1; 480,6; 482,13; 561,4.6
- homoimerês**, homeomerous, 597,23
- homoimereia**, thing of similar parts, 522,34
- homoïousthai**, become like, 490,6-8
- homoïon homoïoi**, like (known) by like, 487,7.22
- homokhronos**, contemporary, 540,28
- homônumia**, things said equivocally, 575,13
- homônumos**, equivocal, 575,12
- homoulos**, of the same matter, 526,19.24.34; 532,22.25.26
- hôra**, hour, 580,26.34
- horasis**, seeing, 470,14; 474,34.35
- horatikos**, of sight, 463,1.2.5-6.8
- horaton**, thing seen, 464,7 470,14; 602,18
- horikôs**, termwise, in a termwise manner, 543,4; 569,23
- horkos**, conjuration, 497,6; 500,30.33
oath, 502,24
- horkoun**, conjure, 500,32
- hormê**, purposive impulse, 576,26-8; 578,5; 583,19
- horos**, boundary, 560,21.25
definition, 507,10
term, 472,11; 543,6-10; 544,5-7; 545,24
- hudôr**, water, 448,18.27; 601,27; 607,10.11
- hugiaineîn**, be healthy, 487,11
- hugieia**, health, 501,20.26

- hugrotês**, moisture, 449,13-14
hulê, matter, 502,1.2; 522,32;
 523,14.16; 528,37; 529,33; 530,1;
 531,12; 539,17; 541,12; 598,27;
 599,1.4.5.9
hulikôs, in a material way, 481,25
hulikon aition, material cause,
 501,29; 502,9
humên, membrane, 450,23; 453,8
hupainittesthai, hint at, 593,26
hupakouein, understand, 487,19
huparktikos, substantive,
 545,6.7.10; 569,18.23
huparxis, subsistence, 567,15.16
huparkhein, belong, 461,14; 500,12;
 514,9
 to be, 449,6
 really to exist 545,9
hyperbaton, words out of order,
 514,16; 531,1.3; 548,28; 568,11;
 606,1
hyperbolê, excess, 472,7.16;
 517,5.6.15; 602,9; 606,18.21
hyperkosmios, above the cosmos,
 528,20
hyperlampros, overbright, 476,20
hyperousios, super-real, 504,21
hyperselênos, superlunary, 594,22
huphantikê, weaving, 476,25
huphistamenon, subsistent, 471,15
hupnos, sleep, 498,18.19; 575,27.28
hupokeimenon, subject
 (grammatical) 476,4; 546,4.6;
 548,16.17
 (logical), 590,32
 (i.e. subject matter), 456,21.23;
 463,29; 511,23; 563,15
tôi hupokeimenôi, in subject,
 473,22.23; 474,6; 475,10; 480,26;
 530,32-3; 531,4; 571,22.26; 584,32
hupokeisthai, be subject, 472,27;
 500,27; 563,18
hupokrisis, acting, 492,28
hupolambanein, suppose, 523,31.32;
 570,20
hupolêpsis, supposal, 490,28-30;
 492,11.12.16.24; 493,22;
 497,16.18; 593,23
hupomnêma, commentary, 464,20-1;
 531,25
hupomnêmatizôn, in his
 commentary, 575,7
hupomnêsantes, commentators,
 453,15
hupopiptein, fall under, 454,16.20;
 555,36
huposelênos, sublunary, 594,22
hupostasis, subsistence, 471,34;
 532,14-15; 588,3
hupostatikos, subsistence-giving,
 547,11
hupostrônnusthai, form a mattress,
 601,8
hupothesis, hypothesis, 467,34; 565,2
hupothetikos sullogismos,
 hypothetical syllogism, 447,17;
 455,10;
hupothetikôs, by hypothetical
 reasoning, 454,11
hupotithenai, suppose, 518,4
hupotupôsis, outline, 539,10
iatros, doctor, 501,20.25; 588,10
idiazein, be peculiar, 449,3
idios, proper, 454,3-6.8; 457,11;
 459,8.24; 460,26; 462,13; 540,3.19;
 541,6
idikos, special, 454,1; 509,7; 573,24
 of our own, 517,20
idiopragein, attend to one's own
 business, 455,13; 554,2; 557,3
idiôma, peculiarity, 572,30.37.38
idiôma aisthêtikon, way peculiar
 to sense, 458,13.14.16
idiôtês, simple person, 540,29
ikhthus, fish, 449,13
ilus, mud, 588,37
isosthenein, be of the same number,
 595,3-4
kainotomein, introduce new
 classification, 558,25
kakia, vice, 596,26.27
kakizein, censure, 518,32
kakographos, ill written, 533,30-1
kakophônos, with a bad voice, 533,32
kakos, bad, 554,18.31-7; 560,4.5;
 562,11 etc.
 evil, 547,10
kalamos, measuring rod, 567,34
kalôs, rope, 511,12
artêmenos kalôs, tightrope, 511,12
kamêlos, camel, 450,7
kampulos, curved, 562,27; 566,14-16

- kanôn*, rule, 503,3; 506,4; 525,31
kardia, heart, 565,30; 566,2;
 587,24.25; 588,7.15.17
karukeuma, savoury sauce, 601,16
kataballein, overcome, 502,33; 503,2
katabasis, descent, going down,
 473,23.25
katadromê, attack, 536,6.19.28;
 537,8.16.17.24
katadusis, underground habitation,
 495,21
 burrowing, 595,31
katagignesthai, be occupied with,
 488,3; 498,6 etc.
katagôgion, lodging, 555,4-11;
 560,9.14.16.21
katagôgos, on the downward path,
 596,30
katagraphein, inscribe, 538,5.9
katakhrêsthai, use (words) loosely,
 speak loosely, 550,6; 551,23;
 573,17
katakhrêstikôs, loosely, loose
 (speaking), 490,17.19.35; 491,34-5
katapultein, overlay, 511,34
katalambanein, grasp, 603,11
katamathêmatikeuein,
 mathematicise, 481,34-5
katanoêsis, attending to, 528,16
kataphasis, assertion, 546,3.7.8;
 548,12.16.19.25; 559,31
ek kataphaseôs, positively, 478,31
kataphatikôs, positively, 547,7.9
kataphronein, be contemptuous of,
 529,14-15; 563,9
kataskeuazein, establish,
 451,7.9.11.18.21.24 etc.
kataskeuê, establishment, 501,6
 establishing argument, 598,23
katasterizein, make into
 constellations, 461,30
katasterismos, location relatively to
 one another, 461,29
katêgorein, predicate, 513,29
katêgoroumenon, predicate,
 476,3.5.7; 543,7; 545,22; 546,4;
 548,16-26
katêgorikos, categorical, 455,11
katekhein, hold (in sensory system),
 464,13
katepeigein, be urgent, 516,18-19;
 600,14
katharos, pure, 556,19
katheudein, sleep
en tôi katheudein, in sleep,
 488,22.24
katholikos, universal, 596,7
katholikôteron, in a more universal
 sense, 539,21
katholou, universal, 596,23 etc.
katoikizein, house, 565,29
katonomazesthai, have a name,
 470,8.9.17
katoptron, mirror, 464,12
katorthôma, right action, 584,28
keimenon, assumption, 575,5
kenon, gap, 500,7
kentrikôs, in a pointlike way, 542,29
kentron, centre, 481,8.10; 542,30;
 560,22.25.27.31; 589,20; 591,30
kephalaion, section, 455,11.12;
 456,12; 479,8.20-3; 480,4
 point, 535,1; 542,21.22; 587,12
kêros, wax, 605,13.14
kharaktêrizein, characterise,
 598,15; 600,21
khartion, sheet of papyrus, 533,26
kheimôn, winter, 580,7.8.32
kheir, hand, 512,8; 567,33; 604,25-7
khiôn, snow, 476,22
khitôn, covering, 595,31
khorêgein, bring along, 537,3.4
khôristos, separable, 520,31-3;
 521,1.22.23; 537,10.12.13; 540,3.5;
 551,25.28-31; 563,3;
 566,20.21.25.26; 573,16.19
 separate, 466,21; 563,23.24
khôrizein, separate, 537,10.12-14.17;
 563,4.26; 566,21
khortos, food, 587,9
khêrsis, usage, 485,24-5; 486,11.12
khroa, colour, 452,17
khroia, colour, 454,17.19; 461,8
khroma, colour, 455,32; 466,4.5.7;
 469,12; 471,10; 474,28; 475,1;
 539,28
khromatismos, colouring,
 466,13.15-16
khromatizein, colour (v.), 464,4.9.14;
 466,2.7-9.11; 468,30; 469,11
khronos, time, 480,11.12.17;
 483,21.31; 540,20.31
 549,9.23-7.30-2; 550,2.32;

- 551,14.22.34; 580,2.3.15.16.22.27;
581,2.4
tense, 545,22.25.26.31.35.38;
548,5.7.26
khrosís, colouring, 470,15; 474,35.36
khumos, flavour, 462,16; 601,16
khumosis, flavouring, 475,3.4
kinein, change (transitive), 570,19-21
etc.
kinésis, change, 453,9 etc.
kinētikos, (that which changes),
570,14.27.29 etc.
klan, break, 525,27.29
to bend, 526,7.9; 532,6
klimax, ladder, 473,24
koilos, concave, 588,20
koinōnein, have (something) in
common, 473,10; 485,17-19;
558,13 etc.
koinōnia, thing in common,
446,10-11.26; 516,19-23.29.30;
517,2; 521,37; 522,1-7;
600,14.19.25 etc.
community, 471,28
koinos, common
koinē aisthēsis, common sense,
446,11; 455,21-2; 464,22; 465,25;
477,23; 479,8-9; 480,5; 555,5.34-8;
560,20 etc.
koinon aisthēton, common
sense-object, 453,28 etc.
koman, be long haired, 488,27
kôpē, oar, 502,14; 525,27.28
kôphos, deaf, 507,33; 601,35
korē, pupil, 560,10
korsē anaukhēn, neckless head,
545,19
kosmein, adorn, 450,11
kosmikós, on a cosmic view, 540,31
kosmos, cosmos, 520,23; 526,35;
540,21
krama, mixture, 503,35.36; 504,5;
538,13
krasis, mixture, 472,32; 504,3;
517,23.24
kratein, master, 523,1
keep hold of, 464,11
kratiston, strongest, 572,18
kreitton, stronger, 572,19.23
krēmnos, precipice, 583,9; 595,12-13
krinein, discern, 453,33 etc.
krisis, discernment, 489,24; 490,8
kritikós, in a discerning way,
481,25.26.33
krystalloeidēs, of crystalline form,
448,19; 560,11
ktupos, clap, 474,21
kubernan, govern, 518,17
kubos, cube, 450,31
kuklikos, in a circle, 591,33; 597,1
kuklos, circle, 587,31; 589,20.23;
591,30
kukloterēs, curved, 511,12 (see note)
kuôn, dog, 478,11; 482,26
kuria, control, 590,9
kuriolektein, speak accurately,
490,19
kuriōs, properly, 464,5
kuros, supreme power, 502,23;
572,23; 579,22
kurtos, convex, 588,18.20
laburinthodēs, labyrinthine, 517,11
lampas, light, 464,8; 466,12.15;
469,4; 499,18.21.22
lampros, bright, 464,9
famous person, 528,17
legein, argue, 464,13
say, 447,22
speak of, 446,22
mean, 450,17; 504,7
leipsanon, trace left behind, 486,35;
581,14
lēmna, (preliminary) assumption,
474,16; 507,10, 512,5; 526,12
leôn, lion, 497,4.6; 581,8.13.17
lêthē, forgetfulness, 502,32; 503,1
forgetting, 506,10
lexis, text, 450,21; 521,29; 530,13 etc.
word, 473,17
detailed commentary, 470,16; 539,11
etc.
logikos, rational, 525,12
logikē psukhē, rational soul,
446,6.13; 447,15; 450,10.13.17;
465,33; 466,23; 485,11; 494,6-7;
496,22; 507,1; 508,15-16;
511,35.38; 512,2; 516,8-14;
517,8.9; 518,3; 521,24.26; 595,36;
596,39; 597,17
logical, 495,9
logikōteros, a bit logical, 481,17
logion, saying, 547,12

logismos, reasoning, 585,23; 587,2;
596,25

logistikón, that which reasons, 593,8

logoeidēs, rational in form 506,22

logos, account, 469,17.18; 516,24.25;
520,2.5.11; 533,28; 565,5; 596,8
etc.

logōi, kata logon, in account,
473,22; 530,33; 531,5; 584,33 etc.
argument 447,26.31.34.35; 448,23;
449,19.28.29; 450,8; 473,3; 477,23;
494,19 etc.

diaskeuē logou, structure of
argument, 455,10

book, 446,12.14; 453,28; 455,7
principle, 506,28

proportion, proportionality,
472,31-34; 473,1

reason (i.e. explanation), 488,8

reason (the faculty), 466,30; 467,7;
485,13; 488,9; 500,21; 516,19.23;
565,18.29.34; 566,2; 571,20;
573,22.31; 574,6; 576,11.12;
583,23; 586,22; 593,10.14.16 etc.

relationship, 516,17

sentence, 599,36

speech, 485,10; 492,30

statement, 596,29; 597,18

talking about, 539,32

logōi eipein, in a word, 518,35

loimōdēs, pestilential, 487,10

loutron, bath, 476,25

lupē, distress, 559,19.32

lupēros, distressing, 554,30.32.33;
559,15.16

unpleasant, 607,14

lusis, solution, 449,6; 468,22;

481,2.3.5; 484,10.25; 526,28

makhē, conflict, 502,12

makhesthai, fight, 502,11.13; 503,6

mageirikē, cooking, 476,24

mageirikon onoma, cooking-term,
475,5

mainomenos, maniac, 555,22

makroapodotos, taking a long time
to reaching its main clause, 582,32

malakotēs, softness, 595,33

manteuesthai, divine, 451,32

marmarugēs, seeing sparks, 464,7.15

maskhalē, armpit, 595,19.21

masēsis, chewing, 544,35

mastix, whip, 488,35; 500,26.36

mastos, breast, 494,31; 495,4

matēn, to no purpose, 447,32.33.34
etc.

mathēmata, mathematics, 510,23

objects of mathematics, 510,24;
527,15.21.24; 531,8.20.23; 532,7;
562,22.24.27; 563,4

mathēmatikos, mathematical, 481,35

mathēsis, learning, 469,32.34; 569,1

mathētēs, pupil, 469,34

mazos, breast, 511,15

megalophuia, loftiness of genius,
529,14

megethos, size, 453,29 etc.

magnitude, 546,15 etc.

megethunai, give magnitude, 543,34

meiōsis, too little, 472,7

meioun, diminish, 458,33.34

meizōn, major premiss, 590,16.17

mekhanasthai, devise, 572,27

mēkos, length, 550,9-13.32; 551,29 etc.

mēkunein, make too long, 530,13

melankholia, depression, 528,22

melas, black, 511,14; 547,5.7.8

dark, 567,16

meli, honey, 455,15; 461,19.21; 495,23

melissa, melitta, bee, 495,22; 501,2

mēlon, fruit, 571,12.13

menein, remain still, 589,5.10.18.21

mēpote, perhaps, 462,28

merikos, particular, 490,24; 526,1.5;
596,24.32

aisthēsis merikē, particular sense,
459,23; 461,18.20

meristos, in parts, 544,8.9

divisible into parts, 571,29.31

meristós, part by part, 479,9

in parts (adv.), 546,33

merizein, to divide into parts, 571,30

mesotēs, mean, 477,10; 560,12

mesouranein, be in mid-sky, 590,11

metaballein, change, 517,1; 590,31;
604,30-2

metabolē, change, 605,1 etc.

switch, 558,31

metagein, lead across, 564,12

metapeithein, persuade to change
one's mind, 500,34

metaphora

ek metaphoras, metaphorically,
497,18.24 (see note)

metatrepesthai, turn aside from, 492,30

metaxu, to, the medium, 451,23, 508,9

metaxulogia, digression, 474,16
what has been said in between, 490,15

methê, drunkenness, 511,35; 515,32

mêtis, shrewdness, 485,25.29; 486,1

metousios, sub-real, 504,21

miktos, mixed, 600,17-29; 601,5-12

mimêsis, imitating, 597,35

mnêmonikos, mnemonic, using a
mnemonic system, 493,7.10

mokhlos, crowbar, 512,8

monas, unit, 459,4; 543,13

monimos, immobile, 583,1; 598,32;
599,18.27-9

morphê, shape, 551,1

morphôtikôs, by way of shape, 574,15

mousikê, music, 461,32; 602,24

muein ophthalmous, have eyes
shut, 496,11-15; 499,14.15.20;
577,34

muia, winged insect, 495,5.19; 496,19

muktêr, nostril, 449,14

murepsikê, scent-making, 476,24

murmêx, ant, 495,5.19-21; 496,19;
498,31; 511,29; 513,4; 580,8; 590,3

mus, muscle, 575,21

naumakhia, seafight, 479,33-5

neikos, strife, 545,18

neogenês, new-born, 494,26

neuron, sinew, 587,24; 588,11; 591,27

noein, think, 491,11; 497,15 516,15;
517,21.22.28; 522,5.6.25.31.32;
525,10.23.30; 527,9-22; 528,1.7-9;
545,37; 546,13-37; 547,1-4.21.22;
564,10.14-17; 566,13.14.23

exercise intellect, 465,1.20

noêma, thought, 554,2.3;

556,5.6.16.19; 568,14; 569,21.29

noeros, intelligible, 461,26

intellectual, 555,9-12

noerôs, intellectually, 596,9

noêsis, intelligence, 485,21.23.25;
489,30.31.34; 490,21

thinking, 492,22.24; 519,9.11;

542,16; 583,31; 592,9.11

noêtos, object of intellect, 522,10,11;
527,8.15.20.24.26.33-7; 528,3.4;

530,19-21; 532,31.32; 533,1.5-13;
542,22-7; 555,29.32.40; 556,3;
557,9.11; 562,19.20

nomos, law, 471,17; 475,17; 588,9
what is customary, 521,14

nomôi, by convention, 472,1

nosein, be sick, 487,11

nosos, disease, 515,32

notheuein, debase, 491,29

nous, intellect, 446,10; 465,20;

478,4-14; 487,31-8; 490,25.27;

518,7.27; 522,9.10.23; 525,12.21;

527,6.8; 528,6.9; 536,26.27; 578,7;

see also **kata dunamin, kat'**

energeian, kath' hexin,

pathêtikos, praktikos,

theôrêtikos, thurathen

meaning, 489,11; 529,4; 530,30

mind (i.e. meaning), 464,18

nun, now, 479,24-36; 480,1; 483,21-6;
543,13; 545,30-3

nukterinos, nocturnal, 486,14

nux, night, 576,26.27

odous, tooth, 544,35; 577,12.19

oikeios, its own, 478,19; 595,25

belong as its own, 572,31

belonging properly to, 584,12.13.28

oikothên, from within, 527,26

oinomeli, honeyed wine, 502,1; 521,15

okhoun, to, the vehicle, 589,16

okhêsis, movement in a vehicle,
589,15

oktaedron, octahedron, 450,31

oligarkhia, oligarchy, 565,36

oligotês, fewness, 581,18

ômos, shoulder, 472,33

onar, dream, 486,13-14.37.38

oneiros, dream, 494,23.25

oneirôttein, dream (v.), 494,20

onoma, name, 470,13

term, 475,4

onux, nail, 595,1

ôion, egg, 540,29

ophis, snake, 497,3.5; 500,30

ophrus, frown, 464,31

ophthalmos, eye, 453,7; and see
muein

opsis, sight, 448,19; 451,25; 453,30;

455,14.16; 456,8; 460,3; 462,12;

463,35.37; 464,8; 467,28; 468,3.18;

470,14; 476,20; 478,23.33; 510,37;

- 511,2.22; 602,31; 605,26; 606,2.26;
607,1
optikos, optic, 605,27
oregesthai, reach out, 576,15; 582,12;
591,13.15; 592,2.3
have appetite for, 589,32.34
orektikos, appetitive, 574,32
to orektikon, that which is
appetitive, 571,8; 572,15.31;
579,16.17.18.21-29; 587,8.9
the appetitive part, 572,33-6; 579,18
orekton, object of appetite, 571,8;
581,21.33; 585,28; 587,9,10.23;
590,7
orexis, appetite, 495,11.12;
554,35.36; 559,7-9; 565,15-17;
566,3-7; 573,6; 574,25.27; 575,2-9;
576,15-17; 579,10.11.14.16.31-9;
581,22; 585,19.22; 590,7-9;
592,4-13
organikos, instrumental, 502,6.8;
587,24.26.29; 588,6;
organikon aition, instrumental
cause, 501,24.25.28
organic, 583,1
organon, instrument, 467,1; 511,36;
517,27-31; 524,1.3; 526,4; 529,25;
551,13; 562,28; 563,19; 567,33.34;
568,16; 570,2; 576,7; 578,8.9.26
organ, 576,22.23.30.33.37; 582,27
aisthêtikon organon,
instrumentality of sense, 530,9
oruttein, dig, 453,8
ôsis, pushing, push, 588,35.37;
589,4.8.9.11.13; 591,29; 602,17
osmé, odour, 449,33; 452,3.5
osphranton, object of smell, 601,17;
602,13
osphrêsis, smell, 448,20-2;
449,1.12.24; 452,4; 476,21; 601,36
ostrakodermôn, animal with a shell,
600,32
ostreinos, shell-like, 482,12
ôtheîn, push, 588,35; 589,1.12.14.16;
604,28.29; 605,2
ôthesis, pushing, 589,3
oudeterôs, in the neuter, 541,14
ouranion, heavenly body, 526,36;
595,34.36.37.39;
596,3.16.27.33.36.39;
597,6.8.10.13; 598,1-3; 600,22.24
ouranomêkês, as tall as the sky,
503,32; 507,36; 508,6
ouranopolitês, citizen of heaven,
563,8
ousia, substance, 460,11,13;
519,23.37; 537,27.28.32; 571,15-18
atomon ousia, individual
substance, 514,10-12
deutera ousia, secondary
substance, 446,26
pemptê ousia, fifth substance,
453,20; 597,13; 600,23
ousiôdês, in substance, 563,4
paidion, baby, 494,31; 577,11.13.15
pais, child, 518,12.21.24; 519,20.24.37
pakhumerês, coarse-grained, 510,32
pan to, the universe, 520,24
panteleios, completely perfect, 518,16
pantôs, certainly, 453,21
definitely, 478,31 etc.
ou pantôs, not in all cases, 480,23;
490,2
parabolos, hazardous, 580,1.4
paradeigma, example, 459,22;
460,11; 476,28; 529,10.15; 577,25;
585,7-8; 590,22
model, 474,25; 481,7; 558,14; 589,22;
604,23
parageîn, produce, 537,33
paraition, contributory cause, 491,25
parakatathêkê, pledge, 555,22
parakatiôn, further down, 493,24;
519,6.13; 522,7; 563,12
parakeisthai, lie ready for, 595,26;
599,18
parakmê, decline, 577,13
parakolouthên, follow upon,
556,21-2
paramutheîn, reassure, 468,23
paramuthia, reassurance, 468,28
explanation, 542,8
paraplanasthai, wander astray,
583,8
paraphrazeîn, paraphrase, 531,1
paraphroneîn, be deranged in
judgement, 511,33
paraphrosunê, derangement, 516,2
paraphtheireîn, undermine, 521,13
parathesis, juxtaposition, 547,30.31
pareikazeîn, liken, 588,32; 589,6-7
pareistrekheîn, run out beside, 542,11

- parekbasis**, excursus, 546,13
paremphinesthai, appear alongside, 523,14
parepesthai, follow, 515,19
parergos, of marginal importance, 461,25
parergós, by the way, 601,13
paretos, someone with palsy, 602,1
parodeuein, pass through, 605,12.18 (see note)
paromoios, very like, 594,11
paroran, overlook, 582,34
paskhein, be affected, 457,17; 526,15.18.19; 558,20.22.28 etc.; suffer, 581,10
pathos, affection, 453,18.20; 455,1.2.6; 458,32-4; 481,22; 511,34; 516,34; 517,3.5; 522,14.18; 526,30; 527,1.2; 533,17-19
 emotion, 565,17; 576,11.12; 578,16.17; 579,34; 581,27; 583,15.17.25; 584,11; 590,15; 593,14.15
pathêtikos nous, passive intellect, 490,23; 506,24; 523,29; 542,3
pégē, spring, 536,12
peithein, to persuade, 496,34; 500,23.24.34
peithō, persuasion, 496,35; 497,8.9; 500,21,22
pelōris, mussel, 453,12
penēs, poor, 486,28
pepsis, digestion, 452,33
peras, end-point, 481,11
 end, 450,36; 515,13
peripeteia, denouement, 504,14
periphoreia, periphery, 598,3
peripolein, patrol, 527,28
peritton, superfluity, 577,1
péros, deformed, 512,22
pêrōma, deformed, 453,6; 577,11.12.16.17.23.26-8; 583,2
pettein, digest, 452,33
pezos, footed, 449,12
phaneroun, make manifest, plain, 511,21; 537,30.31
phantazesthai, imagine, 488,15-16.17.23-7.31; 492,25-7; 493,1-3; 496,2-4.13; 497,21.27.28; 498,17-18; 507,33.34; 512,15.17.22-8; 580,21
phantasia, imagination, 446,9.11.15.20; 455,23; 466,17.18; 486,15.17; 488,10-15; 490,25; 492,6-8; 494,19.20.22.28-31; 495,25; 498,13.14.26; 499,1-6; 500,3.8; 501,11.13; 502,2.4; 503,5-6.7; 504,3.5; (defined) 507,16-35; 508,1.11; 509,4.5; (etymology) 511,18-24; 512,12; 513,3.6; 514,15.17; 515,2.5.7; 541,23.26; 542,2.7.8; 546,31-4; 551,7-9; 562,28-30; 563,14-16; 564,2-5; 582,9-16; (division of), 589,35-590,5; imagining, 499,5; 514,27; 584,10-11
phantasiousthai, imagine, 582,12-13
phantasma, phantasm, 504,13; 561,26; 563,17.18; 569,5.11.21.29; 593,1.2.4
 imagining, 492,32
phantastikon, to, that which imagines, 574,27.32
phaos, light, 511,23
pharmakon, drug, 492,31
philêdonon, to, love of pleasure, 565,36
philenklêmôn, one who likes to find faults, 446,19
philia, (Empedoclean) Friendship, 545,17.19.20
philokhrêmaton, to, love of wealth, 565,36
philosômatos, body-loving, 563,9-10
philosophos, philosopher, 590,22-6.32
ho philosophos, the Philosopher, 560,17; 576,28; 584,29; 594,23
philotimeisthai, be credited, 467,11
phlebotomon, blood-letting, 501,25
phlegma, phlegm, 595,22
phluaros, garrulous, 596,11.26
phobein, rout, 593,26.27; 594,6
phoitān, rove, 465,12.13
 to pervade, 571,11
phônê, sound, 472,26.27.29.31; 473,3.6-8
 spoken sound, 543,9.19; 544,19.25
 voice, 500,32
phortikos, awkward, 522,12
phortion, burden, 472,33
phôs, light, 476,21; 511,23; 535,34.36.38; 537,26.28.30
phôtizein, illuminate, 535,38.39
phrear, well, 571,6; 573,4; 583,9

- phrên*, mind, 486,27.30; 492,29
- phronein*, judge, 486,16
to exercise judgement, 490,17.36
- phronêsis*, thinking, 486,15.17; 487,3
practical judgement, 490,32.33;
491,32.34; 492,12
- phruktos*, torchlight, 561,29
- phthartikos*, destructive, 448,8;
476,20; 516,35
- phthartos*, destructible, 448,7;
516,10.34; 518,4.5; 572,2.3
- phtheirein*, destroy, 472,14.15;
602,8.11-20
- phtheiresthai*, pass away, 471,14;
598,12
be destroyed, 472,8; 502,27-32
- phthora*, passing away, 598,12
- phusikos*, natural, in the field of
nature, 475,5; 539,16
physical, 469,29; 481,18.35
- phusikôs*, physically, 470,3
- phusiologeîn*, do natural science,
565,32
- phusiologos*, physicist, 570,25
- phusis*, nature, 447,34; 450,25; 462,8;
576,35.37; 587,30; 588,32.33;
589,5.7-10; 598,31
- phutikos*, vegetative, 446,5; 537,2.7;
541,8.11; 574,9.26; 575,4;
576,20.29; 582,5.8.10.21; 595,35;
597,19
- phuton*, plant, 575,6-8; 576,19.20;
594,19.26.27; 595,5.6;
598,14.15.24.26.28; 599,9-11
- pisteueîn*, be rationally convinced,
496,33,34; 500,21
- pistis*, rational conviction,
496,31.32.35; 500,20.21.23
- pistousthai*, derive, obtain
assurance, 466,12; 530,5.23;
595,15
- planasthai* wander, 495,7; 590,2
go astray, 489,23; 535,9.21
- planê*, going astray, 489,16.22.25
- platos*, width, 552,18
- platuneîn*, fill out, 539,12
- plêgê*, blow, 499,21
- plegma*, strand, 572,14
- plekein*, construct (a syllogism),
496,29.33
- pleonazeîn*, abundance, 595,21.22
- plêthos*, multitude, 581,18
- pleura*, side, 548,1
- plokê*, construction, 473,3; 500,17
- pneuma*, pneuma, 481,22; 482,12;
560,10; 587,24.26.27;
588,2.3.8.10.12.24.31.38;
589,6.20.21;
- Kharônia pneumatata*, mephitic
vapours, 476,22; 602,14
- pneumatikon sôma*, pneumatic
body, 481,20.21.24
- podiaios*, a foot across, 502,16; 503,38
- poiêtikos* (that) brings about, 501,19
- poiêtikon aition*, efficient cause,
496,34; 501,23.24.27; 539,17;
547,18; 571,3.4.7; 581,30.35;
588,4-5;
- poiôtês*, quality, 478,23
- poioun*, make qualitative, 543,31
- kamaton poiesthai*, direct labours,
446,5-6
- poioun, paskhon*, agent, patient,
469,30-1
- politeia*, constitution, 565,34
- pôlodamnês*, horse-breaker, 497,5;
500,27
- poludunamos*, many powered,
517,35; 518,4; 571,37
- polumerês*, multipartite, 571,23
- polumêtis*, very shrewd, 491,22.23
- polumorphos*, multiform, 565,35
- polupous*, (nasal) polyps, 601,36
- poreia*, movement, 495,7; 583,1
- poreutikon*, that which moves,
575,17.23
- poreutikon zôon*, animal that
moves, 594,21.24-9;
595,9.11.27.29.34.35;
600,13.15.19.34; 601,3
- poreutikê kinêsis*, change in
movement, 575,16.31
- organon poreutikon*, organ for
movement, 576,22.23
- porisma*, corollary, 472,4;
475,9.11.14; 476,8; 547,15; 566,20
supplementary argument 470,19.28
- pornê*, prostitute, 583,26
- porneueîn*, go to a prostitute, 590,14
- posoun*, make quantitative, 543,31
- pous*, foot, 588,35-589,4
- pragma*, thing, 466,30; 488,3.5;
512,7; 566,24.30; 568,12.17
action, 485,10

- fact, 509,28
pragmateia, treatise, 453,28; 455,7; 602,34
praktikos, practical, 520,26.27
nous, practical intellect, 554,13-18.23.27.30.36.38; 555,1; 558,11; 576,8; 578,8.12.15; 583,13; 584,21-5; 586,8.9; 592,8.13.20.21
prakton, thing to be done, thing that can be done, 490,31-3; 578,10; 583,14; 586,4.6; 591,4.9
proagein, bring forth, 537,28
 advance, 557,29.30; 558,4
proaireisthai, choose, 578,27.28; 592,14
proairesis, choice, 578,12-13.26-7
proaugasma, flash, 464,16
proballein, put forward, 477,28; 480,4; 532,30
 put forth, 534,22.23; 539,29.30.32
problēma, thesis, 475,13
 proposition, 520,34; 521,8
probouleusis, prior deliberation, 501,1
proēgeisthai, precede, 504,29; 522,2; 540,31
progastōr, potbellied, 454,24; 488,28
progignōskein, have prior knowledge of, 565,14
programma, heading, 566,10
prokeimenon, point at issue, 494,35
prokharattein, to outline, 464,16-17
prokheirizesthai, to bring out, 486,9; 520,19
prokheirisis, having to hand, 535,39
prolabon, foregoing, 446,5; 453,26-7
pronoeisthai, take thought in advance, 581,14
 give first thought to, 450,25
pronoia, (divine) Providence, 527,31; 564,1
 taking thought in advance, 581,7
propēdan, jump ahead, 455,17
prophantazesthai, prior imagining, 513,6-7
prophora, expression, 556,14
kata prophoran, expressed, 556,12,15
prosballein, intuit, 447,35; 488,5; 512,10
 approach, 495,1
prosbolē, attempt, 488,4
 intuition, 544,31
prosdiorismos, further differentiation (i.e. quantifier), 476,3.4
 further distinction, 458,10; 523,6
 further condition, 491,16-17
prosektikos, attentive, 464,32-3.36.37; 465,4.6.11.13.16.34; 466,28; 555,12
prosekhēs, proximate, 581,36
 marching with, 588,6
 near at hand, 590,35; 600,7
prosekhōs, proximately, 512,14; 590,36
proseuporein, supply further, additional, 498,3; 503,9; 576,24-5; 583,7
proskhresthai, bring into use, 478,6-7.9
prosklisis, bending, 497,9 (see note)
proskunein, say 'hello' to, 528,18
proslēpsis, minor premiss, 447,21.24; 448,1-2.24.28; 449,18; 451,7-9.12.21.24; 457,9.10
prosumilein, come close to, 494,35
prosphoros, to the point, 486,13
 apt, 589,22
prosthēkē, addition, 472,11.14; 473,1
protasis, proposition, 543,6.7.19-21; 546,1.2.12
 premiss, 488,5; 590,16; 593,22.24.32
proteraios, preceding, 469,6; 470,19
protereuein, come before, 554,10.11
 to take the lead, 581,24
prothesaurizein, store up in advance
 a treasury, 511,29; 580,8
prothesis, connective, 591,1
prōton, **deuteron**, primary, secondary, 446,26-7
 first, later, 546,35; 551,10-11
prōton aition, **prôtē aitia**, first cause, 474,11; 535,20.22.24; 537,11.14.18-20.23.26.27.32.37; 538,21-2
psēlaphan, feel, 577,35-6
pseudēs, false, 463,25; 480,31; 505,20; 506,5.6; 544,19; 555,19; 556,14
pseudesthai, run into falsehood, 491,13.21; 495,33; 496,26; 502,19-21; 503,17.22; 506,9-10;

- 509,15-16.21.22; 513,12.17.18;
545,4.13.21; 553,28.33; 554,4-5;
556,15-21; 569,19.20
pseudodoxia, false opinion, 491,34
pseudos, falsehood, 491,25; 504,22-4;
544,20-30; 545,4.11; 556,13
psittakos, parrot, 495,26; 590,3
psophêsis, sounding, 470,12; 472,23;
474,21.34
psophos, sound, 451,34; 452,2.4.12;
462,16; 474,20; 602,16
psukhê, soul, 446,6; 563,3; 570,13.15
see **aisthêtikos**, **alogos**,
logikos, **phutikos**
psukhikos, psychical, 534,27;
537,18.19; 539,15.19; 553,11;
575,14.15
psukhros, cold, 477,15-17; 601,31
psuktos, cool, 477,12.13.16
psuxis, chill, 602,20
ptênos, winged, 449,12
ptoeisthai, be agitated, 488,34;
489,3.4
ptôsis, case, 529,4
pur, fire, 448,7; 452,33
puramis, pyramid, 450,31

rhabdos, rod, 604,25; 605,3.4
rhaithumos, careless, 486,30
rhakos, rag, 491,21.23
rhanis, drop, 513,19
rhembesthai, be wool-gathering,
465,14
rhepein, incline, 519,28
rhêseidion, **rhêsidion**, gobbet, 522,8;
530,29; 531,26; 538,10; 595,37-8
rhêton, passage, 459,32; 468,8;
520,31; 529,29
rhis, nose, 449,3.5; 601,36
rhizousthai, be rooted, 576,23; 595,8
rhônnoisthai, stand firm, 509,2;
526,31

saphênizein, to clarify, 467,23
sarx, flesh, 529,33; 530,1.11.15.17
selênê, the Moon, 511,3.4
sêmeinein, signify, 454,25; 461,2;
510,10.27; 518,9-16.20.26.30;
520,12-16; 532,9; 543,10-12.14.16
sêmasia, way of signifying, 529,2
meaning, 607,18
sêmeion, sign (astronomical), 590,10
point, 515,22.24; 589,23.24
sêmeiousthai, note, 531,25
sêpsis, infection, 602,15
sigan, be silent
sigêtheisa aporia, unspoken
difficulty, 451,31
simos, snubnosed, 531,9; 566,14
simotês, snubnosedness, 529,34
skelos, limb (of a division), 467,20;
502,5; 527,23
skepazein, protect, 453,8
skeparnos, adze, 467,10; 567,34
skepê, covering, 585,8.10
skhesis, way of being related,
470,4.7.9.11-18; 471,4
relation, relationship, 537,40;
560,32.33
skhesei, in how disposed, related,
469,31.33.35
skhêma, shape, 453,29.30; 456,13;
458,21-30; 531,16
figure (of syllogism), 485,28;
496,30.36; 579,25; 580,1
skhêmatizesthai, to have shape,
458,30
skia, shadow, 545,32
shade, 585,11
skiagraphia, sketch, 519,9
skôlêx, grub, 453,12; 495,5.13.14.19;
498,31; 590,1; 595,31-2; 600,33
skoliôs, out of order, 451,18
skopos, aim, 446,12.13; 447,15;
485,15; 530,34
skotos, darkness, dark, 464,1; 547,8;
552,25.26; 602,33
smênê, comb, 501,2
smênos, hive, 495,22
sôma, body, 481,19; 483,15;
517,14.17.22.23.27; 521,5.6;
563,9.10; 581,20.23; 587,27.28;
588,13-16; 591,22.24.25; 599,2.4;
603,4.20
augoeides sôma, body of luminous
form, 597,18
pempton sôma, fifth body, 448,5-6
pneumatikon sôma, 481,20
sômatikos, bodily, of body, 453,20;
588,3
sophia, wisdom, 491,4
sophistês, sophist, 504,15
spêlaion, cave, 472,18
sperma, semen, 558,1.2

- spermatikos**, seminally, 542,30
sphaira, sphere, 511,3; 590,10
spheterizesthai, make its own, 554,28
spongos, sponge, 600,31
spoudaios, sound, 507,5
 what is good, 576,11
stasis, being stationary, 593,19
stephanoun, crown, 593,28.29
stereos, solid, 450,30; 552,12
sterêsis, privation, 552,4.5.15-18
stigmê, point, 482,1; 484,26; 543,13; 552,6.14.18
stikhos, line, 486,25
stoikheion, element, 448,5; 451,27; 453,19; 594,34; 597,14; 600,23
 letter, 561,10
stokhazesthai, surmise, 463,30
stoma, mouth, 600,31
strongulos, round, 511,6
sullabê, syllable, 475,29
sullogizesthai, infer, 461,7.15
 sylogise, 488,6-7; 590,13.14; 593,5-6
sullogismos, syllogism, 455,10; 491,22; 496,29.30.33; 579,25; 580,1-4
 inference, 490,26.27.30
sullogistikôs, syllogistically, 500,12
sumbainein, kata sumbebêkos, incidental, incidentally, 454,2.4.6-7.9-15; 455,1.3.34-5; 456,4.7-9; 457,16.18-22.28; 458,5-6
sumballesthai, help, 507,10
 contribute to, 508,12; 515,16
sumbebaïousthai, confirm, 450,28 (see note)
sumbolaiousthai, 450,28, meaning unclear (see vol. 1, n. 8)
summetria, commensurability, 477,2; 530,11-12
summetros, proportional, 469,13
 commensurable, 547,35
summetrôs, proportionally, 476,1-2
sumparatheon, fellow traveller, 461,26
sumperasma, conclusion, 460,25; 488,5-6; 532,10; 564,27; 567,7.8; 600,6
sumperatoun, end together, 588,4.5
 to terminate together, 484,26
sumperilambanein, include, 462,2; 473,5-6; 540,5; 586,16
sumplekein, interweave, 491,21.24-5.27; 521,16
sumplêroun, go to make up, 536,32.33
sumplokê, interweaving, 501,9.28; 502,1-3; 505,12.16; 506,14
sumptôma, side-effect, 595,14; 598,31
sumpheresthai, cohere, 572,17
sumphônêin, chime in with, 471,19
sumphônia, consonance, 472,6.7.26.31; 473,1; 477,9; 596,30
sumphuia, natural junction, 471,25
sumphuein, make to grow together, 471,23
sunagein, conclude, draw (a conclusion), 473,11; 517,34; 564,27; 580,5.12
 derive, 475,9
 attach, 467,34
 collect together, 513,5; 542,31; 587,22
sunagesthai, follow, 527,33.37
sunaiasthanesthai, be conscious, 451,8; 580,7.24.32-3
sunaisthêsis, consciousness, 580,2.5.6.15.18.20.26.31-6; 586,21-3; 592,4; 595,23
sunamphoteron, two together, 528,35; 529,7.8
sunaptein, join on, 600,28; see also **sunêmmenon**
sunathroizein, bring together, 515,27
sundesmos, connective, 475,30; 492,5; 592,23
sundromos, concurrent, 535,24.28
sunêgorein, plead as advocate, plead for, 503,9 529,31; 531,14; 563,22
sunêgoria, plea, 529,29; 535,19; 563,27.32.34.36; 364,7.14.18; 568,10; 569,21
suneidenai heautôi, be conscious, 465,15.16; 555,12
sunekheia, continuity, 531,9.11.12; 532,2
sunekhês, continuous, 459,3.4.12; 531,10.16; 543,11
sunêmmenon, conditional premiss, 447,20.24.25; 448,1; 449,31 (see note); 451,7-9.20-1
sunergein, act together, 455,14.19
sunesis, conscience, 465,16
sunêtheia koinê, common usage, 467,9; 496,7

- sunexerkhesthai**, be common exit, 484,28
- sunkatarithmeisthai**, count along with, 497,34
- sunkatathesis**, assent, 489,1,5; 497,8; 500,29
- sunkatatithesthai**, assent (v.), 489,3,4; 497,10; 500,29
- sunkekhumenos**, confused, 589,39
- sunkhein**, confuse, 485,19.30; 486,34 fuse, 478,23
- sunkhusis**, confusion, 487,6
- sunkinein**, change along with, 582,16
- sunkrinein**, compare, 512,3
compact, 472,17; 481,29; 510,5; 517,15; 547,6
- sunousiazein**, lie with, 513,6
- suntelein**, contribute, 587,22.28; 591,22; 602,22
- sunthēma anaplattesthai**, form a composite representation, 508,6
- sunthesis**, composition, 546,3.7-11; 547,26.28; 548,11.12
- sunthetos**, composite, 527,10; 603,4-7
- suntiithenai**, put together, 546,4
- suntithesthai**, agree with, 465,31
- suntomos epagôgê**, in brief the force, 454,32
- sunupakouein**, understand along with, 560,17
- surein**, drag, 582,18
- sustellesthai**, close up (intrans.), 592,28
- sustoikhos**, ranged along with, 589,36-8; 590,4
- suzeugnunai**, yoke together with, 584,1
- suzeuxis**, linkage, 553,8
- taphos**, tomb, 563,10
- tarattein**, agitate, 573,17
- tauros**, Taurus, 511,3
- tekhnê**, skill, 490,33
- tekhneton**, (thing in) the field of skill, 539,16
- tekhnitês**, man of skill, 490,34
- têkein**, waste, 472,20
- tekton**, carpenter, 474,26.31
- têlaugôs**, from afar, 486,16
- teleios**, complete, 453,5.6
perfect, 518,31
- teleiôtikos**, perfective, 516,35; 517,3.4
- aition teleiôtikon**, perfective cause, 547,18
- teleioun**, perfect (v.), 539,34.35
- telikos**
telikon aition, final cause, 547,19; 571,2; 581,31.32
- telos**, end, 576,10-13; 587,10.11
- teôs**, already, 547,27
for the moment, 563,7
- teôs to proton**, as to the first, 532,32
- thateros**, one or the other, 452,26
- thaumasioi**, marvellous, 515,20
- thea**, look, 508,35
seeing, 512,17
- theios**, divine, 528,4; 542,10; 552,29; 553,6.12; 563,38; 564,1.10.12; 567,13; 590,8
- themelia**, foundations, 585,12
- theologikos**, theological, 518,36
- theos**, God, 518,35; 527,30.31; 528,13; 529,3; 536,11.12.17; 538,20; 545,27; 587,11
- theôrein**, to contemplate, 569,5
to look at, 570,6
can see, 586,31
- theôrēma**, speculative thought, 469,33; 583,7
speculation, 473,31; 538,20
- hupsêlon theôrēma**, lofty speculation, 538,19-20
- theôrêtikos**, contemplative, 520,26.28
- nous**, contemplative intellect, 490,17.27.35-6; 554,13-38; 558,12; 576,6.7; 578,7-9; 584,22.23
- theôrêtikôs**, contemplatively, 524,20
- theôrêton**, thing we contemplate, 490,31
- thêreuein**, try to capture, 570,15
- thermantos**, warm, 477,12.13.16
- thermos**, hot, 452,33; 453,1; 477,15-17; 480,5; 530,7.10.17
- to thermon**, heat, 588,12
- thermotês**, heat, 595,21
- theros**, summer, 580,32; 585,8
- thixis**, contact, 487,18.26; 489,30-490,5
- tholoun**, muddy, 519,27
- threptikos**, nutritive, 576,6-26 etc.
- to threptikon**, that which nourishes, 576,17.21

thrix, trikhes, hair, 595,1.15.16
thumikos, spirited, 565,25-6; 574,28
thumoeidēs, spirited, 575,9-10
thumos, anger, 515,32
 spirit, 565,29.30; 566,2; 571,20.24;
 572,6; 574,6
thumousthai, become spirited,
 465,1.21; 597,33.38
thura, door, 545,16
thurathen nous, intellect from
 outside, 518,8.16.31.36; 519,4.6.8;
 520,17; 535,5.34.36; 536,2.4;
 537,39; 538,9.29; 539,9; 541,14;
 542,5; 584,35.37
ti ên einai, to, essence, 531,18.20-1.27
timios, superior, 446,23
tithaseuein, domesticate, 497,7.10;
 607,2
tmēma, division, 485,6; 511,37;
 512,1.2; 516,3
toikhos, wall, 585,11
toioutotropōs, in the following way,
 591,1; 593,3
tolmētias, temerarious, 580,1; 586,19
tomē, cutting, 549,14
topos, place, see 493,7 note
trakhutēs, roughness, 490,20
tragelaphos, goatstag, 488,17-18;
 492,14; 503,32; 507,36
tragikos, (thing said) in a tragedy,
 486,27
tragōidos, tragic actor, 533,32
tragos, goat, 508,4
tremein, fear, 500,33
trephein, nourish, 452,32.33; 595,27;
 599,17; 601,15-18
tropeisthai, undergo a conversion,
 607,2
trophē, nourishment, 595,24.25;
 599,16.19.20.22; 603,33.34; 607,14

tropheia, nursling's dues, 450,20;
 467,4
truphan, have a passion for, 558,14
tupos, imprint, 448,11;
 455,22.23.26.27.29.35;
 456,1.2.5.9.10; 461,10; 464,11;
 493,7 (see note); 512,16; 516,26;
 538,5; 546,35; 551,10
tupoun, imprint (v.), 508,17
tupousthai, receive imprints,
 605,13.14.17
tupōtikōs, by way of imprint, 574,15

xanthos, yellow, 455,17; 460,1; 461,3;
 478,2
xēros, dry, 530,12; 601,31
xiphos, sword, 555,23

zēn, be alive, live, 600,1; 601,35-602,1
zētein, enquire, 446,7
zētēma, object of enquiry, 528,10.11
zētēsis, enquiry, 462,28
zōē, life (i.e. soul), 568,24; 589,21
zōgraphia, painting, 476,23; 545,8
zōogonos, life-giving, 449,20.21
zōon, animal, 572,32.33; 589,28;
 594,20; 599,30.31; (defined)
 600,12-17
zōoun, endow with life, 588,24.30-1
zōophuton, zoophyte, 577,7.12.14;
 589,28.29.34; 592,26.27; 594,22;
 595,28.33-4; 600,13.15.18.30;
 601,3; 604,11
zōtikos, vital, 465,12.15; 597,29.31.32
zōtikon idiōma, peculiarity of what
 is living, 572,30-1.37
zōtikē prosklisis, vital bending,
 497,9

Subject Index

References in italics are to pages of the Introduction. Other references are to page and line of Hayduck's text.

- affections, perfective and destructive,
526,30-527,3
- Alcibiades, as example, 514,2
- Alexander of Aphrodisias,
470,18-471,10; 489,9; 521,12-28;
522,22-6; 523,4-11; 523,20-3;
529,22-3; 530,5-7;
535,4-5.18.20.27; 536,6.11;
537,9-41; 539,36; 558,5; 571,35;
590,39-591,1
on perceiving we perceive, 464,20-3;
464,30; 465,24-7
on intellect, 518,6-18; 518,32;
519,14-37; 520,7; 520,10-28
on heavenly bodies, 595,38-596,14;
596,33; 599,35
- Alexandria, 10
- Ammonius, 2, 5, 9, 12-14; 473,10-19;
518,32-3 and n.
- Ananias of Shirak, 4
- Anaxagoras, 522,33-523,4; 526,21
angels, 527,27; 535,38; 536,13.18;
537,15
- animals, defined, 600,16
composite and have touch,
601,4-602,33
- Anonymous Commentator on *de
Interpretatione*, 12-14
- Antiochus, 8
- appetition, 579,22-39; 585,5-16;
586,29-587,6
- Aristotelian, 464,18; 572,17; 586,25;
596,36-598,6
- Aristotle, 450,3.9.20; 452,7.10;
456,16.18.26-7; 458,11.27; 462,10;
463,31; 464,14.31-2; 465,35;
466,28; 467,4; 469,20; 470,18;
471,10-11; 480,31; 482,16; 486,23;
487,5; 489,16.22-3.31-2; 496,6.14;
500,13.14; 501,14-15; 503,5.8.10;
504,4.27; 508,24; 509,2.12-14.27;
516,25; 518,9.21-2.36;
519,34.35.38; 520,3.4; 521,11;
523,2; 524,14; 525,11.14.18.25;
526,21; 527,28.29; 528,5; 529,4.23;
530,18; 531,26; 533,32.34; 535,32;
536,3.6.10.14.16.20;
537,29-30.36.41; 538,6; 539,36.37;
540,27; 541,28; 553,1.13;
555,17.23; 558,21; 563,12.27.34;
565,2.27; 571,2; 572,6.30;
573,4.29; 574,1; 575,4-5; 576,28;
579,17; 580,23.27;
581,20.23.30.31.34.36; 583,6;
584,8.29; 585,32; 587,25; 597,5.17;
599,33.36; 600,4.12.23.24
purpose in writing *de Anima* 3,
446,12-18
Analytics, 527,12n; 568,29 and n.
Categories and *Physics*, 528,34n
Cat. 3a29-32, 571,17-18; 10a11,
458,25-6
de Int. 16a9-16, 544,24-9; 16a12-13,
546,3n; 16a13-18, 580,28-30;
16a19-21, b6-9, 543,9; 23b3-7,
481,27-30
HA, 591,23n
MA 703b4-13, 575,19n
Metaph., 563,28-31
Metaph., 9 1051b17, 544,26-545,2
Phys. 2 193b6, 538,15
Phys. 3 201a11-15, 558,24n;
201b31-3, 558,27; 202a31-b22,
469,30-5; 473,31-3
Phys. 4 222a21-3, 549,11-12n.
Phys. 6 (i.e.7 243a1ff.), 589,8-9
Post. An. 1 72b23, 543,1
Respir. 470b6-480b3, 575,19n
Sens. 437b10, 605,30-1
Somn. 575,32, 455a20-1, 597,27-8n.

- assent (*sunkatathesis*), 489,1-5;
497,8-10; 500,29
- attentive faculty, 464,35-465,22;
555,12
- Bernard, W., 2, 4; 466,34n
- Blumenthal, H., 1, 4, 5; 528,26n.;
535,4n.
- body of luminous form, 597,18-20
- causes, 501,17-502,9; 571,2-8; 581,33-6
- change, distinguished from making,
473,33-474,2
- change of place (i.e. movement),
575,12-33; 581,20-3; 587,8-18;
587,21-8; 590,6-36; 591,22-34;
594,19-27; 604,23-605,9
- factors not responsible for,
576,5-579,8
- and appetite, 579,9-39; 591,14-19
- and sense, 595,9-27
- Christianity, 4-5, 10-12, 14
- Cleon, as example, 454,22;
460,12.14.27; 514,2.3; 548,22
- cognition, division of, 490,20-34
- Colophonian resin, 455,31
- common sense, 477,21-30;
560,9-561,18
- differentiates objects of different
senses, 478,1-481,34
- and perceiving we perceive,
465,25-31
- and intellect, 555,2-11; 555,24-556,7
- common sense-objects, 453,28-31
- how common, 458,17-25
- not proper objects of a sixth sense,
454,1-455,9
- why there are common sense-objects,
456,18-26; 461,26-32
- perceived by change, 457,28-458,17
- compared with incidental,
509,23-510,31
- coarse-grained and accurate, 510,31-4
- error concerning, 510,34-511,16
- conscious, consciousness, 465,15-16;
555,11-17; 572,38-573,2; 580,1-5;
592,4
- consciousness of time, 580,1-581,19;
586,19-27
- Delium, 573,1
- demons, 500,33
- denial and assertion, 546,1-12
- cognition, thinking by denial,
459,3-13; 547,1-10; 552,3-26
- Dionysius Telmahrensis, 2, 3, 4
- divine illumination, 486,38-487,1;
539,3
- divine things, 492,16; 515,28; 541,30;
542,10; 547,22; 552,16;
552,28-553,15; 563,35-564,2;
564,10-14; 567,13
- Elias, 3, 4
- Empedocles, 452,6-7; 487,5-27;
489,17.26-9; 547,31
- B 57, 545,17-20
- B 106, 485,23-4
- B 108, 486,12-18; 486,34-487,5
- B 109.1, 469,19-20; 489,27-8; 570,24
- Empedoclean Friendship, 545,17-18
- Euripides, *Hippolytus* 612, 492,28-9;
701, 486,27-8
- Orestes* 396, 465,16
- Evrard, 2, 4, 5
- Galen, 3, 13
- Genesis 1, 547,12-14
- God, 474,2.11-12; 507,9; 518,35;
526,26; 527,29-32; 528,4.13;
529,3; 535,25.28; 536,11-13.17;
537,11-39; 538,20-2;
539,3.9-10.31-8; 540,12;
541,13-17; 542,5; 547,8-17;
557,30-558,4; 584,35-7; 586,5;
587,11; 590,8
- good, and evil, relative, 555,18-21;
559,10-12; 562,11-14; 586,6-8
- and pleasure, 560,4-7
- hair, 595,13-22
- Hayduck, M., 1, 6, 9, 10, 13, 15
- heavenly bodies, 595,34-598,6;
599,32-600,8
- Heraclius, 3
- Hesiod, *Works and Days* 361-2,
456,37-457,2
- Hignett, C., 6
- Hippocrates, 3, 8; 472,20; 486,4 (n.)
- Hippocratic writings, 566,11
- Homer, 489,16
- Iliad* 8 281, 538,28
- Iliad* 10 535, 601,1-2
- Iliad* 11 466, 601,2

- Odyssey* 12 92; 547,8
Odyssey 18 136-7, 486,18-34
Odyssey 22 1, 491,23
- Iamblichus, 533,25-35
 imagination, defined, 507,16-509,2
 why so called, 511,18-24
 division of, 589,36-590,4
 called 'passive intellect', 490,23;
 506,24; 523,29; 542,3; 584,17
 without parts, 562,27-563,2
 why given us, 511,25-36
 voluntary and against our will,
 492,31-493,4; 497,21-9
 reminiscent and teachable, 495,25-9
 and sense, 466,17; 494,18-496,20;
 509,4-22
 and common sense, 507,18-31;
 508,27-9
 and opinion, 488,15-489,5; 492,8-21;
 508,13-16
 not a combination of opinion and
 sense, 501,11-504,3
 compared with sense and thought,
 488,9-15
 and appetite and movement,
 574,24-30; 578,1-6; 592,2-593,11
 stirs up imprints, 455,23
 forms constellations, 461,30
 immortality and eternity, 537,1-6
 incidental sense-objects, 454,15-24
 indivisibles, five kinds of, 543,5-16;
 544,4-15
 intellect, signifies three things,
 518,8-520,20
 potential and actual, 554,7-12
 actual, 534,20-539,10
 contemplative and practical,
 554,12-37
 and sense, 487,30-9; 498,3-11;
 516,22-517,3; 554,39-556,7;
 574,13-21
 and imagination, 541,28-31;
 542,7-18; 546,30-5; 554,15-20;
 559,26-560,4; 561,23-562,8;
 563,11-564,25; 569,4-570,5;
 584,8-19
 and appetite, 585,18-586,10
 object of thought to itself,
 527,6-528,31
 not affected except perfectly,
 526,12-527,4
- and time, 546,17-27; 548,5-26;
 549,23-550,4
 gives unity, 548,30-549,2
 thinks large things and small alike,
 524,2
 knows things in matter,
 525,10-526,11
 objects of, 527,33-5; 530,20-2;
 542,24-543,4; 562,20-2; 563,11-13;
 568,14-25
 from outside, see God
- John Barbur, 2
 John Moschus, 2, 3
 Justinian, 5
- knowledge, the same as its objects,
 557,18-25; 566,23-6; 567,18-29
- Lautner, P., 2, 4, 5, 15, 537,28n.
- Marinus, 535,5-8.18; 535,31-536,2;
 536,6.15; 537,9-24
- mathematics, objects of, 456,20-3;
 461,30-2; 531,14-532,17;
 562,24-563,5; 566,10-21
- matter, 539,15-17; 543,27-544,4
 matter, formless, 543,29-31
 movement, see change
- new born children, 494,28-495,4
 nutritive power, 576,8-28
- Olympiodorus, 6
- opinion (*doxa*), 446,10-1; 447,1;
 496,29-32; 500,15-22; 593,4-11
- perceiving we perceive, 462,29-467,12
- Philoponus, 2, 4-6, 12, 518,33n.
 in de Anima 18,26-8, 597,18n.
 in de Anima 240,7-15 and 254,23-31,
 495,11n.
 in de Anima 440,13-23, 599,12n.
 de Intellectu 7,41, 520,34n.
 de Intellectu 43,18-45,59, 535,4n.
 de Intellectu 57,75-58,96, 538,27
 de Intellectu 77,63-86, 551,7n.
- Phocas, 3
- Plato, 456,19; 481,34-5; 487,15;
 504,4-30; 519,37-520,2; 523,25;
 524,6-16; 527,30; 533,33;
 535,10-11; 555,12;

- 573,22.26.28.31; 574,5.24.26;
575,1; 586,12
as example, 479,29.31; 543,8; 590,33
Phaedo 81C-E, 563,7-11
Phaedo 105, 537,4n.; 541,13n.
Phaedrus 245C, 524,11; 528,28;
541,11; 600,1n.
Phaedrus 246B, 596,28
Phaedrus 247B, 596,26-7
Philebus 39B, 538,6
Republic 1 331C, 555,21-3
Republic 6, 456,20
Republic 6 496B-C, 578,30
Republic 6 509B, 504,21n.
Republic 6 511A-C, 596,30n.
Sophist, 504,14-26
Sophist 264B, 504,5-7
Symposium 219E-221A, 573,1-2n.
Theaetetus, 475,26-7
Theaetetus 156A-E, 471,37n
Theaetetus 184D, 482,16-18
Theaetetus 186B-C, 564,23-5
Theages, 578,31
Timaeus 456,20n.; 504,21n.; 579,19
Timaeus 35A, 504,9-10
Timaeus 70D-71B, 583,16n.
on parts and powers of the psyche,
565,20-566,7; 571,19-572,15
on movement, 572,16-29; 581,24-36
Platonic, 450,28; 565,1; 572,17; 573,4-5
Platonists, 572,24; 596,37-598,6
pleasure, 477,5-18
Plotinus, 466,19-20n. 528,25-31;
535,8-13; 535,28-31; 536,6;
536,15-537,1; 538,33; 545,5
Plutarch of Athens, 457,34-458,3;
458,9-17; 460,1; 462,7-10;
464,23-31; 465,17-26; 485,5;
489,10; 512,12-14; 515,13-29;
517,34-5; 518,10.19-519,15;
519,37-520,7; 520,11;
520,34-521,10; 529,22-3; 530,5-7;
531,25-6; 535,13-16.18; 536,2-5;
541,20-4; 553,10; 571,35; 575,6-7;
584,6-8; 591,1-7; 595,38;
596,14-36; 599,36; 600,4.7
pneuma, 560,10; 587,24-589,26;
591,26-7; 597,25-7
pneumatic body, 481,20
Porphyry, 3
practical reason, examples of,
592,15-593,3; 593,26-594,11
Protagoreans, 471,31-472,4; 475,23-7
Protagorean argument, 487,16
Providence, 527,31
Pseudo-Elias, 3, 4
Roueché, M., 1, 4
self control, lack of (*akrasia*),
593,13-16
sense, potential and actual,
469,3-472,4; 558,12-31
only five senses, 447,15-450,33
nomenclature, 474,19-475,5
destroyed by extremes, 472,4-20;
476,18-30; 602,7-20
error about proper objects, 513,16-20
see also intellect, thought
sense organs, 448,3-449,28
shell-like body, 482,12
Sicily, 479,29
Socrates, 504,15.19; 573,1-2; 596,28
as example, 479,29; 488,26;
502,29.30; 505,1.3.4; 511,10;
539,6-7; 546,10; 590,32-3
Sophonias, 6, 11; 592,19n.
Sorabji, R., 2, 15
soul, 538,12-19; 591,14-15
immortal, 516,1.13-14; 517,3-31;
563,2-5; 585,1-2
division of, into parts and powers,
565,21-2; 571,9-572,15
Stephanus, Introduction *passim*
subject and predicate, 543,7-8;
545,21-37; 546,1-12
substance, secondary, primary,
446,25-7
falls under no sense, 454,21-2
Syrian, 473,2
Tarán, L., 12, 13
taste, 603,25-604,2
Thales, 571,6-7; 573,3-4; 583,9
Theaetetus, as example, 511,10
Theages, 578,30-1
Themistius, as example, 590,33
Paraphrasis 81,15-17, 450,9-19
Paraphrasis 92,4-7, 508,19-509,2
Paraphrasis 93,16-17, 514,29-31
Theophylact Simocatta, 3
Thrace, 580,8
thought (*dianoia*), called 'potential
intellect' 491,9-15

- and sense, 487,39-488,9; 491,9-30
and intuitive intellect,
 545,12-546,12; 546,22-30;
 547,25-548,2; 553,25-554,7;
 556,31-4
Thucydides, 541,33
time, 545,21-38; 580,16-17;
 580,1-581,19; see also
 consciousness, intellect
tragedian, anonymous, 492,31
Trojan War, as example, 483,24;
 545,24; 548,7
Tychikos, 4
universals, 481,13-14; 528,5-6; 596,6-9
Usener, H., 2, 3, 4, 7
Vancourt, R., 1, 2, 4, 14
visual ray, emission of, 605,23-8
walking, 588,33-589,5
Westerink, L.G., 1, 11
William de Moerbeke, 1
wisdom, 491,4
Wolska-Conus, W., 1-4, 9
zoophytes, 577,7-32; 589,27-590,5;
 592,25-9; 595,28-33; 597,37-9;
 600,13-601,3

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STEPHANUS
On Aristotle
On Interpretation
Translation

Textual Emendations

- 3,2 Adding *ouk esti labein* as Hayduck suggests
- 3,18 Accepting Hayduck's addition of *metokhê kai rhêma*
- 4,14 Bracketing *kai* before *hômologêtai*
- 6,10 Reading *eme* for *kai allôs*, as in line 12 below
- 7,6 Reading *hekastên* for *hekastou*
- 7,17 Reading *agrammatôn* from *de Int.* 16a28-9 for *haplôs*
- 9,18 Accepting Hayduck's suggestion to add *ditton de kai to thesei, ê to harmodiôs keimenon*
- 9,26 Accepting Hayduck's suggestion to add *alla kata to b tou phusei*
- 10,2 Supplying, v.g., *edei autois, hôs exousi*
- 11,8 Punctuating 'Sôkratous' gar 'peripatei' rather than 'Sôkratous gar peripatei'
- 11,18 Accepting Hayduck's suggestion to add *kai kaleitai*
- 13,21 Accepting Hayduck's suggestion to read *epi tôn ontôn kai tôn mê ontôn* instead of *epi tôn mê ontôn* from *de Int.* 16a5
- 13,22 Accepting Hayduck's suggestion to read *ou badizei*
- 13,34 Correcting *hê* to *ê*
- 15,3 Following Hayduck in inserting *oun sumplekomenon prossêmeinei sunthesin*
- 15,24-5 Correcting Hayduck's punctuation
- 15,29-30 Accepting Hayduck's insertion of *phusei ousês; pan organon phusikês dunameôs*
- 16,4 Inserting only *kai apotelesma*
- 17,5-6 Accepting Hayduck's insertion of *antidiêirêmena; tôn gar estin* should be given quotation marks
- 18,17 Reading *kai* for *ê*
- 18,33 Reading *kai* for *ê*
- 20,6 Accepting Hayduck's insertion of *ou*
- 20,16 Supplying *tautên prosethêkê*
- 22,15 Accepting Hayduck's insertion of *gar tôi Sôkratei tou dikaiou*
- 23,22 Reading *Sôkratês hugiainei, Sôkratês oukh hugianen*
- 26,7 Correcting *ou* 'Sôkratês' to 'ou Sôkratês'
- 26,21 Understanding *sunapsai* with *tôi katêgoroumenôi*, and supplying *eirêsthai* after *ou kalôs* with Hayduck

- 27,5 Following a hint in Hayduck's apparatus and reading *ou heis* for *outheis*
- 28,16 Accepting Hayduck's insertion of *mê pareinai de amphotera dunaton*
- 28,21 Accepting Hayduck's insertion of *pseudetai hê legousa 'oudeis anthrôpos anapnei', hê de katholou kataphatike alêtheuei hê legousa 'pas anthrôpos anapnei'. palin hê men katholou kataphatikê epi tês adunatou hulês*
- 30,25 Accepting Hayduck's insertion of *anthrôpos ou badizei*
- 31,2 Accepting Hayduck's insertion of *dei de sullabein tên tôn aprosdioristôn*
- 33,2 Accepting Hayduck's insertion of *kataleleiptai ara mia protasis hê katholou apophasis antiphatikôs makhomene*
- 33,7 Accepting Hayduck's insertion of *hê de merikê kataphasis pseudetai hê legousa tis anthrôpos hiptatai*
- 33,10 Accepting Hayduck's insertion of *hê gar ou Sôkratês badizei*
- 34,14 Filling the lacuna more generously than Hayduck: *pros apophatikên eite apophatikês pros kataphatikên*
- 34,35 Emending *tou antexomenou* to *tou endexomenou*,
- 35,15 Accepting Hayduck's suggested insertion of *ei dê hôrismenên ekhei gnôsin tôn mellontôn*
- 35,18 Accepting Hayduck's suggested insertion of *pantôs epistatai ta mellonta*
- 35,24 Accepting Hayduck's conjecture that *hôs aidion kai aphtharton* have fallen out
- 36,19 Accepting Hayduck's insertion of *kai eis murioston etos*
- 37,19 Accepting Hayduck's insertion of *alêtheuei hê apophasis kai ouk estai aurion naumakhia*
- 38,2 Accepting Hayduck's insertion of *hê huparxis tou pragmatos akolouthei kai têi huparxei tou pragmatos hê alêtheia tôn logôn*
- 38,37 Accepting Hayduck's insertion of *epi men tôn aei kai ex anankês ontôn ê mê ontôn*
- 43,33 Accepting Hayduck's insertion of *kai en tôi eipein tôi dikaiôi proskeisetai*
- 44,1 Reading *prosrhêmatôn* for *prosrhêματος* at P. Crivelli's suggestion
- 46,6 *adiaphoron einai pros to genesthai tên apophasin to aphairein men tou aoristou hupokeinenou to arnêtikon morion, protattein de auto tou prosdiorismou* is supplied from Ammonius 178,13-15, as Hayduck suggests.

- 50,12 Accepting Hayduck's insertion of *ousêi, houtô kai hê ek metatheseôs apophasis hê legousa 'anthrôpos ou dikaïos ouk estin'*
- 50,13 Accepting Hayduck's insertion (derived from Ammonius 202,3-8)
- 50,25 Deleting a quotation mark that seems to be a printer's error
- 51,7 Accepting Hayduck's insertion of *kai hama katêgorein; kai phêsin, hotan*
- 52,8 Accepting Hayduck's insertion (derived from Ammonius 211,3-4), of *ho de nekros oute zôion oute logikon*, but reading (with Ammonius) *tethneôs* in place of *nekros*
- 52,14 Accepting Hayduck's suggestion of *hupokeisthō Simôn ho skuteus kata men tous tropous* instead of *hupokeisthōsan tou men tous tropous*
- 53,27 Accepting Hayduck's insertion of *katarithmeisthai*
- 57,32 Accepting Hayduck's insertion of *huparkhei to mē*
- 57,38 Reading *alêthês* for *pseudetai*
- 58,3 Reading *pseudeis* for *alêtheis*
- 60,1 Accepting Hayduck's suggestion of *poia estin hê tou anankaïou taxis hê tōi onti hepomenê* as what the sense requires; the text is corrupt
- 60,10-11 Accepting Hayduck's emendation to *to adunaton kata to einai homoiôs ekhei tōi mē dunatōi* instead of *to dunaton kai einai homoiôs ekhei to dunaton*
- 61,15 Accepting Hayduck's insertion of *sumphuês d' êi tōi pragmati*
- 64,13-14 Accepting Hayduck's suggestion to read *makhesthai tōi leukōi* in place of *phainesthai tōi de leukōi*
- 65,23 Accepting Hayduck's insertion of *houtos ê ekeinos*
- 67,13 Reading *amphoterōis* for the MS *amphoterōi*
- 69,15 Correcting Hayduck's 3 to P's 4

Notes with God's Help on Aristotle's de
Interpretatione From the Voice of
the Philosopher Stephanus

1,1

<Beginning of DIVISION 1>

< LECTURE 1>

16a1 First we must lay down what a noun is and what a verb;
then what are denial and assertion and statement and sentence,
etc.

5

The present treatise has a bipartite introduction. In the first part he
[Aristotle] makes an enumeration of those things about which he is
going to speak in Division 1, and also puts forward a speculation. In
the second part he goes through a sort of analogy between spoken
sounds and thoughts.

10

In the enumeration he says that one should first define 'what a
noun is and what a verb', and then 'what are denial, assertion,¹
statement² and sentence'. That is the enumeration.

The speculation goes like this. There are four things, letters,
spoken sounds, thoughts and things. Of these, two are due to nature
and two to laying down. He shows this in the following way. Letters
and words [*onomata*] are not the same with everyone; and things that
are not the same with everyone are not due to nature. Therefore
letters and words are not due to nature. That words and letters are
not the same with everyone is agreed straight off. There is one way
of shaping letters with the Greeks and another with the Egyptians.
And it is just the same way with words. The Greeks use one lot of
words, say 'horse' and 'dog', the Egyptians and Romans another, and
other nations other ones. And that things that are not the same for
all are due not to nature but to laying down is perfectly clear too. If
they were due to nature, they ought to be the same for everyone; for
the workmanship of nature is the same everywhere.

15

20

And that thoughts and things are the same for everyone and on
that account due to nature, is clear. An Egyptian does not have one
thought concerning horses and a Greek another; they have the same.
And again, the thing: a horse is not one thing with this lot of people
and another with that, but the same with all. So these latter things

25

2,1

are due to nature, and those to laying down. That is what he goes through in the first part of the introduction.

In the second, as I said, he puts forward a sort of analogy between spoken sounds and thoughts. Just as in the soul there are simple thoughts in which it is not possible to attain truth or run into
 5 falsehood, e.g. thinking of Socrates apart from any activity or affection, and there are composite thoughts, when you think of him acting or being affected in some way, and in those true or false can in a way be seen, so with spoken sounds: there are simple spoken sounds in which it is not possible to see the true or the false, but in composite spoken sounds there is definitely one or the other. That completes the
 10 second part of the introduction and the present continuous exposition with God's help.

16a1 First

Things are called 'first' in five ways, as we have already learnt in advance in the *Categories*.³ 'First' must be taken here as first either in time or in order. For a certain order is preserved in this way, with his defining in advance the things he intends to speak of in the first
 15 Division. Clearly too the time within which he speaks of these precedes the time in which he speaks of the others.

16a1 Lay down

It should be known that 'lay down' [*thesthai*] is said in six ways.⁴ A paradoxical supposal of someone renowned in philosophy is called a 'thesis', like Heraclitus' saying that all things that are, are in a state
 20 of change, and nothing has any share in staying unchanged, or again, Parmenides' thinking that what is, is one. Then a hypothesis too is called a 'thesis', as when we say 'Let it be hypothesised that the Earth stands to the sphere of the Sun as centre point'. And a projection [*ekthesis*] is called a 'thesis', e.g. 'Let the line be projected to have such and such a length'. And so are the postulatory inflections of the verb [*thetika epirrêmata*] in the usage of rhetoricians, e.g. 'Let there be a
 25 wedding', 'let there be a voyage'. We say 'in the usage of rhetoricians', because rhetoric and dialectic differ in that one is universal and one particular. The philosopher-dialectician says, universally, 'If, indeed, it is necessary to marry' or 'to make war' or 'to go on a voyage', but the rhetorician says 'If it is necessary for this man or that to marry a woman'. An agreement too is called a thing 'laid down' [*thesis*]. At least, we say that a person who retracts an agreement 'takes back'
 30 [*anathesthai*], as Plato says in the *Gorgias* 'If you wish to take back, Callicles, take back; for you are a good fellow' – that is, 'if you wish to retract what has been agreed and the premisses, retract'.⁵ And 'thing

laid down' [*thesis*] is also said of definitions: for these, as the preliminary hypotheses for demonstrations, are called 'things laid down'. For instance one ought to define triangle and after that show what is such as to belong to triangle of itself, that is, that it has angles equal to two right angles. And again, one should first define man and after that get to know what is by nature such as to belong to man. It is clear that here 'lay down' is used for defining, since his intention is to say what noun and verb and the rest are. And what something is, as we have often said, <is not to be grasped>⁶ unless by definition. For it is not clear to us. 35
3,1

16a1 What a noun is and what a verb

People have enquired about the order of these, since he puts noun before verb. We say that it is putting the more general before the more specific, for a verb is called a 'word' [*onoma*] but a noun [*onoma*] is not called a 'verb'. For Aristotle himself lower down [16b19-20] says 'verbs themselves, said by themselves, are nouns'. At any rate, we often say 'Plato uses fine words' when he is using not only nouns but also verbs and other parts of speech. And also because a noun is signficatory of existence and substance, and a verb signifies a substance's activity, and because substance comes before activity, it was reasonable to place noun too before verb; for as the things stand to one another, so do accounts concerning them. 5
10

People have raised the question why, when there are eight parts of speech, he mentions only two of them, I mean noun and verb. If someone⁷ says that from these two alone, when they are woven together, and not from the others, a complete sentence is obtained, that is speaking falsely. For a participle too and the so called infinitive and pronouns can be woven together to produce a complete sentence. For instance a pronoun and verb 'I walk', <and a participle and verb>,⁸ 'One running advances on foot', and nothing but infinitives, 'To philosophise is to be happy'. 15
20

So we say that all these come back to noun and verb. If they occupy the place of the subject he calls them 'nouns' whether they are verbs or participles or pronouns or the things grammarians call 'nouns'. For instance, if a noun occupies the position of a subject as in 'Socrates is just', 'Socrates' is called a 'noun', because it has the place of a subject. If a verb, as in 'To philosophise is to be happy', he thinks it right to call 'to philosophise' a noun. If a participle as in 'One running advances on foot', the participle too is called by him a 'noun'. And if a pronoun should happen to be taken, as in 'I walk', it obtains the appellation of 'noun' because it occupies the position of a subject. And it is his custom to call everything occupying the position of a predicate a 'verb', whatever part of speech it is, for instance 'Animal is a 25
30

substance': he says 'substance' is a verb, although it is a noun, because it is predicated of animal.

And he does not mention the other parts of speech grammarians have because they are not genuinely parts of speech, but some of them, as is the case with adverbs,⁹ signify only the relation of the predicate to the subject, like 'He walks gracefully', 'He converses well', 'He breathes of necessity'. As in the case of a ship we say that the planks are parts but the glue, the nails and the dowels are not parts, but supplement the parts, so too these things are not parts of speech but parts of uttered language of which a sentence too is a part.¹⁰

4,1 **16a1-2** Then what are denial and assertion

It is reasonable for him to place noun and verb before these in order: he does so because they are simpler. But why does he place the worse before the better, denial before assertion, assertion before statement and this before sentence? We say that it is reasonable for him to do this because he makes the end of what goes before the beginning of what comes after. For since he arrives last at sentence, he starts talking about that, first in order to make his teaching continuous, and then because in the account of statement he mentions sentence, and again in that of assertion and denial he mentions statement. Things used in the definition of something should be better known than that in the definition of which they are used.

We have learnt that there are three particularly important ways of doing a division: dividing a genus into species, a whole into parts and an equivocal spoken sound into its different significations. That statement is the more universal, and that it is divided into assertion and denial,¹¹ is agreed; but we must enquire in what sort of way it is divided. That it cannot be as a whole into parts may be agreed straight off. For it has been said that what is divided as a whole into parts is divided either into parts of the same kind, as flesh is divided into bits of flesh and bone into bits of bone, or into parts that are not of the same kind, as Socrates is divided into hands, feet and head. It has also been said that parts of the same kind receive the same name and account not only as the whole but as one another, whereas parts that are not of the same kind do not. Statement, then, cannot be divided as a whole either into parts of the same kind or into parts not of the same kind. Not into parts of the same kind, because the things into which it is divided, even if they receive the name of the whole (for assertion is of itself called 'statement', and denial likewise), still they do not receive the name and definition of one another. For denial is not also called 'assertion' nor again assertion 'denial'; and neither do they receive each other's definition. But it is not divided into parts not of the same kind either. For it has been said that parts not of the

same kind do not receive the name of the whole; nobody calls Socrates' foot or head or hand 'Socrates'. But in this case, as we have said, both denial and assertion are called by the name of the whole, 'statements'.
 30 So statement cannot be divided into assertion and denial as a whole into parts. But then there is disagreement¹² whether it is divided as a genus into species, as Porphyry thinks, or as an equivocal spoken sound into its different meanings, as Alexander maintains. Since Aristotle defines each of them,¹³ we shall bring forward the proofs of
 35 each of the interpreters and try as best we can to adjudicate [16,22ff].

16a3 The things in spoken sound are [earnests¹⁴ of affections in the soul,]

He says 'in spoken sound' to indicate nouns and verbs. For these are not simply sounds but in spoken sound. That is why he did not say 'spoken sounds are earnestests of affections in the soul' but 'the things in spoken sound'.

16a4 and the things written of those in spoken sound. [And just as letters are not the same for all, neither are spoken sounds] 5,1

He does well to say 'things written' and not 'letters' or 'elements', since 'letter' primarily signifies the imprint and character of the carving, as, indeed, the poet says: 'Now you make this boast because you have engraved the flat of my foot'.¹⁵ It is in a secondary sense that it signifies the phoneme and power. 'Element' again in its primary sense and primarily signifies the phoneme and power, that is, the ability of these elements to be put with others and to sound or not sound, and in a secondary sense the character. Because of this ambiguity, then,
 5 he does not say either 'elements' or 'letters' but 'things written'; for the thing written, that is, the imprint itself, is an earnest of words. Not the phoneme: the phoneme is a part of the spoken sound. 10

So says the philosopher Ammonius [23,20-1]. But our teacher¹⁶ says that Aristotle uses 'things written' wrongly for 'letters', since a thing being written, since it is coming to be, does not yet exist; and
 15 how can what does not yet exist be an earnest of anything? And secondly, whence is their evidence that 'letter' primarily means this and secondly that, and 'element' conversely? None of the philosophers or interpreters of the past says this, nor does Alexander or Porphyry.

16a6-7 but the things of which these are signs in the first instance,¹⁷ the affections in the soul, are the same for all, 20

He says that nouns and verbs are signs 'in the first instance' of thoughts, because secondarily they are signs of things. Of these four

things [sc. letters, spoken sounds, thoughts and things], some only
 25 announce, the things written, some only are announced, the things,
 and some both announce and are announced, the thoughts and spoken
 sounds. They announce the things before them and are announced by
 the things after them. For instance thoughts, since they come second
 after things and first before spoken sounds and letters, announce
 30 things and are announced by spoken sounds and things written.
 Again spoken sounds in the same way announce things and thoughts
 and are announced by the things written. But things never announce,
 because there is nothing prior to them, and things written are not
 announced by anything, because they have nothing after them. And
 35 by nature the thing is prior to the rest; for there must first be, say,
 horse, and then the thought concerning it, and after the thought of
 horse the word, and after the word the letters, if, indeed, there are
 letters at all.

16a7-8 and the things of which these are likenesses, those
 things are already the same

It should be known that he says thoughts are likenesses of things,
 6,1 and words earnest of thoughts. Likenesses differ from earnest in
 this, that a likeness as much as possible images the thing, for instance
 a likeness of Socrates is the image that so far as possible is modelled
 upon the very character of Socrates, so that it is pot-bellied, pop-eyed,
 5 bald etc., so far as it is possible to make an engraving like Socrates;
 but the earnest is not like that. It is within our power to make an
 earnest of war, using what we please, for instance the casting of a
 burning light, the setting up of a spear or the like. But it is not possible
 10 in a picture to make a likeness now in one way and now in another,
 but it must be as is the original. It is reasonable, then, for him to apply
 'likeness' to thoughts, since it is not possible for me¹⁸ to think of a
 horse in one way and for that man in another. But words, since it is
 possible for me to signify the thing in one way, with one word, and for
 that person to signify it with another, he reasonably calls 'earnests'.

16a9 And just as in the soul sometimes there is a thought
 15 without saying anything true or false, [and sometimes one to
 which one or the other of these must belong, so too in spoken
 sound]

Here is the second part of the introduction in which, as we said, he
 puts forward an analogy of spoken sounds to thoughts. An analogy is
 a similarity of proportions, as this stands to this, as a simple thought
 to a simple spoken sound. As in a simple thought there is no truth or
 falsity, so too [there is none] in a simple spoken sound; and as in a

composite thought there is definitely truth or falsity, so too there is in a composite sentence. There and that is the analogy. 20

16a12-13 – For false and true are to do with putting together and division.

It should be known that he calls assertion ‘putting together’ because the predicate is put together with the subject, and denial ‘division’, because the predicate is divided by the negative ‘not’ from the subject. 25

16a14-15 [Nouns and verbs themselves are like thought without putting together and division,] for example ‘man’ or ‘white’ [when one does not add anything: there is not yet either true or false.]

It should be known that ‘white’ [*leukon*] is a noun and a noun with an oblique case-inflection, but still he uses it in place of a verb. We said that since it has the position of a predicate, whether it is a noun or a verb it is called a ‘verb’.

16a18 [Here is an indication of this. ‘Goatstag’ signifies something, but not yet something true or false, unless one adds ‘to be’ or ‘not to be’] either simply or with a tense. 30

By ‘simply’ he means the present tense, and by ‘with a tense’ a tense outside the present, such as the past or the future.

That is the lecture.

LECTURE 2 CONCERNING NOUNS

16a19-21 A noun is a spoken sound that has meaning by agreement, without time, of which no part is significant in separation. [For in ‘Callippus’ the ‘ippus’ signifies nothing by itself, as it does in the sentence *kalos hippos*.¹⁹ Not, indeed, that as it is with simple names, so it is with complex: in the former a part is in no way significant, but in the latter it tries, but is not significant of anything in separation, for instance ‘boat’ in ‘pirate-boat’.]

We have already, in what went before, given the reason why he puts noun before verb. He defines noun, or at least he sketches it out, as follows: ‘A noun is a spoken sound that has meaning by agreement, without time, of which no part is significant in separation.’ For 7,1

- instance 'Socrates' is a spoken sound and has meaning and is by agreement, that is, by laying down, and is without time (for it does not signify time), and a part of it in separation, like the syllable 'so' or 'cra', has no meaning. Let us now interpret each²⁰ expression [*lexis*] in the definition. 'Spoken sound', then, is given in place of the genus. For spoken sound is not genuinely the genus of noun, since noun exists by laying down, whereas sound exists by nature; and it is impossible with genera and species that one should be due to nature and the other to laying down. But he takes spoken sound as matter, analogous to genus. For as we have often been told, matter is analogous to genus, and a certain sort of shape or form to the substantial differentiae. Just, then, as we say that a pleasure boat²¹ is wood arranged thus, making our written sketch from the matter and the form, so here he takes spoken sound, which is the matter of a noun, as genus.
- 15 'That has meaning' and the rest he uses as substantial differentiae to differentiate this sort of spoken sound from spoken sounds without meaning, inarticulate and articulate, and from sounds that are inarticulate but significant, like unwritten²² sounds and the barking of dogs. Articulate are such as 'goatstag', 'blityri'²³ and the like. He says 'by agreement' in place of 'by laying down'. For Egyptians agree to call things by these names, Greeks by those, and others, similarly, by others. This is said to contradistinguish them from the sounds made by other animals, like the barking of dogs. For the barking of a dog is a spoken sound with meaning (for it signifies the presence of friends or strangers), but it is not by agreement; for dogs do not agree that 'at the presence of strangers we shall bark'. 'Without time' is said because of verbs. For 'man' does not signify time. But some people raise a problem²⁴ about what we are to say about temporal nouns, like 'yesterday', 'today', 'in the evening', 'last year': they signify time straight off. So how can he say that nouns are without time? We reply to this that, as the philosopher Porphyry says, 'without time' here is to be taken as 'not signifying time *in addition*'. For verbs do not signify time; they signify time in addition. 'To strike' and 'to be struck' besides signifying a certain activity and a certain affection, signify also present time; and similarly with the other tenses of verbs, the future and the past. The temporal nouns just mentioned do not signify something else along with time, I mean an activity or affection.
- 35 'Of which no part is significant in separation' [16a20-1].²⁵ This is well said. For if from the noun *anthrôpos* ['man'] you take separately the *an*, it will not, as a part of *anthrôpos*, signify anything. This is said to contradistinguish nouns from utterances that do not contain verbs, such as 'O blessed Atrides, favoured with a rich destiny from birth'²⁶ or 'Would that, father Zeus and Athene and Apollo'²⁷ or 'By

this staff'.²⁸ In these everything else is the same: there is a spoken sound that has meaning and is by convention and without time; but a part when separated does signify something, whether a quality or a subsistence or something else like that. In contradistinction, then, to phrases like these he says 'of which no part signifies anything in separation'.

He says 'introducing a determinate nature'²⁹ because of 'not man'. For this has all the other things the same, but because it does not introduce a determinate sort of substance, for that reason it is not a noun. It does away with one thing, but it introduces many others, or rather an unlimited, indeterminate number.

It is with resources to spare, and *a fortiori*, that he establishes that a part of a noun has no meaning in separation. For in composite nouns, such as 'Callippus' and 'pirate-boat' the parts when separated give a suspicion or appearance of signifying something else, for instance in 'Callippus' the 'ippus' when separated appears to signify the non-rational, whinnying animal, and in 'pirate-boat' the 'boat' a solitary steed (for a pirate-boat is a kind of robber's ship: Aeschines³⁰ refers to it when he says 'He embarked in the pirate-boat'). So if in the case of these composite nouns a part does not signify anything in separation, much less does it signify anything in the case of simple nouns. For as in the composite the 'ippus' does not mean anything, so when torn away like this from the whole to which it belongs, even if it provides an appearance [of signifying something], still it signifies nothing in being said as a part of that word ['Callippus'].³¹

That is the sketch of what a noun is. Some of the enquiries made in addition to this we shall hear of in the detailed commentary, and others, with God's help, in another continuous exposition.

16a19 A noun is

People³² enquire why, after having discussed simple spoken sounds in the *Categories*,³³ he discusses them again here. For nouns and verbs are simple spoken sounds. We reply that 'simple spoken sound', 'noun', 'verb', 'saying' [*phasis*], 'term', these five are no different in subject, and the difference between them lies only in their relations. For instance, 'man', inasmuch as it simply signifies something, is called a 'simple sound'; as a subject it is called a 'noun'; as a predicate, a 'verb'; as part of a proposition, a 'saying'; as part of a syllogism, a 'term'. In the *Categories* he spoke only of simple spoken sounds signifying simple things, without raising further issues about whether something was a noun or verb or saying or term, but taking it only as a simple significant spoken sound. Here he is discussing these things as parts of propositions and as predicates and subjects; and in the *Analytics* he discusses them as parts of syllogisms.

16a26-7 'By agreement', because no noun exists by nature

Someone³⁴ might enquire why Aristotle here says that no noun exists by nature. For Plato in the *Cratylus* plainly says that names exist by nature. It should be known, then, that 'by nature' [*phusei*] has two meanings, and so has 'by laying down' [*thesei*]. A thing is said to be 'natural' [*phusei*] if it is brought forth by nature, as we say that the eye or nose or foot is an accomplishment of nature. A thing is also said to be 'natural' if it is fittingly disposed, for instance we say that it is natural if a horse goes on its hoofs, or a man has his mien up,³⁵ that is, eyes able to see upwards. And a man is naturally called 'Archelaus' if he has the character of a ruler, and similarly 'Basil' or 'Vassilis' if he is capable of reigning.³⁶ So what is natural is twofold, either what comes to be from nature or what is fittingly disposed in the manner of the examples given. <And what is by laying down is twofold also, either what is fittingly disposed>,³⁷ which is no different from the second thing signified by 'natural' [*phusei*], or what is simply laid down, in any chance way. Cratylus says that names exist by nature according to the first meaning, and Diodorus says that they exist not by nature but by laying down, and that according to the second meaning, that is, simply and in any chance way. Hence he called his own children by the names of the connectives, 'Men' and 'De'. Clearly one or the other of these does not speak well. But Socrates, arbitrating in the dialogue, says that names are neither natural according to the first meaning of 'natural' nor due to laying down according to the second meaning of 'by laying down', but <natural according to the second meaning of 'natural'>,³⁸ which is the same as the first meaning of 'by laying down'.

That names cannot [be natural in the first way] is clear from equivocation, from the changes of proper names, from the existence of many names for the same thing, from dialects and from people deaf from birth. If names were natural, proper names ought not to be changed; for instance Paris should not have his name changed to Alexander, Pyrrhus to Neoptolemos or Aristocles to Plato – for Plato was formerly named 'Aristocles'. Neither should the same thing have many names, e.g. 'blade', 'sticker', 'sword', 'hanger' are all laid down as words for a single thing. And what are we to make of equivocal terms if names are laid down by nature? Dialects too show that names are not due to nature; for we know that the same thing has one name according to the peculiarities of one dialect and another in another.

10,1 'Other people, other tongues' says the poet.³⁹ And in addition the deaf from birth provide a refutation like this: <as they have>⁴⁰ simply and by nature the power to make spoken sounds, so they should also have nouns and verbs. So from all these things it has become clear that

names are not natural according to the first meaning of ‘natural’. But neither is it possible that they are by laying down according to the second meaning of ‘by laying down’, that is, simply and in any chance way. That is clear from name-givers. Even if name-givers give names to no purpose, still they definitely give them with an eye to some reason and appropriateness. Why, for instance, did they call a man a ‘man’ and not a ‘camel’, or a camel <a ‘camel’ and not> a ‘man’? Definitely, then, there are reasons for which name-givers use names in this way, even if we do not know the etymologies in every case. 5 10

16a31 [But ‘not man’ is not a noun, neither, indeed, is there a name by which it ought to be called] – for it is not a sentence or a denial -

He says that ‘not man’ is not either a denial or a sentence. It is not a sentence, because the shortest sentence consists of two expressions [*lexeis*]. But neither is it a denial, because every denial or assertion must signify a truth or falsehood, and it signifies neither of these. That is the lecture. 15

LECTURE 3 with God’s help

16a32-b1 ‘Of Philo’ or ‘to Philo’⁴¹ and expressions like that are not nouns but cases of nouns 20

It is customary⁴² for commentators here to enquire concerning what grammarians call ‘cases’ [*ptôseis*], whether they are four or five. The Stoics and almost all those who pursue the grammatical art are of the opinion that the cases are five, and so they call the so-called ‘direct’ form a ‘case’. And if anyone asks them how the direct form can be called a ‘case’, they reply that it is called ‘direct’ for this reason, that it produces a direct and correct sentence, e.g. ‘Socrates walks’, and it is called a ‘case’ because it has fallen [*peptôkê*] from thought. This happens with a pencil that has fallen from the hand and stands upright: it is said both to have fallen and to stand upright. 25 30

To this the Peripatetics reply: ‘By this argument, not only have nouns fallen from simple thought, but verbs and all parts of speech. So all parts of speech will be cases, which is both ridiculous and in conflict with your suppositions.’ So if that is absurd, we ought to take the opinion of the Peripatetics, that there are four cases, and the direct form should be called ‘noun’. 11,1

Aristotle says that such things [the oblique cases] differ from nouns in this, that a noun constructed with ‘was’, ‘is’ or ‘will be’ always says something true or false, whereas the others do not. ‘Is’, “was” and “will be” , as the philosopher Porphyry indicates, means only the 5

verbs of being themselves and not the others. For other verbs constructed with cases become unsyntactical straight off. For⁴³ nobody says 'Of Socrates walks.'⁴⁴ Hence he records here also the division of
 10 the Stoics. What is predicated of something is predicated either of a noun, that is to say, of the direct form or of a case. If it is predicated of a noun, it produces either a complete sentence or one that is not complete. If it produces a complete sentence, they call it either a predication [*katêgorêma*] or an incidental predication [*sumbama*]. They are called the same by them,⁴⁵ and the reason is clear. They say 'predication' because it is spoken or said and is predicated of the
 15 subject, and an 'incidental predication' because it is incidental to Socrates to walk. If, however, it does not produce a complete sentence, it is called a 'partial predicate' [*parakatêgorêma*] or 'partial incidental' [*parasumbama*] like 'Socrates loves', for something is missing. Again, if it is predicated of a case, it produces either a complete sentence, <in which case it is called>⁴⁶ a 'lesser predication'. e.g. 'There was a change of mind for Socrates'; or it does not produce a complete
 20 sentence, and they call it 'a lesser partial predication' or 'a lesser partial incidental', e.g. 'There was concern in Socrates for' – for something is missing, e.g. 'for Alcibiades' or someone else.

The 'account', then, of these cases is 'in other respects the same', but with the addition of 'is', 'will be' or 'was' they do not say anything either true or false. But some people⁴⁷ raise the problem why he does
 25 not give the whole definition from the start, but later adds 'not man', that is to say the indefinite noun and the cases. We say that 'name' [*onoma*] signifies many things with Aristotle; it indicates the direct form, the cases, indefinite noun, verb and subject. When, therefore, he says 'spoken sound that has meaning by agreement' he indicates
 30 these five things. In adding 'not signifying time in addition' he throws out verbs, but the others are left, that is, indefinite nouns and cases. Again, in saying 'introducing a determinate nature' he throws out only indefinite nouns. Then finally when he says 'and in conjunction with "was", "is" or "will be", saying something true or false' he pushes
 35 away cases. So the whole definition of noun goes like this: 'Spoken sound that has meaning by agreement, <not> signifying <time> in addition, of which no part has meaning in separation, introducing a determinate nature, and in conjunction with "was" or "is" or "will be" saying something true or false.'

Against this Galen⁴⁸ says it is not a definition but an account. So he himself defines noun as follows: 'a spoken sound signifying by agreement a simple thought'. But this definition fits not only noun
 5 but sentence and other parts of speech. So because of the necessity of the thing, Aristotle is not to be blamed for setting out the definition of noun through a plurality of expressions.

That is the discussion of noun.

16a33-b1 ‘Of Philo’ or ‘to Philo’ and expressions like that are not nouns but cases of nouns

Philosophers use ‘case’ for all inflections [*paragôgê*] and formations 10
[*skhêmatismos*] and agreements in formation [*suskhêmatismos*], and
not just for the inflections grammarians call ‘oblique’: ‘just’ [in the
neuter, *dikaion*], ‘justly’, ‘justest’, ‘juster’ [i.e. ‘more justly’, *di-*
kaioteron] and all such things are called by philosophers ‘cases’.

16b1-2 The account of it is in other respects the same, [but that
with ‘is’ or ‘was’ or ‘will be’ it does not say anything true or false]

He takes this form of words from the Attic usage. For it was their 15
practice, when someone brought in a motion which embraced things
in a prior motion, to say in the second motion ‘In other respects the
same, but I add that a crown should be given to Demosthenes in the
theatre’ – if he should happen to be bringing in a motion about
Demosthenes. They did this because they spoke in a measured
quantity of running water. So here too Aristotle does this, saying “The 20
account or definition of case is in other respects the same, but one
should add that when cases are conjoined with “was” or “is” or “will
be” they do not say anything true or false.’

That is the lecture.

LECTURE 4 with God’s help

CONCERNING VERBS

16b6-7 A verb is something signifying in addition time, of which 25
a part in separation signifies nothing, and is always⁴⁹ a sign for
things said of other things.

The idea of the definition of verb is like that of the definition of noun.
The definition of verb goes like this: ‘A spoken sound with meaning 30
by agreement, signifying in addition time, of which no part has
meaning in separation, introducing a determinate nature.’ But he
himself, being enamoured of brevity,⁵⁰ leaves out what is common,
the things that belong to noun and verb, and puts in only that which
differentiates noun and verb, that is, ‘signifying in addition time’.
What ‘signifying in addition time’ is, has been made clear already in 13,1
the interpretation of the definition of noun.

But if this is so, why does he also put in something else which *is*
common, ‘of which a part in separation signifies nothing’? For in-
stance, if one syllable of ‘clobber’ is separated, it does not as a part of 5
it [that verb] signify anything. And this is true not only of simple verbs

but also of composites like 'catalogue'. We say what Porphyry says, that he adds this because of sentences composed of verbs. For in other respects they are the same. They are spoken sounds and by agreement and signify in addition time, but a part of them in separation
 10 does signify something. For example, 'To philosophise is to be happy': 'to philosophise', 'to be happy' and 'is' in separation signify something of themselves, an activity or an affection; but of a verb this is not true.

Then he puts in the things that follow upon verbs, that a verb is an earnest and that it signifies something said of something else, an
 15 activity or affection. 'I clobber' signifies an activity, 'I am clobbered' an affection. And they are always said of something else; either said of a subject, when they predicated in the strict sense, for example 'To walk is to be moved' or 'To philosophise is to be happy', or [said] as being *in* a subject, for example 'Socrates is hale'.

Besides this he adds some other things which are thought to be
 20 verbs but which are not, like indefinites such as 'is not hale and is not walking'. And he supplies the reason why he does not call them verbs, saying that they equally fit things that <are and things that> are not,⁵¹ e.g. 'A goat-stag is not hale' and 'Socrates <is not walking>'.⁵² And he also throws out the inflections [*ptôseis*]. He calls 'inflections' those verbs that signify time outside the present. And perhaps it is because of their indefiniteness that he does not think fit to give the
 25 name 'verb' to these verbs either, since after this he says that verbs too signify things; for they are words [*onomata*, see 3,5], and words have been shown to signify things. The biggest indication, he says, that they signify things is that when someone is trying to form an idea of something,⁵³ for instance wonders 'What is Socrates doing?' and hears someone say 'Expounding' or 'sitting' or 'walking', it halts the tossing, wandering thought and the person who hears it himself
 30 comes to rest. If the verb did not signify something and show it forth, that would not happen. So verbs signify something, but never something true or false, that is, an assertion or denial, unless someone understands in addition from outside something that is straightforwardly a noun or a verb.

He establishes this a fortiori. If the more archetypal verbs – <the
 35 verbs> of being, into which every verb is resolved, like 'was', 'is' and 'will be', and 'being' itself, from which the verbs are derived – do not signify truth or⁵⁴ falsehood, still less do other verbs. For instance if someone says 'being' by itself ten thousand times he signifies something, that which exists, but never truth or falsehood. But along with other things it signifies a certain composition and proposition, which
 14,1 composition is not thinkable without the things composed, the things that enter into the composition.

Again, as we said over the definition of noun [in reply to the question] 'Why does he not give the whole definition of noun at the

beginning?', so we say here too, since he does not give the whole definition of verb as a whole – a whole like this: 'A verb is a spoken sound that has meaning,⁵⁵ signifying time in addition, introducing a determinate nature, and introducing present time only' – but adds it later. We say that 'verb' too means more things with him than one. It means that precisely which signifies time in addition and that which is predicated in propositions and again the inflections and the indefinites. In 'spoken sound that has meaning by agreement' he signifies also that which is predicated in propositions, even if it is a noun; for that does not signify time in addition. In 'signifying in addition time', he throws this out. Again, next in order 'introducing a determinate nature' throws out indefinite verbs, and 'introducing present time' throws out the inflections of the verb.

So much for the account of verb and the present continuous exposition.

16b7 And it is always a sign for things said of something else

He does well to add 'always',⁵⁶ since a noun too is said of something sometimes, but not always, for instance 'Socrates is just'. It ['just'] is said of something, Socrates, here; but not always; sometimes something else is predicated of it, as when we say 'What is just is useful'. But here! Is not a verb sometimes a subject, in '“I strike” is a verb', 'To be healthy is to be disposed in a certain way', 'To walk is to be moved'? We say that here the verb is put in the place of a noun. For verbs both have a nature peculiar to themselves and also signify certain things. They signify activities and affections, as has been said, but the peculiar nature that they have is, let us say, to be such and such a part of speech. In the utterance '“I strike” is a verb' '“I strike”' is a word for the actual nature of the verb 'I strike'. When we say that it is an earnest, clearly it is an earnest for an activity or an affection.

16b9-10 And it is always a sign for things that exist

This is not true. Substances too exist. And indeed in some copies there is 'for things said of something else', which is better. For substances too exist, but verbs do not signify substances.⁵⁷

16b21-1 [Said all by themselves, verbs are names and signify something – the speaker brings thought to a halt, and the hearer keeps still] – but whether it is or is not, it does not yet signify.

This is said elliptically both here and immediately afterwards. He should have said 'But whether it is true or not is not yet clear', that

is, they [verbs by themselves] do not make an assertion or denial. They certainly signify something, an activity or affection, but they do not make an assertion or denial in which what is true or false can be seen.

16b23-5 [For ‘to be’ or ‘not to be’ is not a sign of a thing, nor even ‘thing that is’ if you say it alone.] By itself it is nothing, but it signifies in addition a kind of composition, which is not thinkable apart from the things put together.

- 15,1 See! Here too ‘true’ and ‘make an assertion or denial’ are missing from his utterance.⁵⁸ And he says ‘signifies in addition’ in place of ‘signifies along with’. In ‘Socrates is a thing that is’, Socrates is a noun and ‘is’ is a verb. <Constructed> with these, ‘thing that is’ <signifies in addition> a certain <composition>, true or false.⁵⁹

That is the lecture.

5

<LECTURE 5>

CONCERNING SENTENCES

16b26-8 A sentence is a spoken sound that has meaning,⁶⁰ some part of which has meaning in separation as a saying but not as an assertion.

- 10 We have already in what goes before [4,2-10] given the reason for the order, by which in the Introduction he starts his enumeration from what is worse or at least more particular, and arrives at sentence, whereas now he starts from sentence. He begins his discussion now from sentences because in the definition of statement, which comes next, he mentions sentence. And he defines sentence as follows: ‘A sentence is a spoken sound that has meaning by agreement, some part of which is significant of something as a saying but not as an assertion.’
- 15

- Sufficient distinctions have already been drawn about ‘spoken sound’, and how a sentence is here called a ‘spoken sound’. Also with ‘having meaning’. ‘By agreement’ he himself will interpret. And of the spoken sound some part can have meaning in separation as a saying but not as an assertion: that too is clear. For instance ‘Socrates is walking’: ‘is walking’ and ‘Socrates’, which are parts of the sentence, in separation signify sayings. In the case of nouns and verbs none of these things occur: they [sc. their parts] do not signify anything in separation.
- 20

But since he has put in ‘as a saying, but not as an assertion’ someone might not unreasonably enquire about composite sentences

like 'Socrates is walking and Plato is debating',⁶¹ and 'If the Sun is above the Earth, it is day': why do not the parts of these sentences signify assertions? We may offer the concise reply that he is defining simple sentence.⁶² 25

'By agreement', as I say, he himself interprets and clarifies by investigating a syllogism that goes like this. Speech,⁶³ he says, is an instrument of the power to produce spoken sounds, <which exists naturally. Every instrument of a natural power>⁶⁴ is itself natural. 30 Therefore speech is natural. We accept the major premiss, that every instrument of a natural power must itself be natural; so the eye, which is the instrument of the power to see, the ear, which is the instrument of the power to hear, the nose, which is the instrument of the power to smell, the hand, which is the instrument of the power to lay hold of things. But we shall no longer accept the first proposition 16,1 which says that speech is an instrument. For speech is not an instrument of the power to make spoken sounds but an accomplishment, as dancing is of the power to move. There is nothing impossible in the same thing's being called, in different respects, both <an accomplishment>⁶⁵ and an instrument, and both natural and artificial. For example, a soldier uses both the natural instruments of the 5 soul, feet, hands and the like, and also artificial instruments, sword, javelin, shield, breastplate etc. So too, then, speech is both an instrument and an accomplishment, <an accomplishment> of the natural power and an instrument of the dialectical. And lung, windpipe, 10 palate are instruments of the natural power, while lips, tongue, teeth etc., are instruments of discourse. So even if speech is an instrument, it is an instrument not of the natural power but of discourse, which is due to laying down. And that speech is due not to nature but to laying down, is made plain by the parts of it. There are many ways in which it has been demonstrated that the parts of speech, I mean 15 nouns and verbs, are due to laying down; and if the parts are due to laying down, clearly the whole is.

This account fits every kind of sentence, all five kinds⁶⁶ – each of them is spoken sound, and has meaning, and part of it signifies something in separation – so from among sentences he contradistinguishes those that are statement-making, with which the present discussion is concerned, and says that 'A statement-making sentence is one in which there is speaking truly or speaking falsely'; for 20 instance 'Socrates is walking' is definitely either truth or falsehood. This does not hold for the other kinds of sentence mentioned: they do not signify either truth or falsehood.

Here some people,⁶⁷ suspecting that this account is a definition of statement-making sentence, say that statement is the genus for denial and assertion. For he would not define it by the things that 25 come under it, since further down Aristotle plainly defines contradic-

tion⁶⁸ by the things that come under it, I mean assertion and denial. And further when he does the division of statement-making sentence he says that one is prior, the other secondary. Alexander clutches onto that and says it is impossible that statement should be the genus of assertion and denial.

- 30 It is clear in the first place here that it is not a genus because he is giving a sketch and not a definition. It is impossible in a definition that there should be anything more particular than the definiendum, but things in a definition should definitely be either more universal or equally universal because of the extent of the uncertainty: more universal as in the definition <of man> 'Man is an animal that is
- 35 rational and mortal' (for these three are more universal than man in that they fit not only human beings but other things too); or equal, like 'receptive of intellect and knowledge and capable of laughter'. These are equal, since they are convertible. If something is an animal
- 17,1 capable of laughter, it is a human being, and if something is a human being it is an animal capable of laughter. But here are things that are more particular; for assertion and denial are more particular. And secondly, another additional point, if things are related as prior and posterior, they cannot have a common genus. If Aristotle, then, says
- 5 that assertion is prior and denial secondary, clearly they are not <divided from each other on a level; for when>⁶⁹ species are divided from one another on a level, and we remove one, the other is not removed along with it, but here if assertion is removed, so, necessarily, is denial.

- Porphyry, however, says that 'statement' cannot be an equivocal spoken sound, or divided equivocally into assertion and denial. For
- 10 an equivocal spoken sound is never used in a definition of anything or in any sketch. For instance, no one giving a definition or sketch of the part of a shoe which sticks up or of the animal that barks uses 'tongue' or 'dog'.⁷⁰ But here, defining assertion, he says it is a statement, and similarly too defining denial. So statement is genuinely
- 15 the genus of assertion and denial and not an equivocal spoken sound, for the reasons given.

- It has also been demonstrated that it is not divided as a whole into parts either, or in any other way of dividing. There remains, then, another intermediate way, which is called 'from one thing' and 'by relation to one thing'.⁷¹ In these cases, that thing which is common is used in the sketch of each. For instance, what is a lancet, or bread?
- 20 We say, 'an instrument of health proportionally related to such and such', or 'an efficient cause of health'.⁷² In this way too, then, here we call both assertion and denial 'statement', and nothing impossible follows.⁷³ So we find fault with those who, in place of what is intermediate – I mean in place of what is from one thing – take one of the extremes. For this way is intermediate between a division from genus

into species and a division into the different things signified by an equivocal spoken sound. Similarly also Porphyry in the *Isagoge* [2,32] says that 'thing that is' is predicated equivocally; though it has been demonstrated that 'thing that is' is not predicated equivocally, because it covers things that stand to one another as prior and posterior, but applied to things because they are from one thing. 25

After this we have the division of statement-making sentence and the supplementary division, as follows. Of statement-making sentences some have unity naturally and some adventitiously. Or rather they have unity either primarily and in the most simple way or secondarily. 'Socrates is walking', that is to say, the assertion, has simple unity. The denial has it in second place. Of those that have adventitious unity, some have it by virtue of a hypothetical connective, some by a disjunctive, some by a conjunctive, [some by an interrogative]⁷⁴ or the equivalent. An example of a conjunctive is 'Socrates is walking about and Plato is debating', of a hypothetical 'If the Sun is above the Earth, it is day', of a disjunctive 'Either it is day or it is night', of the equivalent, 'The Sun being above the Earth', for it definitely signifies that something follows and demands it, e.g. 'it is day'. 30 35 18,1

Then, after this division, he says that every statement-making sentence consists either of a noun and a verb, or of a noun and an inflection of a verb. For the account of a man, even if it contains many expressions, so long as it does not have a verb, is not a statement-making sentence. Having said this, he gives the supplementary division of statement-making sentences, but what this is, and how it differs from the division, we shall see in a later continuous exposition. 5

16b26-7 A sentence is a spoken sound with meaning, some part of which has meaning in separation. 10

He does well to say 'some part'. For not all the parts of speech⁷⁵ have meaning as sayings, but only subjects and predicates. Connectives and negatives are also called in a more general way 'parts of speech', but by themselves they do not signify sayings. We say 'in a more general way' because it was said above [3,31-8] that they are not genuinely parts.

16b28-9 For instance 'man' signifies something, but not that something is or is not 15

Here again he uses elliptical language. He should have said 'truth or falsehood'. 'Is',⁷⁶ [he says,] but whether it is true or false [that something is a man] is not yet shown forth.

16b33-17a1 Every sentence is significant, not, however, as an instrument, [but, as was said, by agreement]

- 20 Here he starts on the demolition of the syllogism which we clarified in the continuous exposition, which tries to show that speech is due to nature. And with this in view, without setting out the whole syllogism he examines its first premiss and convicts it of falsehood – the premiss which says that speech is an instrument of the power to produce spoken sounds, which is due to nature. He says it is not an
25 instrument.

17a2-3 But not every sentence is statement-making; only sentences in which there is speaking truly or speaking falsely. [There is not in all, for instance a prayer is a sentence, but neither true nor false.]

- Whether one were to suppose this a definition or what he gives further down,⁷⁷ neither is a definition. For in a definition there cannot be a disjunctive connective; if there is, then definitely we get a sketch. So
30 here too, if he says ‘in which there is speaking truly or speaking falsely’, we do not have a definition. Clearly he is speaking of assertion and denial. For how can the same assertion, being one in number, be [both] true and⁷⁸ false? So here too statement would be defined by things that come under it; and from this too we have it that the
35 account provided is a sketch and not a definition.

17a4-6 Let the others, then, be set aside; the investigation of them belongs more to the study of rhetoric or literary composition; [but the present speculation is about those that are statement-making.]

- By ‘the study of literary composition’ he means grammar. Because rhetoricians and grammarians are concerned with the other parts of
19,1 speech and do not lay so much claim to statement-making speech, for that reason the Philosopher says that seeing about the other parts of speech is more fitting for rhetoricians and grammarians. For rhetoricians consider the forms of speech, in order that locution may be forceful, well constructed and charged with vehemence, whereas
5 grammarians are more accustomed to make much of accents, breathings, inflections and person.

17a8 A first kind of statement-making sentence which is one [is assertion; then there is denial; the others are one by means of a connective]

Here, according to our continuous exposition [17,29], he sets out the division of statement-making sentence.

17a11-12 [Every statement-making sentence must contain a verb or inflection;] for even the account of man, if 'is' or 'will be' or 'was' or the like is not added, is not yet a statement-making sentence 10

If you recall, it was said at the beginning [16,16] that there are five kinds of simple sentence, statement-making, optative, vocative, interrogative and imperative. Nowhere have we made mention of definitory accounts.⁷⁹ Let us enquire, then, under which kind of simple sentence a definitory account is to be brought. He himself says 15 it is not to be brought under statement-making sentence. And if anyone should say that 'is' is to be understood in addition with it, and it can be brought back under statement-making sentence, we say: 'Then pretty well every noun, understood as having a verb with it, and verb, understood as having a noun or pronoun or infinitive with it, is a sentence.' If that is not true, it is clear from what has been said that what is called a 'definitory account' is a different kind of sentence, 20 and there will no longer be five kinds of simple sentence, but six. For if it is not a statement-making sentence, as he himself says, still less is it an optative or an imperative or any other kind.

17a13-15 But why 'animal, footed, two-footed' is one thing and not many (for it will not be one because the words are said next to one another) it belongs to a different treatise to say. 25

He says elsewhere, that is, in the seventh book of the *Metaphysics*,⁸⁰ that because the thing signified is one, and these [words] give the full substance of the thing signified, for this reason the definition of man is one account and not several. But what does he want 'not because the words are said next to one another' to mean? We say that 'next' is said in place of 'without a connective'. 30

That, with God's help, is the lecture.

LECTURE 6 with God's help

17a15-17 A statement-making sentence is one either because it shows forth one thing or because it is one by virtue of a connective; sentences are many which show forth many things and not one or which have no connectives

After the division of statement-making sentences according as they are prior or posterior, that is to say, secondary, he puts forward also 35

- 20,1 a supplementary division by unity and plurality, and further down a division by simple and composite. The present division differs from that, i.e. from the first one by prior and secondary, in that that was derived from the verbal expression whereas this is from the meaning. In the former, what is called 'one sentence primarily' is that which
- 5 consists of two expressions, like 'Socrates is walking'.⁸¹ 'One sentence secondarily' he calls⁸² a sentence consisting of three, like 'Socrates is <not>⁸³ walking'. These are assertion and denial consisting solely of subject and predicate. The rest are all one by virtue of a connective, as has been said: 'Socrates is walking and Plato is debating', 'If the
- 10 Sun is above the Earth, it is day'. But the division now put forward is taken from the meaning of the things shown. In this case, if what is shown is one, that sentence is called 'one' even if it consists of several expressions both in the subject and in the predicate; but if the things signified are more than one, as happens with equivocal expressions, even if it happens to consist of two expressions, [with the
- 15 equivocation] either in the subject or in the predicate or in both, the sentences are said to be several and not one, for instance ...⁸⁴ <He adds this>⁸⁵ division because of statement-making sentences, one kind predicates <a single thing of> a single thing, either affirmatively or negatively – affirmatively, as 'Men walk', negatively, as 'Men do not walk'⁸⁶ – or [another kind] signifies some sort of relation, and if a
- 20 relation, either one of following or one of disjunction, of following, as in 'If the Sun is above the Earth, it is day', of disjunction, as in 'Either it is day or it is night'. But if the sentence neither has a relationship it shows forth nor predicates one thing of another, then we say we have not one sentence but several, either in the way of sentences with equivocal expressions⁸⁷ or in that of sentences without connectives.
- 25 Having thus stated the division, he gives a sketch of statement, but in terms of what falls under it, saying that a statement is a sentence signifying that something belongs or does not belong to something. By 'belong to something' he indicates assertion and by 'not belong to something' denial. What he ought to have said in addition to this we have already given in what goes before.⁸⁸

- 30 **17a25-6** An assertion is a statement-making sentence in which something is said of something, and a denial one in which something is taken from something]⁸⁹

- To those we have stated he joins a third division in terms of simple and composite, and says that a simple statement is an assertion or denial, e.g. 'Socrates is walking', 'Socrates is not walking'. A composite statement consists either of two assertions or of two denials or of one
- 21,1 assertion and one denial.

There is no need for wonder that both in the first division he says

that a sentence that has unity by a conjunction is one, and again here he says that a sentence can be one by virtue of a connective. For there is no impossibility if in one limb of the first division there is embraced what is also a limb of the second division according to a different idea. It is like this with quantity. We said there⁹⁰ that one sort of quantity is discrete and one continuous, and again that one sort of quantity has position and one has not. Here that which has position is definitely to be seen in quantity that is continuous; for if something has position, it has to be continuous, though it is not the case that if something is continuous it has also to have position, as we there gave the clearest demonstration. And the same thing happens again in the division of animal. We say that one sort of animal is rational, one non-rational, and again, one sort of animal is mortal, one immortal. Here too it is clear that the non-rational has to be mortal; but the mortal does not have also to be non-rational. For human beings are mortal but are not non-rational; they are rational mortals.

So much on that. Then he starts to discuss contradiction. But what contradiction is and what things characterise it, we shall see in another continuous exposition.

17a15-16 A statement-making sentence is one either because it shows forth one thing or because it is one by virtue of a connective; sentences are many if they show forth many things and not one

It is worthwhile to enquire why he adds 'and not one', and does not say 'Sentences are many that signify many things' and let that suffice. We reply that a universal denial signifies both many things and one thing, and a universal assertion likewise. For example 'Every man breathes' both signifies all the individual men and the single unitary nature of man. It is the same with the universal denial 'No man flies.' If he had said this, 'Sentences are many if they signify many things', he would have included this sort of proposition along with them.

17a16 Or because it is one by virtue of a connective

Iamblichus says that 'one by virtue of a connective' above [sc. 17a9] refers to conjunctive connectives which do not signify a relationship between two or more things, such as 'Socrates is walking and Plato is debating'; but that here [sc. 17a16], he says 'one by virtue of a connective', hinting at hypothetical propositions like 'If the Sun is above the Earth, it is day.' But that is not true. He has no way of showing that the philosopher uses 'one by virtue of a connective' with this idea in mind. But as I said, there is nothing impossible if one limb of a division can be seen in another. For he himself further down says

straight out that a simple statement is one predicating one thing of one thing, and a composite statement is one consisting of these. The same with denials. So of necessity in these three limbs he refers to the same thing, according to Ammonius.

That is the lecture.

22,1

LECTURE 7 with God's help

17a26-9 Since it is possible to state what belongs as not belonging and what does not belong as belonging, and what belongs as belonging and what does not belong as not belonging, etc. [and the same with times outside the present, it would be possible both to deny everything that someone asserts, and to assert everything that someone denies. So it is clear that for every assertion there is an opposed denial and for every denial an assertion.]

- 5 He has stated what a sentence is universally and what a statement is and in addition what assertion and denial are. Here he starts his teaching about what is called 'contradiction' and gives a further definition of what contradiction is and what sort of things concur to make it necessary that a contradiction should arise.
To find this out, he first makes a small preliminary assumption.
- 10 This is that for every assertion there is an opposed denial⁹² and for every denial an opposed assertion. That is clear since the false is so related to the true. For it is possible both to state what belongs as belonging, e.g. 'Socrates is just' (for this stands as agreed by all, that Socrates is just), and what belongs as not belonging, e.g. 'Socrates is not just' (<for,> though <just> belongs <to Socrates>,⁹³ if I wish [to state] this thing that belongs as not being I say 'Socrates is not just'), and also what does not belong <as not belonging>, e.g. 'Socrates is not unjust', and what does not belong as belonging, e.g. 'Socrates is unjust'. So necessarily the true denial, I mean the one saying 'Socrates is not
- 20 unjust', is opposed <to the false assertion that says 'Socrates is unjust'>, and the true assertion to the false denial, I mean the one saying 'Socrates is just' to the one saying 'Socrates is not just'. When, therefore, a true proposition is opposed to a false proposition in the case of every tense and every materiality,⁹⁴ that is then called a 'contradiction'. These are the things that must concur if a contradiction is to arise.
- 25 It is possible, then, for people defining contradiction to say: 'A contradiction is a conflict of two propositions that divide truth and falsehood between them for every materiality and every tense.' For example, 'Every man is just. Not every man is just.' Of these, definitely one is true or false. And with the past: 'Every man was just.
- 30 Not every man was just.' The same with the future: 'Every man will

be just. Every man will not be just.^{94a} The same with the other materialities,⁹⁵ necessity and impossibility, as with God's help we shall see.

Further things that must concur for this are the same subject and the same predicate. For if there is the same subject but not the same predicate there will no longer arise a contradiction, e.g. 'Socrates is walking. Socrates is not debating.' For it is possible that these two propositions should both be true or both be false. In the case of a contradiction, that was impossible, but one had to be true and one had to be false. Again, if it should happen that the same predicate is preserved but the subject is changed, the same thing will occur. For instance if I say 'Socrates is hale.⁹⁶ Plato is not hale', both can be true or both false, and it is no longer necessary that one is true and one false and that a contradiction is produced. Not only must these things come together, but the same thing must not be taken in different respects or relatively to different things. Not in different respects, as when I say 'An Ethiopian is white. An Ethiopian is not white.' Both can be true, if I take what is predicated with respect to different things; an Ethiopian is white with respect to his teeth but not with respect to the rest of his body. Nor relatively to different things, e.g. 'Socrates is a father. Socrates is not a father', 'The stone is larger. The stone is not larger.' For it is possible for Socrates to be father to one person and son to another, and again for the stone to be larger than one thing and smaller than another. Nor in different ways, that is, now in potentiality and now in actuality. If that happens, again there will not longer be a contradiction, but either both propositions will be true or both will be false, e.g. 'The child is a grammarian. The child is not a grammarian.' The child is not actually a grammarian, but grammarian belongs potentially. Nor at different times. For it is possible that Socrates should be hale at one time and sick at another, and if I say 'Socrates is hale. Socrates was not hale',⁹⁷ I do not make a contradiction. Nor speaking equivocally. For if I say 'Ajax engaged in single combat. Ajax did not engage in single combat', I am found to be speaking truly and not dividing true and false between the two propositions, which contradiction requires. The Locrian Ajax did not engage in single combat, the Salaminian did. Nor without differentiation,⁹⁸ lest I say 'Men walk. Men do not walk.' For it is possible that some some human beings walk <and some do not>, and both propositions are found to be true. And often not just one term is equivocal or undifferentiated, but both. Not only are there these further differentiations for which we must watch out if we are to accomplish a contradiction, but others which he gives in what is called the *Sophistici Elenchi*. He there enumerates six ways in which paralogisms can arise from the expression and seven from thought.⁹⁹ So we need to watch out for all of these if a contradiction is to be produced.

That, with God's help, completes the continuous exposition and the First Division.

17a33-4 Let this be a contradiction, an assertion and a denial [that are opposed. I say that is opposed which [sc. asserts or denies] the same thing of the same thing]

24,1 Why, we enquire, does he call opposed propositions [*protaseis*] like 'Socrates is walking. Socrates is not walking' 'contradiction' [*antiphasis*] and not 'contraposition' [*antiprotasis*]? We reply, because the need is to do away with the most important part of a proposition, whatever that may be, whether it is what is predicated, or what is predicated in addition as a third thing,¹⁰⁰ or the further differentiation;¹⁰¹ and a part is called a 'saying' [*phasis*]. Since, then, we do away with the saying and not the whole proposition, for that reason this is called 'contradiction' and not 'contraposition'.

That, with God's help, is the lecture.

The beginning, with God's help, of DIVISION 2

<LECTURE 1>

10 **17a38-40** Since¹⁰² of things, some are universal and some individual – I mean by 'universal' what is by nature such as to be predicated of more things than one, and by 'individual' what is not, etc. [for instance, man is something universal, and Callias something individual, and it is necessary to state that something belongs or does not belong, sometimes to something universal and sometimes to something individual¹⁰³]

15 Here he starts the ball rolling and discusses propositions consisting of subject and predicate alone, e.g. 'Men walk', 'Socrates walks'. Before our exegesis of the text in detail we have three sections of enquiry, as follows. First, what is a further differentiation (for this is common to other kinds of proposition also), and how many further differentiations are there? Secondly, what is the number of propositions that consist of subject and predicate alone? And third, how out of assertions do we make denials?

20 Let us start with the first. A further differentiation is a verbal adjunct¹⁰⁴ signifying to how much of the subject the predicate belongs. For instance, when I say 'Every man walks,' it signifies for me that walking belongs to all those things that fall under human being, Socrates, Plato, Alcibiades and the rest. Again, in 'Some men walk' it signifies that walking belongs to some of the human beings and not to others. The same with 'No man walks' and 'Not every man walks.'

There are four further differentiations, two universal and two particular, and of these some are affirmative and some negative. There is universal affirmative, e.g. 'Every man breathes', universal negative, e.g. 'No man flies', and, coming to particulars, the affirmative, 'Some men walk', and the negative, 'Not every man walks.' It is necessary that there should be four further differentiations and not more or fewer. For either we state what is universal, and that either negatively or affirmatively, which makes the two universal further differentiations, I mean 'every' and 'no'; or we state the indefinite particular, and again we do that either affirmatively or negatively, making the two particular further differentiations 'some' and 'not every', 'some' being affirmative and 'not every' being negative. 30

We have now seen what a further differentiation is and how many of them there are; and that completes the first section. 35

In the second section we enquire into the number of the propositions that consist of subject and predicate. There are 144 propositions. The reason is as follows. It arises from the subject, from the relations of the predicate to the subject, and from the further differentiations, which is why we took the section on further differentiations first. 25,1

From the subject we take the following reason. The subject is either particular and individual, like 'Socrates', or universal. By 'particular' I mean what is atomic¹⁰⁵ and relates to one thing, by 'universal' what can be seen in many and is predicated of many, like 'man'. Such a universal subject either has or does not have a further differentiation. It does not have it in 'Men walk'. If it has it, it is either particular affirmative or universal affirmative. For the affirmative further differentiations have been laid down just now – and at the moment we are enquiring only into assertions. So there arise four propositions: 'Socrates walks', 'Men walk', 'Some men walk', 'Every man walks'; and the four are affirmative. 5 10

When these four are multiplied by the three parts of time, there arise 12 propositions. For instance 'Socrates walks', 'Socrates walked', 'Socrates will walk': see, there are 3. 'Men walk', 'Men walked', 'Men will walk': see, 3 again, making 6. 'Some men walk', 'Some men walked', 'Some men will walk': look! 9! 'Every man walks', 'Every man walked', 'Every man will walk': see, 12 propositions, because of the three parts of time. 15 20

Again, when these 12 propositions are multiplied by the three kinds of relationship of predicate to subject, they become 36. By 'relationships' I mean these three: contingent, necessary, impossible. People in the past who were interested in the art of these things¹⁰⁶ called these relationships 'materialities' because, as matter is revealed along with form, so a relationship like this is revealed along with the form of a proposition. In 'Socrates breathes' I signify a necessary relation, in 'Socrates walks' a contingent, in 'Socrates flies' 25

an impossible. So when the 12 propositions are multiplied by these three relationships we get 36 assertions. And since to every assertion, as has been said above, there is contradictorily opposed a denial, it is necessary that however many assertions there are, that number of denials should arise too. So there are 72 propositions in all, when the subject is definite.

And if the subject should be indefinite, the same. He himself calls 'not Socrates' and 'not man' 'indefinite nouns'. So, by virtue of the subject, there arise four assertions: '[What is] not Socrates walks', '[What is] not a man walks', 'Some [things that are] not men walk', 'Everything [that is] not a man walks.' These, multiplied by the three parts of time, and again by the triplicity of materialities in the same way, become 36 assertions; and clearly there are as many denials. So altogether there arise 144 propositions composed of subject and predicate alone. That completes the second section.

The third section of enquiry we proposed is to say how we make the denials from these assertions. To what do we attach the negative 'not'? Is it to the predicate or to the subject? In the case of propositions without a further differentiation and propositions about individuals we say that the negative should be attached to the predicate. For in the first place, if we were to attach the negative 'not' to the subject and not to the predicate, there would arise indefinite assertions, as has been said.¹⁰⁷ For '[What is] not Socrates walks'¹⁰⁸ removes one thing but introduces indefinitely many. And a second reason we give is: that the negative 'not' ought to be attached to the predicate. In propositions like this the predicate is what matters to the person making the assertion. When he says 'Socrates walks' he [the would-be denier] wishes to do away not with Socrates but with the 'walks'. And since in such propositions the predicate has the most important role, as indeed the word for such propositions makes clear (for they are called 'categorical' propositions, taking their appellation from the more important part¹⁰⁹), one ought to attach the negative 'not' to the more important part, and do away with what the assertion asserts. So too in doing away with animals we thrust the sword into the more important part, in order that the animal may the quicker be destroyed, for instance we drive it into the heart or the liver or the brain, not the hand or foot or the like.¹¹⁰

In the case of propositions with further differentiations we say what others have said without further differentiation, that it is not well said that it should be attached definitely to the predicate.¹¹¹ For we say again for two reasons that the negative 'not' should be attached to the further differentiation. First, for the reason already given, that just as in propositions without further differentiations and propositions concerning individuals the predicate has the most important part, so in propositions with further differentiations the further dif-

ferentiation has. Secondly, if we do not attach the negative 'not' to the further differentiation, there never arise contradictions. For instance, if I say 'Every man walks', 'Every man does not walk' [i.e. refrains from walking], the two are false together and we no longer have a contradiction but contrary propositions. For 'Every man does not walk' is equivalent to the proposition that says 'No man walks', and 'every' and 'no' conflict as contraries. But if we say 'Not every man walks' it conflicts contradictorily, as we shall see, with the proposition saying 'Every man walks'; for one is true and one definitely false. That completes the third section, which teaches us how we make denials out of assertions. 30

Let us also deal with the appellation of the universal further differentiation, and say why we do not obtain 'some' and 'not some' as we do 'every' and 'not every'. For that is how it should come about: just as there the negative particle 'not' is applied just to the 'every', the universal further differentiation, so too here the negative 'not' should have been added to 'some', the particular further differentiation, to produce 'not some' [*ou tis*].¹¹² To this we reply that of necessity the denial must be one of these: either *ou tis* ['not some'] or *outheis* ['no', 'no one'] or *oudeis* ['no', 'no one']. *Outheis* and *oute heis* ['not one'] are equivalent, and again *oude heis* ['not one'] and *oudeis* mean the same. *Ou tis* is not said at all; it is not in Greek usage. *Outis* is a poetic form. *Ou heis*,¹¹³ besides having a bad sound, is not the denial of 'Some men walk' but of *heis*, the mathematical word [for the number one]. So of necessity there is left *oude heis*, which by crasis and elision becomes *oudeis*, which is composed out of *heis*, the mathematical word, the connective *de* ['and', 'but', 'even'] and the negative *ou* ['not']. 27,1

When people hear 'not every' in some materialities they tend to get agitated¹¹⁴ lest it should introduce 'some'. This happens when the materiality is impossibility. In 'Not every man flies' the appearance seems to be produced that some fly and some do not. Again, with the materiality of necessity: 'Not every man breathes'; it seems to signify that some breathe and some do not. Since this appearance arises in the two materialities, let us speak about it. 5 10 15

'Not every' said by itself¹¹⁵ in the materialities of necessity and impossibility follows upon¹¹⁶ the universal denial. For instance, in the modality of the impossible, 'No man flies' and 'Not every man flies' are equivalent; for they are true together.¹¹⁷ Again, in the materiality of the necessary, 'No man breathes' and 'not every man breathes' are both false. But in the materiality of the contingent it does not follow upon the universal denial. For in the materiality of the contingent the universal denial is always false, e.g. the one saying 'No man walks', and the one saying 'Not every man walks' is true. 20

That we say this truly is plain from the assertions. For as a particular assertion stands to a universal assertion, so a particular 25

denial should stand to a universal denial. The particular assertion in the materiality of the contingent does not follow upon the universal assertion; for while the universal is false, it is true. But in the other two materialities it does follow along. 'Every man breathes' and 'Some men breathe' are both true; and in the materiality of the impossible the assertion saying 'Every man flies' is false and the particular assertion saying 'Some men fly' is false also. For they are contradictorily opposed to the universal denial.¹¹⁸ So the particular denial too follows upon the universal denial in the two materialities; but in the materiality of the contingent it does not follow along.

That, with God's help, completes the third section and the present continuous exposition.

17a38-9 Since of things, some are universal and some individual

- 28,1 That is, particular.¹¹⁹ 'Atomic' signifies several things. It signifies the individual itself, like Socrates (for Socrates and individuals are called 'atomic'); and 'atomic' also indicates what is cut up with difficulty, and what is not cut up at all, like a point and forms that are most specific.
- 5 Here he says 'individual' in place of 'particular' and 'atomic' for what can be cut up but does not preserve its earlier form after the cutting. So he is saying the equivalent to 'Of things, some are universal and some particular.'

17b3-5 If something is declared universally of something universal, that it belongs or does not belong, the statements will be contrary.

- 10 He calls 'contrary statements' universal assertions and universal denials, when both the subject is universal and the further differentiation is universal, whether negative or affirmative. For example, 'Every man walks', 'No man walks'. He calls such statements 'contrary' because they are like contraries with intermediates. For just as it is impossible that contraries with intermediates, like pale and dark, hot and cold, should be present at the same time in the same subject, <but it is possible that neither should be present,>¹²⁰ so too it is impossible that these propositions should be true together, but possible for them to be false together. If the materiality is contingent both are false, e.g. 'Every man walks', 'No man walks.' But in the other two modalities one has to be true and the other false. In the materiality of the necessary the universal denial <is false which says 'No man breathes' and the universal affirmative is true which says 'Every man breathes.' Again, in the materiality of the impossible, the universal negative>¹²¹ is true, the one saying 'No man flies', and the universal affirmative is false, the one saying 'Every man flies'.

17b7-8 But when something is stated of something universal, but not universally, they are not contrary,¹²² though the things indicated may sometimes^{122a} be contrary. [I say that things are declared not universally of universals, for instance, in 'Man is white', 'Man is not white', for though 'man' is universal it is not used as universal in the statement;]

He says 'universal not [used] universally' [17b10-11] in connection 25
with propositions which have a universal subject but not a further
differentiation. He does not call them 'contrary' because they are
sometimes true together. He says that the things indicated by such
propositions are sometimes contrary, hinting at contraries without
intermediaries. When such propositions are taken with contraries 30
without intermediaries the things signified by them introduce con-
traries, for instance 'Numbers are even', 'Numbers are not even.' They
are not [themselves] contrary, since they are true together, but the
things indicated in them are contrary. For 'not even' signifies 'odd',
and odd and even are thought to be contrary. Again, 'Socrates is hale',
'Socrates is not hale', since 'not hale' indicates 'sick', and sickness and 35
health are plainly contrary. So the things indicated in them are
contrary, as sickness and health are contrary, and even and odd.

17b11-12 for 'every' signifies not something universal but that
universally

His phrasing here is elliptical. The whole sentence is: 'The further 29,1
differentiation "every" or "no" does not signify a certain universal
nature like "man"; it signifies a certain relationship of the predicate
to the subject.' For example 'Every man walks.' In this by 'every' I
mean that, the subject, that is to say man, being universal, walking
belongs to all the individuals under man. So the whole passage says 5
that 'every' does not signify some universal nature, as does 'man'; it
signifies that, the subject being universal, the predicate belongs to all
the things ranked under the subject.

That, with God's help, is the present lecture.

<LECTURE 2>

17b12-14 But in the case of the predicate, to predicate the 10
universal universally¹²³ is not true; for no assertion will be
true,¹²⁴ etc. [in which the universal of the predicate is predicated
universally, for instance 'Every man is every animal']

Having put forward the differences that propositions derive from the

15 subject – according as it is determinate or indefinite – from the relationship of the predicate to the subject and also from the further differentiations (for the proposition saying ‘Men walk’ is of one species, and ‘Every man walks’ is of another), he enquires: is it possible, just as a further differentiation when attached to the subject – ‘Every man walks’ – makes a different proposition from ‘Men walk’
20 – is it possible to attach the further differentiation to the predicate, and make another species of proposition, e.g. ‘Every man is every animal’? And he states that this is impossible, because such a proposition, I mean one having the universal further differentiation in the predicate, is false.

25 But first let us say how many such propositions arise, propositions with universal further differentiation that have simply the further differentiation in addition to the differentiation. There arise 16. For there are four further differentiations. These when multiplied produce 16 propositions, for four times four is 16. For the subject must have one of these futher differentiations, and the predicate varies in four ways, as is shown in the table:

every man is	every animal	some man is	every animal
	not every animal		not every animal
	some animal		some animal
	no animal		no animal
not every man is	every animal	no man is	every animal
	not every animal		not every animal
	some animal		some animal
	no animal		no animal

30,1 Aristotle says that the universal further differentiation should not be attached to the predicate because the assertions come to be false. To this we say that what is said is true, but <not> so far as this goes,¹²⁵ since other false propositions arise also, for instance all assertions in the materiality of the impossible, and all universal assertions and
5 denials in the materiality of the contingent. So far, then, as true and false go, one ought to throw out the other propositions and not just these. But if we accept them, why not these too? We reply that even if there are found in the case of these propositions some true ones, like the one saying ‘Every man is some animal’, and ‘Every man is
10 not every animal’, still there are two reasons why we should not accept propositions like these. First, because they are superfluous. For ‘Every man is an animal’ signifies the same as ‘Every man is some animal’. And besides being superfluous, it will also be found useless for syllogistic procedure. For instance, let there be a syllogistic construction like this: ‘Every man is some animal; some animal is a

substance': such a construction is not a valid syllogism. For the second premiss is particular; and when the major premiss is found to be particular, such a construction is found not to be a valid syllogism in the first figure, as with God's help we shall learn in the *Analytics*.¹²⁶ Since such a proposition, then, is useless for syllogistic procedure it is reasonable for us not to accept it. So much on propositions that are twice further differentiated. 15

Aristotle next gives the difference between the oppositions that are to be seen in propositions. These are four. One is the opposition of singular propositions: 'Socrates is walking. Socrates is not walking.' Second, that of contraries: 'Every man walks. No man walks.' Third, that of subcontraries, whether they have the particular further differentiation or not, e.g. 'Men walk. <Men do not walk.>';¹²⁷ or 'Some men walk. Not every man walks.' And fourthly, that of propositions that conflict contradictorily. He calls the opposition where the conflict is contradictory, when one proposition is universal and one particular, and one affirmative and one negative, 'contradiction'. For instance 'Every man walks. Not every man walks.' 'Some men walk. No man walks.' And additionally [he applies 'contradiction' to] the opposition of singular propositions, 'Socrates is walking. Socrates is not walking.' He calls this conflict 'contradictory' because for every time and every materiality they divide true and false between them. And the notorious problem about singular opposition in the case of the future he himself raises and resolves. Universal affirmative and negative propositions, he says, conflict as contraries. Why he calls this sort of opposition 'contrary' has been said in the foregoing [28,13-17]. The contrariety of particular propositions and propositions without further differentiation he calls further down 'subcontrary' because they are under contraries; 'some' is under 'every' and 'not every' is under 'no'. 20 25 30 35 31,1

That is how he differentiates the oppositions between propositions. <And we ought to take that of propositions without further differentiation together>¹²⁸ with that of particular propositions. In the detailed commentary we shall see why.

17b14-16 For no assertion will be true in which the universal of the predicate is predicated universally, e.g. 'Every man is every animal' 5

He says 'no assertion' in place of 'proposition', taking his nomenclature from the more important part.¹²⁹ For if there is no assertion, still less is there any denial. For the denial exceeds the assertion only by the negative 'not', as we have often said.

- 10 **17b33-4** For if [a man] is ugly, he is not handsome, and if something is coming to be, then also it is not

Here he wants to demonstrate that particular propositions are equivalent to¹³⁰ propositions without further differentiation. He argues this in two ways, from contraries and from things that are coming to be. The one from contraries goes like this. If it is true to say that men are handsome, it is also true that men are ugly, and 'ugly' clearly signifies 'not handsome'. Therefore it is true to say that men are 'handsome', because of Achilles or Neleus, and true to say that men are 'ugly', which definitely signifies not handsome, because of Thersites. It follows that the propositions are true together. If they are true together, clearly there is no longer a contradiction, but they are equivalent to particular affirmative and negative propositions. That is the first argument.

The second argument is taken from things that are coming to be, and goes like this. If it is true to say 'Men are' because of those that already exist, it is also true to say 'Men are not', because of those that are coming to be and are in the womb. For what is in the womb is not yet. So they are true together, as has been said. If a contradiction never admits of truth together, a denial without further differentiation is not equivalent to a universal denial.¹³¹

But here an enquiry arises¹³² about denial without further differentiation, whether it is equivalent to a universal or to a particular denial. For concerning assertion there is no argument. It is plain to all that a particular assertion and an assertion without further differentiation are equivalent, for example 'Men walk', 'Some men walk' – without the article, of course.¹³³ But concerning a denial without further differentiation, it is enquired whether it follows the universal denial or the particular. And some might say it follows the universal, and bring along Aristotle himself as a witness. For he says elsewhere and clearly uses this in place of a universal denial, for instance in the *On the Soul*¹³⁴ he says 'There is not sense¹³⁵ over and above the five senses', that is, 'There is *no* sense over and above the five senses'. Again, in the *Physics*¹³⁶ 'There is not change over and above the things changed.'¹³⁷

We say, then, that it definitely follows the particular denial. And this is true too, that it follows the universal denial, since in the materialities of the impossible and the necessary necessarily it too, since it follows the particular denial, follows the universal as well.

5 But in the materiality of the contingent, since the particular denial, as was said [27,20-1], does not follow the universal (for the particular is true and the universal false), it is reasonable that the denial without further differentiation should not follow the universal denial.

For the proposition saying 'No man walks' is agreed to be false, [and that saying 'Every man walks' is agreed to be false,]¹³⁸ but that saying 'Not every man walks' is agreed to be true. So the denial without further differentiation always follows the particular denial. And the particular denial and particular assertion do not conflict. For it has been said that those propositions conflict contradictorily which for every time and every materiality divide true and false between them. Clearly, then, propositions without further differentiation, since they are true together in the materiality of the contingent, are not said to conflict contradictorily. And Aristotle's arguments [at 17b30-4] are clearly taken in the materiality of the contingent. For they have this aim alone, to show that they [sc. propositions without further differentiation] do not conflict contradictorily.

That is the lecture.

<LECTURE 3>

17b38-40 It is clear that there is one denial for [each] one assertion. For the denial ought to deny the same thing that the assertion asserts.

Having gone through all the species of proposition and shown which are said to conflict as contradictories, which as contraries, which as subcontraries and which as singular propositions, he now derives a certain corollary from what has been said. The corollary goes like this. It has become plain from what has been said that one assertion conflicts contradictorily with one proposition. How is this derived from what has been said? It seemed that with one assertion, that is, the universal, two propositions conflicted, the universal denial and the particular denial, and no other. For we showed that the denial without further differentiation was equivalent to the particular denial. But of these, the universal denial does not conflict in every way. For it is false together with the universal assertion in the materiality of the contingent. There is left, therefore, the one proposition saying 'Not every human being' to conflict contradictorily; for that divides out truth and falsehood for every time and every materiality.

Again, with the particular assertion, I mean 'Some human beings walk', two propositions seem to conflict, the universal negative and the particular negative. But the particular negative is true along with it in the materiality of the contingent, as has been demonstrated. The proposition saying 'Some human beings walk' and the one saying 'Not every human being walks' are true. <There remains, therefore, one proposition, the universal denial, that conflicts contradictorily. For>¹³⁹ in the materialities of the contingent and the necessary the particular assertion is true, e.g. 'Some human beings walk', 'Some

5 human beings breathe'; but the universal denial is false for each of these materialities, both the one saying 'No human being breathes' and 'No human being walks about.' In the materiality of the impossible, conversely, the universal denial, saying 'No human being flies', is true, <and the particular assertion, which says 'Some human beings fly', is false.>¹⁴⁰

For the singular assertion there is one denial that conflicts straight off; it has no other denial that at all seems to conflict. For example,
 10 'Socrates is walking' conflicts with the one proposition which says 'Socrates is not walking' – for < '[What is] not Socrates is walking' >¹⁴¹ has been demonstrated not to be a denial at all.

It has become plain, therefore, that for one proposition there is one proposition that conflicts contradictorily. That is the first section.

In the second section he puts forward the following speculation, which he has also pretty much put forward in Division 1 [23,23-6]. It
 15 is this. Sometimes in truth there is one assertion and one denial, and sometimes there is not one. The speculation now put forward differs from that in Division 1, in that in Division 1 he put forward the difference between simple and composite sentences, whereas here he draws this distinction by itself, that sometimes there is a single statement, so that it may have a proposition conflicting contradicto-
 20 rily. He says that when one of the terms is equivocal, there is not a single proposition, and he gives the reason, that it is impossible that another proposition should conflict contradictorily with this. For 'Ajax is walking' and 'Ajax is not walking' are true together if taken as being about different people. But if it is not the case that one of the terms is equivocal, either the subject or the predicate, there is definitely one
 25 assertion, and on that account it will also have one other proposition conflicting contradictorily, e.g. 'Socrates is walking', 'Socrates is not walking' (if 'Socrates' signifies one thing).¹⁴²

'But if there is one name for two things, which do not together make up a single thing, there is not one assertion' [18a18-19].¹⁴³ He himself
 30 takes his example from man and horse. Let man and horse, he says, have the common name 'cloak'. The proposition 'Cloaks are white' signifies this, that horses are white and that men are white. And these are in fact two propositions. So the former proposition that said 'Cloaks are white' signifies either two things or nothing. For it is not possible that a man should be also a horse or a horse also a man, so
 35 that we could say that the proposition 'Cloaks are white' is one proposition. That is the second section.

Next he raises a problem about contradiction in singular propositions, about how truth and falsehood are said to be divided between
 34,1 them when the time is future, and he resolves the problem. But this is enough for the present continuous exposition. How he does this we shall see, with God's help, in another continuous exposition. But the

detailed text being clear, and everything in it well surveyed in what we have, we shall bring the present lecture to an end.

<LECTURE 4>

5

18a28-9 In the cases, then, of things that are and things that have been, it is necessary that the assertion or the denial should be true or false, etc.

He has differentiated with the greatest clarity and accuracy the four kinds of opposition; and called one of these 'subcontrary', where the propositions do not always divide true and false between them, but are true together – that is, particular propositions and propositions without further differentiation – and one 'contrariety', I mean that of a universal affirmative proposition and a universal negative, which again in the materiality of the contingent are both false; and the remaining oppositions, that of singular propositions and the conflict of a particular proposition with a universal, either of an assertion <with a denial or of a denial with an assertion>¹⁴⁴ he has said conflict 'contradictorily'; so having said all this in the foregoing, he now raises a good enquiry. In the case of the three others the oppositions are the same with regard to the three times in dividing true and false between them or being true or false together. But in the case of singular propositions, whereas with regard to the present and past they again in the same way divide true and false between them in a completely determinate manner, with regard to the future it is a problem whether perhaps they divide true and false between them in a determinate manner in the same way. If so, there will follow something absurd: the contingent will be abolished, and everything will happen of necessity.

This speculation which Aristotle now starts is also theological. For the subject of enquiry is just this, whether everything happens of necessity or some things of necessity and some not. But it also belongs to the study of nature. For we are enquiring into things, and into the nature of things that come to be and cease to be: is their nature such that they come to be of necessity, or such that they sometimes come to be and sometimes not? And it is also logical. For the subject of the enquiry is just this, since the discussion is also about propositions, and enquiring about propositions belongs to logic. Neither is the subject of the enquiry alien to ethics. For if in reality all things come about by necessity, there is no obligation to worry about the virtues or to turn away from vice. How Aristotle raises the problem and resolves it we shall learn in the detailed commentary on the Aristotelian text, and in order to destroy the contingent¹⁴⁵ we shall bring in from outside [his writings] two arguments, of which one is logical,

that is, it stays on the surface,¹⁴⁶ whereas the other is more business-like.¹⁴⁷

- 35,1 The logical one sets out from some activity of ours as follows. If you are going to reap, it says, it is not the case that perhaps you will reap and perhaps not, but you will definitely reap. Again with the denial, if you are not going to reap, it is not the case that perhaps you will not reap and perhaps you will, but definitely you will <not> reap.
- 5 'Definitely'¹⁴⁸ introduces necessity; and once necessity is brought in, contingency vanishes.

To this it is easy to reply that it takes as agreed precisely what is under enquiry.¹⁴⁹ The hypothesis 'If you are going to reap' is not yet established; for that is what is being enquired into. Every hypothesis has to be established through a categorical argument.¹⁵⁰ We all know that if I am going to reap, definitely I am going to reap. But whence

10 is it clear that I am going to reap? That is not yet established by a categorical argument. That is argument 1.

The second argument sets out like this. The Divine [sc. God], it says, has knowledge of future things or does not have it. To say that it does not have it is both extremely impious and impossible. And if we say that it has it, indeed, but it is indefinite, that too is not far removed from impiety. For how will it differ from our knowledge? And

15 if the activities of things are the same, so, clearly, are their substances.¹⁵¹ <But if the divine has determinate knowledge of the future>¹⁵² and definitely knows that so and so will happen, even ten thousand years hence, that thing will definitely happen. For, as indeed Aristotle says, the existence of things follows upon the truth of statements. If the statement is true and the Creative Intellect <definitely knows the things that are to come,>¹⁵³ what will be definitely will be.

- 20 Resolving this difficulty Iamblichus says that sometimes knower and thing known are equal, as when the soul knows itself (for there enquirer and subject of enquiry are the same, and knower and thing known). Or else the knower is better than the known thing and knows it better than in accordance with its [the known thing's] nature, as when we know that which is destructible <as eternal and indestructible>,¹⁵⁴ for instance Socrates as rational mortal animal.¹⁵⁵ There we
- 25 know Socrates better than in accordance with his nature, for rational mortal animal is eternal and indestructible. Or the knower knows worse than in accordance with the nature of the thing known, as when we try to know the Divine. For we definitely conceive certain figures and shapes of corporeal form, and clearly here the cognition is inferior
- 30 to the thing that is known. In this way, then, as has been said, it is possible to know the thing known in a way superior to what is in accordance with its nature, as we said about Socrates. The Divine knows things that come about in a way superior to what is in

accordance with their nature. These things on account of their nature come about in an indeterminate way, but the Divine knows them determinately.

Again, another absurdity springs up on top of these. If the Divine knows that a human being is going to do something, in the case of the good it is reasonable not to prevent it. But why not in the case of the evil? For instance, it knows that this infant is going to be a sorcerer, a scourge, a murderer. Can the Divine prevent it or not? To say 'It cannot' is most impious. So it can. But if it can prevent it, but does not wish to, that is characteristic of someone malevolent and maleficent.

To this we say that the Creator has given self-determination for the sake of future goods. If there were not changes of course, people would receive no crowns. Just as we find with soldiers that it is after contests that they get rewards, whereas he who has not striven is not thought worthy of a reward at all, so it happens in these cases.

These things are taken from outside [Aristotle's writings]. Aristotle first takes from some people¹⁵⁶ a small initial assumption for doing away with the contingent. This is that the existence of a thing follows upon the truth of statements, and the non-existence upon their falsehood. <It follows that> the contingent is done away with. For if the statement made yesterday about the baby born today, 'It will be born tomorrow, big and fair', if that was true, definitely the baby will be born; and conversely if it is born, definitely the statement is true. Again, if the statement was false which said that tomorrow so and so will happen, it will not happen; and if it does not happen, the statement was false. If it is determinately true in the case of individual events that so and so will happen tomorrow, e.g. that there will be a seafight, definitely there will be a seafight, and all things come about of necessity <even ten thousand years hence>¹⁵⁷ – for there is nothing to stop one person from making an assertion about so many years ahead, <and another a denial>.

But if that is so, it will be absurd to do away with the contingent. For we are beings that deliberate. And deliberation is not to no purpose. For neither God nor nature makes anything to no purpose. We deliberate neither about what is necessary nor about what is impossible (for no one deliberates 'I ought to fly' or 'I ought to breathe'), but about what is contingent. It follows that the contingent exists. If, however, the contingent exists, it is not the case that of contradictorily opposed propositions one is determinately, definitely true or false. That is what he puts forward. And he adds another more perfect solution which, with God's help, we shall see in another continuous exposition.

- 30 **18a28-9** In the case, then, of things that are and things that have been, it is necessary that the assertion or the denial should be true or false

Here there should be added 'determinately', since definitely one of them is true and one is false.¹⁵⁸

- 35 What are we to say, then, of the Divine? For us, indeed, it is indefinite, and we do not know if there will be a seafight tomorrow or not. But God knows in a determinate way that there definitely will or will not be. We know this whole: 'Either there will or there will not'; but he knows one [part], whether that there will or that there will not. To this we say: it is not the case that, by virtue of the fact that he knows, on that account it will come to be, for God's cognition is not the cause of the thing's coming to be; on the contrary, because of the thing, that is the cause of God's knowing in advance.¹⁵⁹

- 37,1 **18a34-5** [But in the case of individuals and things that are future it is not like that.] For if every assertion or denial is true or false, then it is absolutely necessary that it should belong or not belong. [For if the one is going to say that something will be, and the other is going to deny this same thing, plainly one of them will be true, if every assertion is true or false]

- 5 Here he takes the hypothesis which says that the existence of things follows upon the truth of statements, and the non-existence of things upon the falsity of statements. But the hypothesis is false and leads to an impossibility. This form of argument is *reductio ad impossibile*.

18a38-9 For both will not belong at the same time in such cases

- 10 He says this, hinting at propositions without further determinations, since they have it as a peculiarity that they can be true together or false together. So he says that in the case of singular propositions this does not happen.

18b9-10 Again, if it is white now, it was true to say earlier 'It will be white.'

Here he takes the argument establishing the hypothesis he has taken that the falling out of things follows the truth of statements.

- 15 **18b17-18** But neither is it possible to say that neither is true, that neither will it be nor will it not be, etc.

Not only is this thing he has said absurd, that both propositions should be false, but in addition it will be found that the thing both will be and will not be. For if the assertion saying that tomorrow there will be a seafight is false, <the denial is true and there will not tomorrow be a seafight;>¹⁶⁰ for when the assertion is false it results that the denial is true, though the hypothesis was that it too is false. 20
And again, if the denial is false which says 'Tomorrow there will not be a seafight', then the assertion is true, and there will be a seafight, and again the same thing will result.

18b26 There result these absurdities and others like them

What are the absurdities when someone says that one of these propositions is definitely determinately false? There results the absurdity that the contingent is abolished and all things come to be of necessity. 25

18b31-2 So we ought neither to deliberate nor to busy ourselves

He proceeds as though pleading for the existence of the contingent. By 'busy ourselves' he means apply ourselves at all to things. That is the lecture.

<LECTURE 5>

30

19a23-4 That what is, when it is, should be, and that what is not, when it is not, should not be, is necessary, etc.

We have already seen the notorious problems about the contingent, and how they undertake to effect doing away with it. And we have also supplied the solutions to them. Argument 1 was from divine knowledge, which was resolved according to the manner of Iamblichus. Argument 2 was from the [mutual] implications of things and statements, that if <the existence of the thing follows upon> the truth of statements, <and the truth of statements upon the existence of the thing,>¹⁶¹ and the non-existence of the thing on the falsehood of statements, and the falsehood of statements on the non-existence of the thing, then the contingent is abolished. Aristotle resolved this by means of Providence. He says that if God, through nature as an intermediary, made us beings that deliberate, and deliberation is neither about what is necessary nor about what is impossible but about what is contingent, clearly the contingent exists. And it is not because <a statement> is true, it is not on that account that the thing comes to be, but because the thing comes to be, on that account the statement is true, in cases where the statement is true and the thing 35
38,1
5
10

exists. And again contrariwise, it is not because the statement is false, it is not on that account that there is the non-existence of things, but because of the non-existence of things, on that account the statement is not true but false. Having gone through all that in the preceding, now in a yet more articulate way he resolves the same difficulty.

- 15 He starts the argument from a division, saying that what is, that is to say, what is necessary, is twofold; there is what is necessary absolutely and what is necessary hypothetically. We say that something is necessary hypothetically, so long as the predicate belongs to the subject. But that same thing is capable also of not belonging, as that Socrates should be sitting or sleeping. So long as the sleeper
20 sleeps, of necessity sleep belongs to him. The absolutely necessary is again twofold: it exists both in the case of eternal things and in the case of things that come to be and cease to be, when a substantial differentia of the thing that is subject is present. We say 'substantial' because in the case of the hypothetically necessary when the thing, that is, the predicate, is separated, for instance walking or sleeping, the subject is not destroyed, but here, for instance in the case of fire
25 if the heat is separated it destroys the subject, that is, the fire. What is the necessity that is to be seen in the case of eternal things? For example, when we say 'The Sun is of necessity in motion', 'God is of necessity good.' But in the case of things that come to be and cease to be, it is like this fire. Like the particular, we mean, and not the universal, since this particular fire comes to be and ceases to be, but
30 the universal is always the same and does not cease to be. That is how what is necessary absolutely and what is necessary hypothetically can be seen in connection with what is.

And clearly what is not is twofold also. There is what is not at all, which neither was nor is nor will be, like scindapsus¹⁶² and the like, and what in a way is and in a way is not, as is the case with contingent things.

- 35 As what is stands to necessary and not necessary, so, necessarily, do statements. And because what is, as has been said, comprises what is absolutely and <genuinely> of necessity and what is necessary hypothetically, so too it should definitely be with their contradictions. <In the case of things which are or are not of necessity and always,>¹⁶³
39,1 one of the contradictory propositions is true determinately and one false. But in the case of things that are contingent and that in a way are not, which things we also say are necessary hypothetically, it is not differentiated that either the assertion or the denial is true or false determinately. The whole, 'Tomorrow there will be or there will
5 not be a seafight', is definitely necessary. For either there will be at this hour or there will not be. But if we divide it up and say determinately 'There definitely will be' <or 'There will not be'>, it is no longer

true, since <the thing> itself is indefinite. That is the solution of the problem.

He gives [19b5-19] another speculation concerning the division of propositions <that consist of> subject <and predicate>, which we have already seen. In propositions the subject must be either determinate or indefinite. And whether the subject is determinate or indefinite, it definitely has a verb (or inflection of a verb, which he passes over for the sake of clarity), or an indefinite verb. As examples of these things he gives us, <of those that have> the subject determinate, 'Socrates is walking', 'Men walk', 'Some men walk', 'Every man walks.' The same with denials: 'Socrates is not walking', 'Men do not walk', 'No man walks', 'Not every man walks.' An indefinite subject is one having the negative 'not' attached to it. The examples of this are clear. 10 15

Having said this, he¹⁶⁴ puts an end to the present continuous exposition. And there end together with it the present second division and the present lecture. 20

Beginning of DIVISION 3

<LECTURE 1>

19b19-20 But when 'is' is predicated in addition as a third thing there are now¹⁶⁵ two ways in which oppositions are expressed

In this Division he speaks of propositions that consist of subject, predicate and a third thing predicated in addition. For instance, in the proposition that says 'Socrates is just', 'Socrates' is subject, 'just' is predicated, and the verb of being, 'is', is said to be a third thing predicated in addition. Before the detailed exegesis of the text we shall enquire in three sections as follows. First, what is the number of such propositions; secondly, how do we make the denials out of these assertions; and thirdly, what are the implications in the case of these propositions, that is, what proposition follows along upon what? 25 30

Let us start, then, with the first, and state the number of propositions of this sort. The propositions of this sort that arise are twice as many as the others consisting of predicate and subject. It was demonstrated that of those, there are 144 propositions, and here there will be 288, for the following reason. It is necessary that either both the terms, the subject and the predicate, should be determinate, or both should be indefinite, or the subject should be determinate and the predicate indefinite, or conversely the subject indefinite and the predicate determinate. So there arise four kinds. Examples of these: both determinate, 'Men are just'; both indefinite, 'Not-men are not-just'; subject determinate and predicate indefinite, 'Men are not-just'; and again,¹⁶⁶ 'Not-men are just.' When each proposition is multiplied 35 40,1 5

10 by the three parts of time there arise 12 propositions. Then when
 these 12 are multiplied by the three parts of materiality, there arise
 36. The 36 propositions are multiplied by 4, since we say that
 affirmative propositions are four, the singular, that without further
 differentiation, that with particular further differentiation and that
 15 with universal further differentiation. 36 propositions multiplied by
 4 come to be 144 – assertions, that is; and it is agreed that there will
 be as many denials. Altogether there will be 288. That completes the
 first section.

In the second section we enquire how we make denials out of
 assertions like these. To which do we attach the negative ‘not’, to the
 20 subject, to the predicate or to the third thing predicated in addition?
 That we ought not to attach it to the subject, we have already seen.
 But not to the predicate either, since there again arises an indefinite
 assertion, which Theophrastus calls ‘from transposition’, either be-
 cause the negative ‘not’ is transposed from ‘is’, the third thing predi-
 25 cated in addition, to the predicate, or because their order in the
 diagram is transposed. For as we shall see, the assertion no longer
 comes to be under the assertion or the denial under the denial.¹⁶⁷ For
 these reasons Theophrastus thought it right to name such proposi-
 tions ‘propositions from transposition’. As we have said, then, the
 negative ‘not’ should not be attached to the predicate, but to the third
 30 thing predicated in addition. For if we attach it to the predicate, not
 only will we make an indefinite assertion, as we have said, (for ‘Men
 are not-just’¹⁶⁸ is an assertion, but an indefinite one) – not only will
 this result, but also in such propositions the third thing predicated in
 addition has the most important role, which, indeed, is why such
 propositions ‘from the third thing predicated in addition’ have that
 35 further name. Here, then, is where we want to destroy the bond,
 in order that the whole assertion may be dissolved. For ‘just’ cannot
 be attached to ‘man’ except through ‘is’, the verb of being. We must
 then dissolve the bond in order that the whole assertion may be
 dissolved.

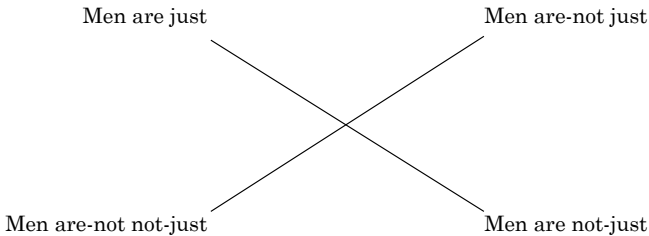
This is so if the propositions are without further differentiation. In
 propositions with further differentiation, as has been said, the nega-
 40 tive ‘not’ should be attached to the further differentiation. First
 because of the most important role of the further differentiation. The
 further differentiation signifies quantity, as we have already stated
 in the foregoing [24,19-22]. We attach the negative ‘not’ to it, then, in
 41,1 order to destroy the quantity. When the other person says ‘Every man
 is just’ it is by destroying the quantity that we say that this is not
 true. For we say ‘Not every man is just’. Secondly, in addition to this,
 because if we do not make denials in this way, attaching the negative
 ‘not’ to the further differentiation, contradiction does not arise. For
 5 instance in ‘Every man is just’, if we make the denial ‘Every man

is-not just',¹⁶⁹ both will be found false in the materiality of the contingent, and there will no longer be a contradiction. But if we say: 'Every man is just', 'Not every man is just' definitely one is true and one false. That is the second section.

In the third section we discuss the implications of propositions, 10
which proposition follows which, and which not. This we see as follows. There are two oppositions, one determinate and one indefinite. By a 'determinate opposition' here I mean one that has a determinate predicate, and by an 'indefinite', one that has an indefinite predicate. And we call a determinate opposition 'simple', e.g. 15
'Men are just. Men are-not just.' The indefinite we call 'from transposition', as has been said.

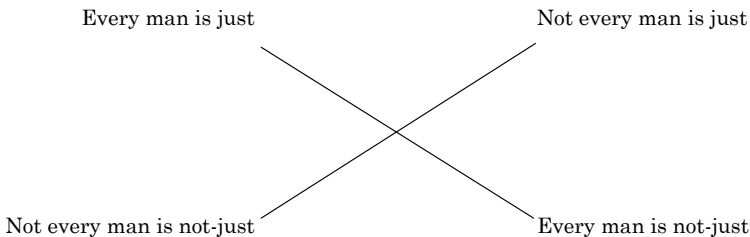
There arise, then, four parts or propositions,¹⁷⁰ 'Men are just', simple assertion, 'Men are-not just', simple denial, 'Men are not-just', 20
assertion from transposition, 'Men are-not not-just', denial from transposition.¹⁷¹

<Diagram 1> ([diagonals] always true together)



<i>less far</i>	is a just man	<i>simple</i>	is-not a just man	<i>further</i>
<i>further</i>	is-not an unjust man	<i>privative</i>	is an unjust man	<i>less far</i>
<i>further</i>	is-not a not-just man	<i>from transposition</i>	is a not-just man	<i>less far</i>

<Diagram 2> ([diagonals] sometimes true, sometimes false)



There being these four parts, two of them, those from transposition, stand to the simple assertion and denial in their implications as do privative assertions and denials. For as the privative denial 'is-not an unjust man' follows¹⁷² the simple assertion, and goes beyond it, so 25

too the denial from transposition that says 'is-not a not-just man' follows the simple assertion 'is a just man' and goes beyond it. For the privative denial saying 'is-not an unjust man' fits not only <just> men, but children and those who have an intermediate disposition; and in the same way the denial from transposition saying 'is-not a not-just man' fits the same people.¹⁷³ The simple assertion 'is a just man' fits only the just.

Again, the assertion from transposition saying '<is> a not-just man' extends less far than the simple denial saying 'is-not a just man'. For the privative assertion is said only of the unjust, but the simple denial may be said not only of the unjust but also of children and stones and, in a word, of those that are not capable of receiving justice at all. As the privative assertion, then, extends less far than the simple denial, so too the assertion from transposition that says 'is a not-just man' extends less far than the simple denial that says 'is-not a just man'. For the simple denial, as has been said, fits both stones and children and the unjust; the assertion from transposition fits children and those with an intermediate disposition, those who are neither just nor unjust, but does not fit stones. Nobody says that a stone is a not-just man; the proposition will be found to be false. The simple denial which says (suppose a stone as subject) 'is-not a just man' removes both just and man from the stone. But the other assertion, that from transposition, which says 'A stone is a not-just man', this says that the stone is a man, but not a just one. So the simple denial is more universal than the assertion by transposition.

And it does not convert.¹⁷⁴ For simple propositions do not have the same relation in respect of being more universal and more particular that privative propositions have to propositions from transposition. For the privative assertion 'is an unjust man' is more particular, as has been said, than the assertion from transposition 'is a not-just man'. But the simple denial has been demonstrated to be more universal than it in the same way. Since the privative assertion is more particular than the assertion from transposition, it follows that the denial of it, 'is-not an unjust man', <is more universal than the denial from transposition, 'is-not a not-just man'>, and the simple assertion has been demonstrated to be more particular than that. It is well said, then, that of the four parts, those from transposition follow simple assertions and denials in the same way as privative propositions, but not conversely.

So much on propositions without further differentiation. It is the same way with the implications for propositions with further differentiations; except that the propositions that lie on the diagonal are not true together in the materiality of the contingent as they are in the former case. There, that is in the case of propositions without further differentiation, the diagonals are always true together. But

in the case of propositions with further differentiation sometimes they are true together and sometimes they are false together. That too is clear from the diagram. In Diagram 1 there is 'Men are just', simple assertion, and diagonal to that the assertion from transposition saying 'Men are not-just'. It is agreed that both are true, the one saying 'Men are just' because of Socrates, and the one saying 'Men are not-just' because of Anytus¹⁷⁵ or babies. Again, there lies in a horizontal line 'Men are-not just', simple denial, and diagonal to that is the denial from transposition that says 'Men are-not not-just'. They are true together. The denial saying 'Men are-not just' is true in the case of babies, and in the case of the same,¹⁷⁶ the denial from transposition is also true. So it has been demonstrated that in the case of propositions without further differentiation, the diagonals are always true together.

But in the case of propositions with further differentiation, let there be at the top a proposition that is a simple assertion, 'Every man is just', which is agreed to be false. On a horizontal line with this is another proposition conflicting contradictorily with this, saying 'Not every man is just'. Again, let the denial from transposition be put below following upon the universal assertion, the proposition saying 'Not every man is not-just'. On a horizontal line with this is put the assertion saying 'Every man is not-just'. The universal diagonals, the simple assertion and the assertion from transposition, are false together, the proposition saying 'Every man is just' and that saying 'Every man is not-just'. The other diagonals, that saying 'Not every man is just' and 'Not every man is not-just' are true together. For it is true to say 'Not every man is just' and 'Not every man is not-just'. Then, further down [19b37], he gives a certain illustration also of propositions that have an indefinite subject. What these are, we have already seen.

Now that we have said this, and the present continuous exposition has attained an adequate length, let us bring it to an end here and busy ourselves with the detailed commentary on the text in order that, if it needs it anywhere, we may clarify it to the best of our ability.

19b20-2 For instance 'Men are just': I say that 'are' is put together as a third name or verb in the assertion.

It should be known that 'is put together' is an ill chosen expression. For 'are' is not put together out of two or more components, and everything put together is put together out of two components at least. So you should take 'is put together' as being in place of 'is put in', which he himself a little way below [19b25] substitutes for 'put together'; or else in place of 'is put together with the others', that is, with the subject and the predicate. He says 'name' [*onoma*] or 'verb'

25 here, meaning, 'by whichever name you wish to call it'. He uses 'name' as the common appellation. For we said that what we call a 'noun' [*onoma*] and a 'verb' and every part of speech was called a 'name' by people in the past. If you call 'are' a 'verb', you call it by the name peculiar to it.

30 It should be known that by 'assertion' and 'denial' [19b23] he means the simple propositions, not because the others are not assertions and denials too, but he calls the simple propositions 'assertions' and 'denials' because they are more important than the others.

19b24-5 I mean that 'are' will be added either to 'just' or to 'not just'

35 Here he does well to say of 'are' that it will be added; <and in saying it 'will be added to "just," '>¹⁷⁷he signifies a simple proposition, in saying 'to "not just"', the proposition from transposition 'Human beings are not-just'.

44,1 Here¹⁷⁸ he gives propositions from transposition. And it is worthwhile to enquire, concerning the denial from transposition, whether it signifies an assertion or a denial. We say that the denial from transposition follows upon the simple assertion. That is reasonable, since in the case of things that are, when two negatives are taken in connection with different terms or verbal adjuncts¹⁷⁹ (by 'verbal adjunct' I mean either the further differentiation or the third thing predicated in addition), they definitely signify an assertion, for example 'Men are just', 'Men are-not not-just'. Here 'are-not not-just' 5 expresses an assertion. But when they are taken with things that are not,¹⁸⁰ they signify indifference. For the same denial from transposition in the case of things that are indifferent, such as the neither just nor unjust, does not have the same assertion.¹⁸¹ We say 'with different terms' because of the Attic usage. For Attic speakers often put two negatives actually one on top of the other in place of a single negative, e.g. *ou mê poiêseis* ['You will not do it!'] in place of *ou poiêseis*, and 10 other like locutions.

19b30-1 These then [sc. the four unquantified propositions] are ordered as is said in the *Analytics*¹⁸²

15 It should be known that, as far as the phrasing of this passage goes, the *Analytics* is earlier than the present work. For it says 'as is said in the *Analytics*'. So take 'is said' as being in place of 'will be said'. It is because he has the aim of writing about these things that he says 'is said'.

19b31 And it is similar even if the assertion is made with a noun taken universally

Since everything said above was set out for propositions without further differentiations, he now says that the same results for propositions with further differentiations.

19b35-6 Except that it is not possible for the propositions in the diagonals to be true together in the same way, though it is possible sometimes 20

We said in the continuous exposition [42,25-8] that there is a difference between propositions with further differentiations and propositions without. In the case of propositions without further differentiation, the diagonal propositions (those he calls 'in the diagonal') are always true together; but in propositions without further differentiation one pair of diagonals is true together and one false together. That is what he is hinting at in the present passage. 45,1 5

19b37-8 [These two [sc. 'Every man is just', 'Not every man is just', 'Every man is not-just', 'Not every man is not-just'] are opposed,] and others which add something to 'not-man' as subject

Since he has set out his account for propositions which have determinate subjects, he says that there are other propositions which have an indeterminate subject and make assertions and denials in the same way. And these are separate from those that have a determinate subject.¹⁸³ 10

That is the lecture.

<LECTURE 2>

20a3-5 In cases where 'is' does not fit, for instance where being hale¹⁸⁴ or walking is predicated, what are so put do the same as if 'is' were added, etc. 15

In this speculation which Aristotle now puts forward, some interpreters¹⁸⁵ understand him to say that as propositions in which 'is' is a third thing predicated in addition follow onto each other and are ordered, so those propositions follow each other and are ordered in which in place of 'is' we take another verb, for example 'Just men walk'.¹⁸⁶ That this is not true is clear. For what we have here is not a proposition with a third thing predicated in addition, but a composite 20

subject. For it is impossible that any other verb should be predicated as a third thing in addition like this. This is both determined in addition here and said in the *Analytics*,¹⁸⁷ as with God's help we shall be able to see.

25 Others say that the object of enquiry here concerns propositions in which 'is' can be seen as present potentially, as in 'Socrates walks' (for 'is' is added here potentially: when the verb is analysed it is analysed into its proper participle and the verb 'is'; 'Socrates walks' is in place of 'Socrates is walking'). When there thus arises 'Socrates is walking', is 'Socrates is not-walking' an assertion or a denial? And
30 he says that it is a denial. But this is not worthy here of enquiry. What could be more arbitrary than to say 'Men are not-just' is an assertion, but 'Men are not-walking' is not an assertion?¹⁸⁸

46,1 But we say, since he mentioned directly and gave examples of propositions consisting of subject and predicate alone that have an indefinite subject, e.g. 'Not-men <are>', 'Every not-man is' [19b16-18], and again propositions consisting of subject, predicate and third thing
5 predicated in addition, 'Not-men are just', 'Every not-man is just', that he is afraid that someone might suspect <it makes no difference to the production of the denial to remove the negative particle from the indefinite subject and put it in front of the further differentiation>,¹⁸⁹ and thinking the further differentiation 'every' is the same as the noun 'man', make the denial of the assertion 'Every not-man is just' 'Not every man is just', no longer keeping the negative 'not' in the
10 subject. So he now says that we ought not to make the denial like that, but should keep the negative particle in the subject, as it was in the assertion, and make the denial 'Not every not-man is just' or 'Every not-man is-not just'. For 'every', as was said above, does not signify a universal nature, as 'man' signifies mortal rational animal;
15 it signifies this, that the subject being universal, the predicate belongs to all the things that fall under the subject. And the examples he gives are clear.¹⁹⁰

Then, since in the examples given above¹⁹¹ there is not included the universal denial that says 'No man is just', he enquires what
20 proposition follows this. And he declares that it is the assertion that is universal and from transposition. For instance, simple denial, 'No man is winged'; to this follows 'Every man is not-winged'. And sometimes the particular assertion follows the particular denial. Particular assertion: 'Some men are just'; particular denial: 'Not every man is just'.

That is how Aristotle demonstrates by examples what proposition
25 follows upon what. Proclus, however, puts forward a universal procedure for finding these things. The procedure goes like this. If a proposition is proposed, keep the same subject and quantity, but change the quality and predicate. Quality is to be changed thus. If

the proposition proposed is affirmative, make it negative, and if negative, make it affirmative. And change the predicate thus: if it is determinate, make it indefinite, and contrariwise, if it is indefinite, determinate. So when you keep the quantity the same, that is, if it is particular, making it particular, and if universal, universal, and you keep the subject the same, but change the quality and the predicate, you will definitely find the proposition that follows. For instance, let there be put forward the universal proposition 'Every man is an animal'. Keep the subject, 'man', keep the quantity, change the quality and further change the predicate, and obtain 'No man is not-an-animal'. That says the same as the proposition put forward. It will be the same with other propositions that have further differentiations, and denial will follow upon assertion by this procedure and assertion upon denial. In the case of propositions without further differentiation the denials follow upon the assertions¹⁹² but the assertions do not conversely follow the denials.¹⁹³ For it has been shown that the assertion from transposition is more particular than the simple denial, and it is reasonable that it should not follow upon it. That the particular should follow upon the more universal is not possible.

So much in the continuous exposition.¹⁹⁴

20a23-6 Plainly in the case of singulars, if it is true when the question is asked to deny, it is also true to assert. For example, 'Is Socrates wise?' 'No,' It follows that Socrates is not-wise

Having completed the discussion of the implications of propositions, here he puts forward some further speculations that follow upon what has been said. But first let us go through the problem that was disclosed to us in the diagram about the implication of propositions; afterwards we shall see what follows upon this.

It was said in the diagram that the assertion from transposition without further differentiation is in fact more particular than the simple denial. This assertion is 'is a not-just man', and they say that it is more particular than the simple denial saying 'is-not a just man'.¹⁹⁵ They establish it as follows.¹⁹⁶ They take the composite predicate, and show that of things of which this is true, the other, the simple denial, is not true. So from this they conclude the the simple denial is more universal than the assertion from transposition. For instance, let there be the assertion from transposition saying 'Babies are not-just men': it is true and fits. And let there be the denial saying 'Babies are-not just men'. False. So the latter is more universal, and the former, the affirmative from transposition, is more particular. That is how their demonstration goes.

But we say that there is no difference in what is signified between the simple denial and the assertion from transposition, whether the

35 predicate is simple or composite. For if we show that of whatever things one of these is true, definitely the other is true too, and of whatever it is false, definitely the other is false too, clearly they do not differ from one another. For just as if we show that of whatever things 'man' is true, 'such as to laugh' is true, on this account also
 40 they are equal, and convert with one another, and there is no difference between them, so too with what is before us.

48,1 But first we will draw this distinction, that what is predicated in the propositions is either simple or composite. The examples are clear.¹⁹⁷ Suppose then now that the predicate is simple in both propositions, and let us examine propositions with every materiality
 5 and every time. Let us take 'Babies are not-just', assertion from transposition in contingent materiality and present time. Again, <'Babies are not-winged', materiality of the impossible and present time.>¹⁹⁸ Both these are established as true. 'Babies are not-breathers', assertion from transposition in the materiality of the necessary
 10 and present time, false. Say the simple denials, of the first, 'Babies are-not just', of the second, 'Babies are-not winged'. These denials too are true. The third, 'Babies are-not breathers' is false. You see how we have shown that of whatever the assertion from transposition is true, the simple denial is true also, and of whatever the former has been shown false, so has the latter.

15 Having given propositions with a simple predicate, let us now give those with a composite. But at this point in our account, let us determine in addition that the negative particle 'not' removes the whole of the predicate. That is reasonable. For if someone says that,
 20 for example, when we say 'Socrates is-not a just-man', it removes 'just' but not 'man', there is in a way an assertion and in a way a denial concerning the same thing (both have¹⁹⁹ been removed, but in part not removed), so that of necessity there will be two different denials of the same assertion. For if only 'just' has been removed, and 'man' has remained, another denial is needed to remove 'man'; and either
 25 there will be two denials of the same assertion, which is impossible (for we said that for one proposition there is one opposed to it that conflicts contradictorily), or the original assertion was not one proposition but two. It is the same when it is attached to a predicate that is composite, for example 'Socrates is a not-just-man'.²⁰⁰ It does not
 30 remove only 'man' but the whole, saying that he is neither a man nor just.

Let us proceed now to what was proposed, and let there be a composite predicate, as was said. I utter the assertion from transposition 'Babies are not-just-men'. Am I speaking falsely or truly? Both this is false and that which says in the materiality of the impossible 'Babies are not-winged-men.' Say also in the materiality of the necessary, where it is true, 'Babies are not-stones-without-life.' Here we
 35

have truth, since they are neither stones nor without life. Then, after the assertions from transposition, say also the simple denials in the three materialities with a composite predicate: 'Babies are-not just-men', 'Babies are-not winged-men', 'Babies are-not stones-without-life.' If it is found that for every materiality and every time they are true together and false together, clearly there is no difference between them. 49,1

Let us also say where those who say that the assertion from transposition is more particular than the simple denial went astray. We establish it as follows. They take the composite predicate and divide it up, saying that I can say 'Babies are not-just men'. Here I speak truly, since babies are human beings, but are-not just. But in saying 'Babies are-not just men' I speak falsely, for here the 'not' removes both man and just from baby. So this is false, but the former is true. But that this is excessively irrational we have already stated in what went before. How can the negative 'not' fall in the middle of the predicate, which is a whole, and remove one part and not another? 5 10

And besides, those who say that the assertion from transposition in propositions without further differentiation is more particular than the simple denial, also say that the particular denial from transposition extends further than the universal simple assertion. In the second diagram we have 'Every man is just', simple universal assertion. On a horizontal line with this we have the proposition conflicting with it contradictorily that says 'Not every man is just', particular denial. Under the simple universal assertion they put the particular denial from transposition, the one saying 'Not every man is <not>-just'. On a horizontal line with that is the universal assertion from transposition which conflicts contradictorily, the one saying 'Every man is not-just'. And they say that the particular denial from transposition extends beyond the universal simple assertion.²⁰¹ 15 20

In addition to this, they did not bring on the Canon of Proclus, that if, when a proposition is proposed, you wish to find the proposition that follows it, keep the subject and the quantity and change the predicate and the quality: that proposition will definitely be equivalent to the former and will follow along with it. Also, because in the case of propositions with further differentiation, according to the above mentioned Canon, the assertions follow upon the denials and the denials upon the assertions, since here we have 'Every man is just', according to the Canon there clearly follows upon this 'No man is not-just'. For I kept the quantity and the subject, and changed the predicate and the quality, since there the predicate was determinate, and here it is indefinite. So upon the simple universal assertion follows the universal denial from transposition. But they say that also the particular denial from transposition extends further than the universal simple assertion and follows upon it. It will be found that 25 30 35

50,1 both the universal and the particular denial from transposition are equivalent, if both follow upon the universal simple assertion. But how can the universal be equivalent to the particular? So necessarily either the Canon is not true or in the cases under discussion the propositions from transposition with further differentiation are not more universal than the simple propositions.²⁰²

5 But it is worthwhile²⁰³ to enquire why Aristotle says 'When "is" is predicated in addition as a third thing, there are two ways in which oppositions are said. Clearly there are four parts. Of these four, two are related to the assertion and denial with regard to sequence or implications as are the privations, and two not.'²⁰⁴ We say that nothing impossible follows. Aristotle does not say that they are so related in respect of being more universal and more particular, nor need we so understand him; he says this meaning only the implications. As the privative denial saying 'Men are-not unjust' follows the simple assertion 'Men are just' <so too does the denial from transposition saying 'Men are-not not-just'.>²⁰⁵

10 <Iamblichus>,²⁰⁶ looking to what is put forward in the *Analytics*,²⁰⁷ says one ought to put into one's question the whole of the contradiction.²⁰⁸ Alexander, however, attending to what is said here [20b22], says we put one part or the other of the contradiction into the question. They say pretty well the same, but putting in one part of the contradiction is clearer. For the person asked can meet it and answer 'Yes' or 'No'. For if someone says the whole 'Is the soul mortal or immortal?' and the answerer replies 'Yes' or 'No', it is not clear to which part of the contradiction he is making his answer. So here Alexander is to be preferred to Iamblichus. Iamblichus says that the person who is ascertaining, even if he utters only one proposition, is in potentiality asking about the whole contradiction. For in asking 'Is the soul immortal?' he definitely has the alternative, mortal, in mind.

20 So whether he puts one proposition into his question or the whole contradiction, it is the same.²⁰⁹ And that is well said. But Alexander is more to be believed for the reasons stated above.

That is the lecture.

<LECTURE 3>

21a6-10 [It is clear, then, that if anyone supposes combinations arise in a simple way, many absurd things will result in being said.] How it is to be put, we shall now say. Of things predicated, and the things in connection with which they are predicated, as many as are said incidentally, either of the same thing or one of the other, will not be one, etc.

30

We said in the preceding²¹⁰ that the Philosopher puts forward a

complete double speculation, in which he enquires: can things said separately always also be said together, or is this sometimes possible and sometimes not; and can things said together also be said separately, or sometimes yes and sometimes no? He has already said just now [20b31ff] that things said separately can sometimes be said together, but not always; otherwise we shall be found speaking falsely and idly and distorting things and saying what is to no purpose. In what cases this happens we have already seen [20b35-6]. Now, therefore, he gives us rules on when it is possible for things predicated separately <also to be predicated together, and says, when>²¹¹ they are not both incidental, or one incidental and one a substance, or one more universal and one more particular. If it should ever come about sometimes that one is more universal and one more particular, the particular should not be placed before the more universal, even if both are predicated in the same way²¹² of the same thing. 51,1

We shall give examples, if you please, of all this. Both incidental: 'The white is walking', 'The white is educated'. For even if the proposition saying 'The white is walking' is sometimes found to be true, still, because the account of white is different from the account of walking or educated, the proposition is not one.²¹³ Again, let one of the things be a substance, the other incidental. Since the account of the substance is other than that of what is incidental, for instance when we say 'Men walk' the account of man is different from the account of walker, because of this the proposition is not one.²¹⁴ For it is possible for walking to be separated from human being. Third, in addition to these, when both are predicated in the same way, as two-footed and animal are of man, and the universal is put before the particular, animal before two-footed, out of the two propositions, 'Men are two-footed' and 'Men are animals', it is possible to make the single proposition 'Men are animals that are two-footed'. But when we do the reverse and put the more particular first, that is not possible. 'Two-footed' is included in 'man' and 'animal' in 'two-footed'.²¹⁵ And in 'rational', 'animal' is again included, and we find other things like this. So much on the first complication. 15

The answering part to this is: when is it possible for things said together to be said separately? For this is not always possible. For instance, I can say this whole: 'Bats are birds and not birds', 'Eunuchs are men and not men'. But I am not able to separate them and say 'Bats are birds', 'Eunuchs are men', because every bird has divided²¹⁶ wings. The same thing happens both in the case of the same thing and in many other cases.²¹⁷ So he gives a rule for this complication too, about when it is possible for things said together also to be said separately. He says, when one expression manifestly conflicts with the other, as is the case with 'bird', 'not a bird', (for here it is manifest 30

- that expression conflicts with expression), or when expression does not seem to conflict with expression contradictorily, but in the accounts or definitions of these expressions a contradiction is found, then it is not possible for the things said together also to be said separately. For instance, take 'dead'. I can say 'One who has died is a dead human being', but I cannot say separately 'One who has died is a human being'. Here expression does not conflict contradictorily with expression (what conflict is there between 'dead'²¹⁸ and 'man'?), but the definitions conflict. The definition of 'human being' is, say, 'rational animal' <and one who has died is neither an animal nor rational>,²¹⁹ but rather non-animal, non-rational etc.
- And to these he adds another way. Even when expression does not conflict with expression and neither do the expressions' definitions, still, when in a composite proposition the third thing predicated in addition, the verb of being, is found predicated of the subject incidentally, then it is not possible to separate it and make it one predication. For example, suppose that Simon the shoemaker is evil in his ways²²⁰ but accurate at his craft, the converse of what he was in the former arrangement.²²¹ Then I can say this whole, 'Simon is a good shoemaker', but not 'Simon is good'. In the first predication 'is' is predicated of Simon incidentally, not of itself.²²² Again, in 'Homer is a poet' it is predicated incidentally of Homer. So I cannot say 'Homer is'. The verb of being, 'is', when it is predicated of itself and not as a third thing predicated in addition, signifies the present existence of the thing. And we can provide another extremely clear example which he himself gives: 'That which is not, is opined.' I can say this whole, because 'is' is predicated of that which is not incidentally. But it is not possible to say 'That which is not, is'. For the opinion we have concerning that which is not is not that it is, but that it is not.²²³
- Having said that, he brings the present third Division to an end.

21a32-3 It is not true, because what is not is opined, to say that it is a thing that is; for the opinion concerning it is not that it is, but that it is not

- It should be known that it is the supposition of Plato that this universe consists of things that are and things that are not. He²²⁴ says that that which is not, that is, matter, is none of the things that are in actuality. So Aristotle says that what is not is opined, not because it is, but because we have the opinion concerning it that it is not.
- That is the lecture.

Beginning of DIVISION 4

53,1

<LECTURE 1>

21a34-5 These things having been determined, we must see how the denials <and assertions> are related to each other, etc. [that are of the possible and not possible, and the contingent and not contingent, and about the impossible and necessary]

In this fourth division the philosopher has the aim of dealing with modal propositions. He makes two speculative enquiries: first, how the denials arise from the assertions, secondly, what the implications are of such propositions. We, before our exegesis of the text in detail, will enquire first, what modality is, how many modalities there are and how what is called 'modality' differs from materiality; and secondly, what the number is of propositions like this. 5 10

Let us start with modality. A modality is a verbal adjunct, or at least a spoken sound, signifying how the predicate belongs to the subject. The further differentiation signifies quantity (for it has been said that a further differentiation is a verbal adjunct signifying to how much of the subject the predicate belongs), whereas the modality determines quality. The modalities are in number pretty well impossible to encompass or grasp, but can be summarised and brought under these four heads: the modalities, I mean, of necessary, impossible, contingent and possible. For everything that someone might say definitely signifies either a necessary modality, e.g. 'The Sun is always in motion' (for here 'always', even if it is not genuinely a modality, still plays the role of necessary modality; for the Sun is necessarily in motion); or it signifies a contingent modality, e.g. 'Socrates walks beautifully' (for 'beautifully' is a hint at the contingent modality); or it signifies the possible modality, e.g. 'Socrates loves much' ('much' here signifies the possible modality); or the impossible, as when we say 'There is no way in which Socrates can be winged'. 15 20

So there are these four modalities, and there is no other, as some interpreters of Aristotle have imagined when he says in the *Analytics*²²⁵ that every proposition is either of belonging, or of belonging of necessity, or of its being contingent that something belongs. They think that there <he also includes in his enumeration>²²⁶ the modality of belonging. But that it is impossible that there should be the modality of belonging is clear and can be established both from Aristotle himself and from the truth. From Aristotle, since nowhere in the diagrams does he mention belonging, but only the four modalities. And from the truth, because the first way in which propositions differ is in being with modality or without modality. Propositions 25 30

54,1 without modality Aristotle calls propositions of 'belonging', as will be said, with God's help, in the *Analytics*, when he speaks of the conversion of propositions.²²⁷

Modality differs from materiality, in that materiality is revealed along with the species of a proposition,²²⁸ as has been said [25,25], whereas modality is added from outside. For instance, when we say
 5 'Socrates is an animal', that the materiality is necessary is revealed along with it; but if I say 'Socrates is necessarily an animal' the 'necessarily', that is, the modality, is added from outside. Hence they often diverge. If the materiality is necessary and the modality is not necessary, the proposition will be found to be false. For example, 'Human beings are animals': the materiality is necessary. If I add the
 10 modality of contingency to the necessary materiality and say 'Human beings are contingently animals' the proposition I make like this is false. 'Contingent' signifies what is not, but can come to be. That is the first section.

The second section is an enumeration of such propositions. There arise of propositions of this sort 1296 assertions, for the following
 15 reason. Modality is found either in propositions consisting of subject and predicate alone, e.g. 'Socrates contingently walks', 'Socrates necessarily breathes' and the like, or in propositions consisting of subject, predicate and third thing predicated in addition. When it is
 20 found in propositions consisting of subject and predicate alone, the assertions vary in four ways. It is to be assumed, as he himself says in the text, that whenever the negative 'not' is not attached to the modality, it makes an assertion. Necessarily either both terms are determinate, or both are indefinite, or one is determinate and one
 25 indefinite. The last can happen in two ways. Either the subject is determinate and the predicate indefinite, or the predicate determinate and the subject indefinite. When, on the other hand, the modality is found in propositions consisting of subject, predicate and third thing predicated in addition, the propositions vary in eight ways. For necessarily either the three terms, the predicate, the subject and the
 30 third thing predicated in addition (for let it be assumed now that the third thing predicated in addition is a term too) are determinate, or the three are indefinite, or some are determinate and some indefinite. In the last case, again, either the extremes are determinate and the middle indefinite, or, conversely, the extremes are indefinite and the middle is determinate; or the first two are determinate and the last
 35 is indefinite, or conversely, the last is determinate and the first two indefinite; or the first is definite and the last two indefinite, or conversely the first is indefinite and the last two determinate. Examples of these, if anyone wants to write them down, are extremely clear.

So of propositions consisting of subject and predicate alone there were 4 assertions, and here there arise 8 propositions with a third

thing predicated in addition. So far, that is 12. These 12 propositions we multiply by the propositions already there, by the four kinds of affirmative propositions, I mean singular, without further differentiation, with particular further differentiation, with universal further differentiation. So the 12 propositions multiplied by 4 by these propositions become 48. Multiply these 48 by the three parts of time, and they become 144. Multiply them again by the three kinds of materiality, and they become 432. When these 432 are multiplied by the three modalities they become 1296. We say 'three' modalities and only three, because he says that the possible is only something more universal than the necessary and the contingent, and divides into those two modalities. What is divided is nothing over and above the things into which it is divided; and because of this we say that there are three modalities only, necessary, contingent and impossible. It is reasonable, then, that of such propositions there should arise 1296 assertions. To these we add the other assertions of Divisions 2 and 3. In Division 2 there were 72 arising from subject and predicate alone, and those arising in Division 3 from subject, predicate and third thing predicated in addition were 144. Adding these 216 from Divisions 2 and 3 to the 1296 we make 1512 assertions. And since, however many assertions there are, clearly there will also be that many denials, all the denials and assertions, all the propositions that the philosopher has given us in the present book, will be 3024. That, with God's help, completes the second section and the present lecture.

<LECTURE 2>

21a34-5 These things having been determined, <we must see> how the denials and the assertions are related to each other, etc.

We said in the preceding lecture that in this fourth division he speaks of propositions with modality and makes two speculative enquiries, first, how the denials arise from the assertions, and secondly, what the implications are between such propositions. In Section 1 he enquires to what the negative 'not' should be attached, whether to modality or to the 'is' and in general to the verb. In the case of the other kinds of proposition we attach the negative 'not' to [the verb] 'to be'. If we do not do this, assertion and denial will sometimes be found false together. For, given that the assertion saying 'A piece of wood is a white human being'²²⁹ is false, if we make the denial 'A piece of wood is-not a white human being', we achieve a true proposition. But if we say 'A piece of wood is a not-white human being', what we produce is false along with the assertion and in the same way. For this denial says this, that a piece of wood is a human being, but not a white one,²³⁰ which everyone agrees is false. With reason, then, we

attached the negative ‘not’ to the ‘is’ and made the denial ‘A piece of wood is-not a white human being’. Perhaps, then, here too the negative ‘not’ should be attached to [the verb] ‘to be’, so that we make the denial of the assertion ‘possible to be’ ‘possible not to be’.

10 He says that here it is impossible to do it like this. First, as we have often said, because the modality here has the most important role, and we ought to attach the negative ‘not’ to it. That is what we want to destroy, the manner or at least the quality. The assertion says that human beings walk contingently. We wish to destroy the modality and say it is not contingently that they walk. The first reason, then,
15 is this, that the negative ‘not’ should be attached to the most important part, as has often been said. The second is, that if we do not make denials thus, assertion and denial will be found being true together, which is impossible. For if I say ‘It is possible for the garment to be cut’, ‘It is possible for it not to be cut’, both are true in the materiality of the contingent. But if I say ‘It is possible for the garment to be cut’,
20 ‘It is not possible for it to be cut’, definitely one is true and one false. As it is with the possible, so, clearly, it will be with the contingent, the necessary and the impossible. Similarly with assertions from transposition. That completes the first section, on how denials should be made from assertions in the case of propositions with modality:
25 the negative ‘not’ should be attached to the modality.

In the second section he gives the implications between such propositions in three diagrams. Diagram 1 goes like this:

possible to be contingent that it should be not impossible to be not necessary to be	not possible to be not contingent that it should be impossible to be necessary <not> to be
possible not to be contingent that it should not be not impossible not to be not necessary not to be	not possible not to be not contingent that it should not be impossible not to be necessary [not] to be

He starts by putting first assertions of the possible and the contingent, saying ‘possible to be’, ‘contingent that it should be’. Immediately he adds, third, the denial of the impossible, saying ‘not
30 impossible to be’, and, fourth, the simple denial of the necessary, saying ‘not necessary to be’. Then, next, <in> the second block²³¹ he puts the assertions from transposition ‘possible not to be’, ‘contingent that it should not be’, third the denial from transposition of the impossible, which says ‘not impossible not to be’, and fourthly again
35 the denial from transposition of the necessary, which says ‘not neces-

sary not to be'. Then, in a horizontal line from the first block he puts the denials 'not possible to be', 'not contingent that it should be', then the assertion saying 'impossible to be' and fourthly the assertion from transposition of the necessary, which says 'necessary not to be'. In the fourth block he puts first the denials 'not possible not to be', 'not contingent that it should not be', <then> the assertion from transposition 'impossible not to be', and fourth, the simple necessary assertion, which says 'necessary to be'. 57,1

Having thus set up the diagram, he thinks that the other propositions and their implications are fine; the only difference is the contradiction of the impossible, since the assertion follows upon the denials,²³² and the denial <on the assertions. Also the denial>²³³ of 'necessary not to be' is not 'not necessary to be' but the proposition lying diagonally below, 'not necessary not to be'. He corrects this diagram in Diagram 2, and thus puts the contradiction on the horizontal line, as he did also with the contradiction of the impossible. 10 But how he does this we shall see, with God's help, in another continuous exposition.

21a38 For if of combined things these are [the contradictions] that lie opposite to one another, [the ones that are ranged according to being and not being, for instance the denial of 'is a man' is 'is-not a man', not 'is a not-man', and that of 'is a white man' is 'is-not a white man', not 'is a not-white man']

It should be known that he says 'combined things' here in place of 'propositions'.

21b3 for [sc. otherwise] if of everything either the assertion or the denial is [true] [sc. since it is false that a piece of wood is a white man], it will be true to say that a piece of wood is a not-white man 15

Here some people have suspected that the simple denial is more universal than the assertion from transposition, since it is false, as he says, that a piece of wood is a not-white human being, but true to say that a piece of wood is-not a white human being. For that destroys the whole. But if we preserve the whole predicate and do not divide it into parts, clearly this too²³⁴ will be found true, like the simple denial, as we said above [47,20-50,12]. 20

21b14-15 [So if it is thus everywhere, it will be the case also that the denial of 'possible to be' will be 'possible not to be' and not 'not possible to be'. But it seems possible for the same thing both

to be and not to be. For everything for which it is possible to be cut or to walk it is also possible not to walk and not to be cut.] The reason (by 'reason' [*logos*] he here means 'explanation' [*aitia*]²³⁵) is that what is possible in this way [does not always act]

- 25 He is speaking here of the possible as applied to the contingent. For that is capable of not acting always. The possible as applied to the necessary²³⁶ acts always. For we say that it is possible that the Sun should be in motion today, taking it not that it sometimes moves and sometimes not, but that it is always acting and in motion.

21b18-19 But it is impossible that contradictory sayings should be true of the same thing. [It follows that this is not the denial. For it results from these things that either it is possible to say and deny the same thing of the same thing, or it is not [sc. always] by additions according to being and not being that sayings and denial arise.]

- 30 He says this here because it is impossible that contradictories should be true or false together about the same thing at the same time. It is clear that he is not bothering here about every kind of proposition like this. For in the case of propositions with further differentiation this is <not> always <the case, that they are not>²³⁷ true together, if we make the denial by attaching the negative 'not' to the further differentiation. Sometimes, in some materialities, namely that of the
- 35 contingent, they are true together; sometimes they are not, in the materiality of the necessary. For it is true to say 'Every human being necessarily is an animal' and false to say 'Not every human being is necessarily an animal'; so in the case of the necessary, they divide true and false between them. But in the case of the contingent, this
- 58,1 does not hold. Both that proposition is true which says 'It is contingent that every human being should walk' <and that which says 'It is contingent that not every human being should walk'>²³⁸ – at a determinate time, that is – but if they are said with regard to indefinite time, clearly both are false.²³⁹ But if I say the other denial, 'It is not contingent that every human being should walk', I speak truly and falsely.²⁴⁰ For this signifies 'It is contingent that no human
- 5 being should walk',²⁴¹ and says nothing else but that it is impossible that every human being should walk. So in the case of propositions like these we should take the modality and attach the negative 'not' to that, whether the proposition has a further differentiation or not. In that way a contradiction will arise.

21b22 So if the former is impossible

What is he saying is impossible? That the two propositions, the assertion and the denial, that is, the contradiction, should be true of the same thing. 10

21b26-7 For it comes to be that, just as in the former [sc. non-modal] cases 'to be' and 'not to be' are additions [and the subject things are, one the one hand white, on the other man, so here being comes to be like a subject and being possible and being contingent the distinguishing additions]

By 'addition' he means 'verbal adjunct and not subject'.
That is the lecture.

<LECTURE 3>

15

22a38-9 But how is it with the necessary? We must see. Plainly not like this, but the contraries follow, while the contradictories are separate, etc. [For the denial of 'necessary not to be' is not 'not necessary to be'. For both may be true of the same thing]

In Diagram 1 he takes the simple denial of the necessary as following upon the assertions of the possible and the contingent, and the denial of the impossible; and here he looks to see if it was true to take it so there. For it seems that it is rather the simple assertion that follows the propositions mentioned, I mean the two assertions of the possible and the contingent and the denial of the impossible. That it is the assertion rather than the denial that follows, he establishes through a certain small preliminary assumption that proves it through what is called 'proof from the impossible'.²⁴² 20 25

The assumption is like this. I say that upon the affirmative proposition 'necessary to be', there follows the proposition 'possible to be'. If you say that it does not follow, then since in every case either it is true to say or it is true to deny, there will follow the proposition saying 'not possible to be'. And since this proposition 'not possible to be' has following it the propositions saying 'not contingent that it should be' and 'impossible to be', necessarily there will follow upon the simple assertion of the necessary which says 'necessary to be' the ones saying 'not contingent that it should be' and 'impossible to be'; which is irrational. And again,²⁴³ since 'necessary not to be' follows the assertion 'impossible to be', if someone should say that 'not possible to be' follows upon 'necessary to be', the proposition saying 'necessary not to be' will also be found following upon that saying 59,1 5

10 ‘necessary to be’, which is impossible. Therefore ‘not possible to be’ does not follow upon ‘necessary to be’, but rather the assertion, that is, ‘possible to be’, so that the denial and the assertion of the possible may not be found following on the same thing.

15 Again, the necessary is determinate, but the possible is both of two things (for it signifies both the necessary and the contingent²⁴⁴). And necessarily there are four propositions of the necessary, I mean simple assertion, simple denial, assertion from transposition and denial from transposition. It has been shown that the simple denial does not follow as it is put in Diagram 1, because it has been shown that the assertion of the possible follows upon the assertion of the necessary. But neither can the assertion from transposition, the one
20 saying ‘necessary not to be’, follow upon ‘possible to be’; for it was laid down that it follows upon the denials.²⁴⁵ Therefore there is found following upon the propositions under discussion the denial from transposition which says ‘not necessary not to be’. For this is true even in the case where it is necessary to be, and is more universal than that and indefinite.

25 It remains, then, to change the arrangement, and to range the proposition saying ‘not necessary to be’, the simple denial, which has the fourth place in Block 1, in the eighth place, while in its place, the fourth, we carry up the denial from transposition, ‘not necessary not to be’. For this also conflicts contradictorily with the proposition in a
30 straight line, the assertion from transposition saying ‘necessary not to be’. And the implications of the propositions [of the necessary] come about in the same way as those of the propositions of the possible, that is, they lie in a horizontal line, and the contradictories are no longer separated as they are in Diagram 1.

This is Diagram 2.

possible to be contingent that it should be not impossible to be not necessary not to be	not possible to be not contingent that it should be impossible to be necessary not to be
possible not to be contingent that it should not be not impossible not to be not necessary to be	not possible not to be not contingent that it should not be impossible not to be necessary to be

35 He raises a problem again about this, and solves it and provides a third diagram showing how the propositions imply one another in truth. But how he does this, with God’s help we shall see in another continuous exposition.

22b3-4 The reason why the following is not as it is with the others [is that the impossible, though having the same meaning, is given in the contrary way to the necessary. For if it is impossible for something to be, it is necessary, not that that thing should be, but that it should not be; and if it is impossible for it not to be, it is necessary for it to be]

Here he tells us a reason why we are not given contradiction opposed to contradiction but 'to be' to 'not to be'. He should have first said <what the arrangement of the necessary is which>²⁴⁶ follows in reality, and only then given the reason because of which this sort of following arises. But he changed the order, and first gives the reason because of which this sort of following arises, and only then changes just two propositions and gives the accurate arrangement. For he first ranged the simple denial of the necessary with the simple propositions above, and now ranges it with the propositions from transpositions below. And he does the reverse with the denial from transposition, as was said in the continuous exposition. 60,1 5

22b7-8 So that if the former ['impossible', 'not impossible'] are similar to the possible and the not possible, the latter ['necessary', 'not necessary'] are the contrary way 10

What the Philosopher is saying here is that if <the impossible is similar in respect of being>²⁴⁷ to the possible, the necessary will not be similar but the contrary way.²⁴⁸

22b11-12 [Or is it impossible that the contradictions of the necessary should lie like this?] For what is necessary to be is possible to be; if not, the denial will follow

Here he starts to do what we said in the continuous exposition. He wants to show that the proposition saying 'possible to be' follows upon that saying 'necessary to be'. For if it does not follow, necessarily the denial of it will follow, the one saying 'not possible to be', because in any modality whatever it is definitely possible either to assert a thing or to deny it.²⁴⁹ And he concludes, by *reductio ad impossibile* as we said, that the proposition saying 'possible to be' definitely follows upon that saying 'necessary to be'. 15 20

That is the lecture.

<LECTURE 4>

22b29-30 Someone might raise the problem whether 'possible to be' follows upon 'necessary to be', etc.

25 Having shown in Diagram 2 the possible following upon the necessary
 61,1 (for if it does not, he said there would of necessity follow the denial
 which says 'possible not to be' or 'not possible to be', both of which are
 impossible to say in the case of the necessary), he now raises the
 problem how one can say that the possible follows upon the necessary.
 For the possible is both of two things. If it is possible that something
 will be cut, it is possible also that it will not be cut. Whereas the
 5 necessary is determined. How can what is indefinite follow upon what
 is determinate?

He resolves the problem by appealing to equivocation. Things are
 called 'possible' in more ways than one, and one kind of possible
 follows upon the necessary, while another thing signified by 'possible'
 does not. In how many ways in general things are called 'possible' we
 can take as from a division. A thing is called 'possible' either by virtue
 10 of suitability, as when we say a baby is able to be a grammarian, or
 by virtue of a disposition, with either the power or the activity being
 separate,²⁵⁰ and that to which the activity belongs not being de-
 stroyed, for instance as walking belongs to the walking person, and
 when walking is separated that which can walk is not destroyed. This
 is called the 'hypothetically necessary',²⁵¹ [remaining] as long as the
 15 predicate belongs to the subject. Or when the activity belongs as a
 disposition, <but is part of the nature of the thing>,²⁵² and this belongs
 to things that come to be and cease to be.²⁵³ And if it belongs to things
 that come to be and cease to be, then if it is separated, that to which
 it belongs must <cease to be>. For instance, this fire here comes to be
 and ceases to be. And necessarily when it exists heat belongs to it.
 But when the actuality, the heat, is destroyed, it must be destroyed
 20 along with it. It also belongs to eternal things, as when we say that
 motion always belongs to the Sun; for the Sun is always in motion.

So a certain kind of possible, that spoken of in connection with
 eternal things²⁵⁴ or when the predicate belongs simply to the subject,
 which is also called 'the hypothetically necessary', these two things
 signified by 'possible' can follow upon the necessary. But the other
 25 things signified are not necessary. Certainly what is said to be
 possible by virtue of suitability does not follow upon the necessary.
 For it is possible both for the garment to be cut and for it not to be
 cut, and it is not the case that of necessity either definitely it will be
 cut or definitely it will not. Similarly the baby is able to become a
 grammarian and able not to. This sort of possible, then, does not
 30 follow the necessary in the way in which we say animal necessarily

follows upon man. For we say that upon man animal follows as a whole, namely substance, animate, perceiving, but not that every kind of animal follows upon man. Even if rational animal follows upon man, it is not the case that non-rational does too.

The interpreter of the book²⁵⁵ says ‘I think the speculation is clear’. For always, when the things that lead do not convert with the things that follow, it is necessary that the more universal should follow upon the leader, not in all its parts,²⁵⁶ but as a whole. For instance, when we say ‘A man is an animal’, man leads and animal follows on. If something is a human being, definitely it is an animal, but it is not the case that if something is an animal, definitely it is a human being. Since leader and follower do not convert, because of this that which follows upon the leader does so not in all of itself, but as a whole, as we have said. For animal is substance, animate, perceiving, and so is man.

So much on that. But since he has shown that the possible is more universal than the necessary, he converts the arrangement of the diagram, and places the propositions of the necessary which are lying below above, and leaves the others in the places they have.

<Diagram 3>

necessary to be	not necessary to be
not contingent that it should not be	contingent that it should not be
not possible not to be	possible not to be
impossible not to be	not impossible not to be
necessary not to be	not necessary not to be
not contingent that it should be	contingent that it should be
not possible to be	possible to be
impossible to be	not impossible to be

And he himself gives the reason, that things that are particular and lead are always put before things that follow and are more universal. And he gives a second reason, that the necessary is spoken of only in connection with eternal things, whereas the possible is spoken of in connection both with them and with things that come to be and cease to be. And since the former are better than the things that come to be and cease to be, it is reasonable that in the diagram too propositions of the necessary should be placed before those of the possible. And he here makes an enumeration of these things, saying that of things that are, some are actualities only, namely the divine substances, some are both in potentiality and in actuality, namely all things that come to be and cease to be, and some are in potentiality

only, like so-called formless matter. Having said that, he brings his project about propositions to an end.

20 That completes the continuous exposition.

23a11 ['Possible' is not said just in a single way, but one thing is said to be possible in that it is true, being in actuality, for instance it is possible for a thing to walk because it is walking, and in general it is possible to be because it already is actually what is said to be possible, and another because it might act, for instance it is possible for a thing to walk because it might walk.] And this latter kind of power is in those things only that are subject to change, [whereas the former is also in unchanging things.]

By 'power' he seems to mean the suitability which is sometimes completely separated from the actual, as is that for walking in a seated person. That is why he also says it is in those things that are subject to change, that is, things in the states of coming to be and
25 ceasing to be, which can be changed and not changed, while he places activity separate from this kind of power in eternal things. Hence he will next show that activity is prior to power, because eternal things are prior to things that come to be, and this power is in the latter. So even if in the heavens there should be that which is potential, still it is not this, but the one woven together with what is actual.

30 **23a18-19** And perhaps the necessary [and not necessary] is source [for all things of their being or not being]

Here, since he has demonstrated that the possible is more universal than the necessary, and that things that follow should, as universal, be placed after the things that lead as more particular, he says that propositions of the necessary are sources and primary.

35 **23a23-4** And some things are actualities without potentiality, namely the primary substances

In the case of the first substances, that is, eternal things, he says that potentiality and actuality are the same. And reasonably, since it is not possible to see in them potentiality bereft of actuality.

23a24 And some are with potentiality, which are prior by nature but later in time²⁵⁷

63,1 He says that actuality is prior to potentiality by nature as perfect to

imperfect and superior to inferior. But he says it is later in time, since every activity proceeds from some pre-existing potentiality.

That is the lecture.

Beginning of DIVISION 5

<LECTURE 1>

23a27-8 Is assertion contrary to denial or assertion to assertion, etc. 5

Aristotle's project concerning propositions has been completed, and the fourth section has reached its end. The enquiry now undertaken is certainly not Aristotle's, but is written as an exercise. That is why Porphyry, writing a lengthy²⁵⁸ commentary on the present written work, did not judge this section worthy of the thought needed to clarify it. Still, whether it is by Aristotle or not, we shall clarify what is before us. 10

The speculation goes like this. When a proposition, true or false, <has> two propositions conflicting with it, which conflicts more, the assertion of the contrary or its own denial? And the father of the problem declares that its own denial conflicts more with such a proposition. But he transfers the enquiry from sentences to opinion. As it is with opinion, that is to say, with speech in the mind,²⁵⁹ so it is with uttered sentences. 15

And first he makes an additional determination of what opinions are contrary²⁶⁰ and what seem to be, but are not. He says that those opinions seem to be contrary which opine about contrary things, 'Temperance is good', 'Temperance is bad'.²⁶¹ After this additional determination, he sets out to show what he proposes by five arguments. 20

The first argument is from predicates and goes like this. One sort of opinion is that in which what belongs is opined as belonging; for instance, that what is good is good, that what is good is profitable, that what is good is to be pursued, that what is good is to be chosen, and such other opinions as are like these. There is another sort of opinion that says what does not belong as belonging,²⁶² e.g. 'What is good is to be avoided', 'What is good is unprofitable', 'What is good is not-good'²⁶³ – this last says what belongs as not belonging.²⁶⁴ He says that none of the opinions should be thought conflicting which opines what belongs as belonging, but the opinion that opines what belongs as not belonging does conflict, for instance the one saying 'What is good is not-good' conflicts with the one saying 'What is good is good'. 25

But that this does not carry necessity is agreed straight off. For as has been said many times, it has been established that to one thing there is one thing contrary. 'Not good' imports the bad, the useless,

what is to be avoided and ten thousand other things; so there will be found many things, indefinitely many, conflicting with one. For as 'not-white' signifies black and yellow and grey and red and blue-green and all the other intermediate colours, and if someone says that not-white conflicts with white,²⁶⁵ many things will be found conflicting with one, so it will be with the things before us.

The second argument is from what is of itself and what is incidental. He says that we know this, that what is of itself conflicts with what is of itself more than does what is incidental. For if there are two things, of which one is of itself white and one is incidentally white, and another two, one of itself black and one incidentally black, clearly it is what is of itself black that conflicts with what is of itself white, not what is black incidentally.²⁶⁶ The opinion which says that what is good is not-good of itself conflicts with that which opines that what is good is good, whereas that which says that what is good is bad conflicts incidentally. It plainly follows that its own denial conflicts more with an assertion.

He gives a third argument from the simple and the composite, that the simple conflicts <with the simple> in the same way as the composite with the composite. If 'What is good is good' is simple, and 'What is good is not-good' is likewise simple, but 'What is good is bad' is complex, it follows that 'What is good is not-good' conflicts more with 'What is good is good' than does the opinion which opines 'What is good is bad'.

These two arguments have the same idea, and there is a common refutation for them. It is false to say that 'What is good is bad' is complex, and 'What is good is good' simple. For it is clear that we do not apply 'simple' and 'composite' like this because of what is in the uttered speech, nor 'of itself' and 'incidentally'. We apply them because of what is signified, since the problem is being set out for opinion, that is to say, for the speech in the mind. If when we say 'This is bad', 'This is black', we signify the extreme, and the extreme is determinate, whereas 'is not-good', 'is not-black' signify not just the extremes but the intermediates, clearly these are more complex and composite than those opinions which opine 'What is good is bad' and 'What is white is black'.

The fourth argument is from contradiction. He says that in every case either it is true to say or it is true to deny; that necessarily either an assertion is true or its own denial is; and that it is not possible in all cases to make the assertion of the contrary. This being so, clearly as it will be with those other propositions which do not have a contrary assertion of what is contrary (for it is to be known that if the predicate is a substance or a quantity or anything else to which there is no contrary, it is not possible to make an assertion of what is contrary, but it is possible to say the proposition's own denial,

e.g. ‘Men are animals’, ‘Men are-not animals’, ‘The line is three cubits long’, ‘The line is-not three cubits long’), so, therefore, he says, it will be with the others too, with those propositions that do have contrariety. 15

That this argument here set up is easily refuted is agreed straight off from one thing. What we are enquiring is: when one true or false proposition has two propositions conflicting with it, which conflicts the more? In cases where a proposition does not have a contrary assertion, how can the enquiry proceed? It is agreed straight off that it conflicts with its own denial, and we can no longer see another to try against it. Just as, for example, if you have two enemies and you enquire if <this one or that>²⁶⁷ fights you more; if one of them is removed, the enquiry does not proceed ‘Does the other fight or not?’ So too with the cases before us. 20

That is Argument 4. Argument 5 and other things pertaining to another argument we shall see, with God’s help, in another continuous exposition. 25

23a40-23b1 [There is a certain opinion about the good, that it is good, which is true,] and another, that it is not good, [which is false]

This proposition, being from transposition,²⁶⁸ is an assertion, but he takes it as a denial and uses it without differentiating. Indeed, we have shown that there is no difference between simple denial and assertion from transposition. Since he too, when arguing about denial, uses an assertion from transposition, by this he hints to us that there is no difference between them. 30

23b3-4 To think that contrary opinions are defined by this, that they are about contrary things, is false

Here he sets out the additional determination and says what opinions are contrary and what are not contrary but seem to be. Some interpreters, among whom is Ammonius,²⁶⁹ think this is his first argument. But it is not. It is nothing to the purpose. 35
66,1

That is the lecture.

<LECTURE 2>

23b33-4 Further, the opinion about the good, that it is good, and the opinion about the not-good, that it is not-good, are alike, etc. 5

This is the fifth and last speculation, the most troublesome and the hardest to confront.²⁷⁰ He takes two oppositions, one that has a

10 determinate subject, 'the good is good', which is in fact a true assertion, and one with an indefinite subject, 'The not-good is <not>-good'.²⁷¹ And he thinks that as it is with the true denial that has an indefinite subject, so it will be with the true assertion that has a determinate subject.

15 Let us see what sort of proposition follows upon or destroys the true denial 'The not-good is <not>-good'. We find that the proposition saying 'The not-good is bad' does not conflict with the said proposition. For both can be true in certain cases, for instance in the case of those with a vicious disposition. For I can call a bad person 'not-good'. But
20 neither does the proposition 'The not-good is not-bad' conflict. For this in turn is true in the case of those that have an intermediate disposition and those things that are not by nature at all such as to receive goodness. For instance, I can call a stone, which is not-good, 'not-bad', and a baby similarly. It follows that there is one proposition left, that which says that the not-good is good. For that always conflicts with
25 the said true denial, 'The not-good is not-good'. So as it is with this opposition, so it is with the other. It follows that what conflicts with the proposition saying 'The good is good' is <not> the proposition saying 'The good is bad' but the one saying 'The good is not-good'.

That is what is contained in the fifth argument. Against this we say, first, whence does he get the thought that the implications of
30 these oppositions [sc. with a determinate subject] are like those in the case where the subject is indefinite? Secondly, the things he is trying against others are also unlike.²⁷² For if a subject term is indefinite, it will also have the things following it in an indifferent way, whereas a determinate term will definitely have what follows it <determinate>.²⁷³ How, then, can he think that the determinate opposition will have the same implications as the indefinite?

67,1 That on the arguments. But since in the present argument he has no longer used the universal further differentiation, whether affirmative or negative, but only the article, he makes an additional determination and says [24a3-b1] that it makes no difference whether one
5 uses articles or the universal further differentiation. For what difference is there between saying that the good is good, and saying that if something is good it is good? The same with denial. For when articles do not signify anaphora,²⁷⁴ whether they are singular or plural²⁷⁵ they definitely introduce the universal further differentiation. For when there are ten men, it is the same thing to say 'Bring me the men' and
10 'Bring me all the men', or 'The men walk' and 'Every man walks'. But when the thing is known from before, and the article signifies anaphora, the equivalence no longer holds.²⁷⁶ And if any poets or orators had the usage of speaking with [both] the article and the further differentiation, they loosely used both²⁷⁷ for the sake of the metre or the rhythm, as Demosthenes in the *de Corona*²⁷⁸ says

‘First I call upon all <the> gods and goddesses’. For if he said ‘the gods’, using the article, there was no need to bring on the universal further differentiation too, I mean [in saying] ‘*all* the gods and goddesses’.²⁷⁹ 15

Ammonius says that the article is not altogether equivalent to the universal further differentiation.²⁸⁰ This is clear, he says, from the Dream in Homer that says ‘He [sc. Zeus] commands you to arm the long-haired Achaeans’, and not satisfied with the article, adds ‘in all their number’ – which is where Agamemnon went astray.²⁸¹ But we say that the article is not used in that particular place,²⁸² and it was reasonable to bring on the universal further differentiation ‘in all their number’. For propositions without further differentiation are equivalent to particular propositions. So, as was said, if the article does not signify anaphora, it definitely introduces the universal further differentiation, unless it is used for the sake of rhythm or the metre. 20 25

Having said this he has set out the account for opinion; and he applies it and says it makes no difference whether we say the same things of opinion or of uttered speeches. For an uttered speech is an earnest of affections in the soul, and as it is with opinion, so it is with uttered speeches too. 30

Then, since in the last argument he took it that contraries are never true together, for instance ‘The not-good is bad’ and ‘The not-good is good’, as if someone had said to him ‘Whence is it clear that contraries are not true together?’, he establishes this very thing syllogistically: contraries are contradictorily opposed; it is impossible that things contradictorily opposed should be together; therefore it is impossible that contraries should be together. This conclusion he takes as a premiss and says: ‘If it is impossible that contraries should be together, and the things about which we are speaking, the not-good <and the> bad, can be together, it follows that it is impossible these should be contraries’. Saying this he brings the present treatise to an end. 35 68,1

23b33-4 Again the opinion about the good, that it is good, and the opinion about the not good, that it is not-good, are alike 5

It should be known that here too, as we also said in the foregoing lecture, what he puts forward is properly speaking the assertion from transposition with an indefinite subject; but he uses it in place of a simple denial. Hence we did well to say that there is no difference between these propositions in what they signify.

23b36-7 [and in addition to these, the opinion about the good

10 that it is not good, and about the not good, that it is good. To the opinion, then, about the not good, which is true, that it is not good, what opinion is contrary?] Not the one saying that it is bad. For sometimes they²⁸³ might be true together

He says ‘sometimes’, because in the case of those that are indifferent, [i.e. people with a middling disposition], the proposition saying that the not-good is bad is false, but in the case of those that have a vicious disposition, both propositions [sc. that the not-good is bad and that it is not-good] are true.

That is the lecture.

That, with God’s help, brings Aristotle’s *de Interpretatione* to a fortunate completion.

[Appendix]

Notes, with God's help, of contingent propositions with definite subject

1. Socrates	walks	Socrates	will walk	Socrates	walked
2. Man	walks	Man	will walk	Man	walked
3. Some man	walks	Some man	will walk	Some man	walked
4. Every man	walks	Every man	will walk	Every man	walked

materiality of necessity

1. Socrates	breathes	will breathe	breathed
2. Man	breathes	will breathe	breathed
3. Some man	breathes	will breathe	breathed
4. Every man	breathes	will breathe	breathed

materiality of the impossible

1. Socrates	flies	will fly	flew
2. Man	flies	will fly	flew
3. Some man	flies	will fly	flew
4. ²⁸⁴ Every man	flies	will fly	flew

Contingent denials, with God's help

Socrates	does not walk	will not walk	did not walk
Man	does not walk	will not walk	did not walk
No man	walks	will walk	walked
Not every man	walks	will walk	walked

necessary [denials]

Socrates	does not breathe	will not breathe	did not breathe
Man	does not breathe	will not breathe	did not breathe
No man	breathes	will breathe	breathed
Not every man	breathes	will breathe	breathed

impossible [denials]

Socrates	does not fly	will not fly	did not fly
Man	does not fly	will not fly	did not fly
No man	flies	will fly	flew
Not every man	flies	will fly	flew

Indefinite contingent assertions, with God's help

Not-Socrates	walks	will walk	walked
Not-man	walks	will walk	walked
Some not-man	walks	will walk	walked
Every not-man	walks	will walk	walked

	<i>necessary [indefinite assertions]</i>		
Not-Socrates	breathes	will breathe	breathed, etc. ²⁸⁵

	<i>impossible [indefinite assertions]</i>		
Not-Socrates	flies	will fly	flew, etc.

	<i>Indefinite contingent denials, with God's help</i>		
Not-Socrates	does not walk	will not walk	did not walk [etc.]
<Not-man	does not walk	will not walk	did not walk
No not-man	walks	will walk	walked
Not every not-man	walks	will walk	walked> ²⁸⁶

	<i>necessary</i>		
Not-Socrates	does not breathe	will not breathe	did not breathe, etc.

	<i>impossible</i>		
Not-Socrates	does not fly	will not fly	did not fly, etc.

Altogether 144 propositions consisting of subject and predicate from Division 2

Assertions with God's help with a third thing predicated in addition

Notes of contingent propositions; subject <and predicate> both determinate

Socrates	is just	was just	will be just
Man	is just	was just	will be just
Some man	is just	was just	will be just
Every man	is just	was just	will be just

	<i>necessary</i>		
Socrates	is an animal	was an animal	will be an animal etc.

	<i>impossible</i>		
Socrates	is winged	was winged	will be winged, etc.

Assertions, subject and predicate both indefinite and third thing predicated in addition

Notes of contingent propositions

Not-Socrates	is not-just	was not-just	will be not-just
Not-man	is not-just	was not-just	will be not-just
Some not-man	is not-just	was not-just	will be not-just
Every not-man	is not-just	was not-just	will be not-just

	<i>necessary</i>		
Not-Socrates	is a not-animal	was a not-animal	will be a not-animal etc.

	<i>impossible</i>		
Not-Socrates	is not-winged	was not-winged	will be not-winged etc.

Contingent assertions, determinate subject, indefinite predicate

Socrates	is not-just	was not-just	will be not-just, etc.
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Socrates	is a not-animal	<i>necessary</i> was a not-animal	will be a not-animal, etc.
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Socrates	is not-winged	<i>impossible</i> was not-winged	will be not-winged, etc.
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Contingent assertions, indefinite subject, determinate predicate

Not-Socrates	is just	was	will be, etc.
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Not-Socrates	is an animal	<i>necessary</i> was	will be, etc.
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Not-Socrates	is winged	<i>impossible</i> was	will be, etc.
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144 Propositions.

Denials [subject and predicate both definite] with God's help of assertions with third thing predicated in addition

[Notes of contingent propositions]

Socrates	is-not just	was-not	will-not-be
Man	is-not just	was-not	will-not-be
No man	is just	was	will be
Not every man	is just	was	will be

Socrates	is-not an animal	<i>necessary</i> was-not	will-not-be, etc.
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Socrates	is-not winged	<i>impossible</i> was-not	will-not-be, etc.
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Denials, subject and predicate both indefinite, with third thing predicated in addition

Notes of contingent propositions

Not-Socrates	is-not not-just	was-not	will-not-be
Not-man	is-not not-just	was-not	will-not-be
No not-man	is not-just	was	will be
Not every not-man	is not-just	was	will be

Not-Socrates	is-not a not-animal	<i>necessary</i> was-not	will-not-be, etc.
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Not-Socrates	is-not not-winged	<i>impossible</i> was-not	will-not-be, etc.
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Denials with determinate subject and indefinite <predicate>

Notes of contingent propositions

Socrates	is-not-not-just	was-not	will-not-be
Man	is-not not-just	was-not	will-not-be
No man	is not-just	was	will be
Not every man	is not-just	was	will be

<i>necessary</i>			
Socrates	is-not a not-animal	was-not	will-not-be, etc.

<i>impossible</i>			
Socrates	is-not not-winged	was-not	will-not-be, etc.

Denials with indefinite subject and determinate predicate

Notes of contingent propositions

Not-Socrates	is-not just	was-not	will-not-be
Not-man	is-not just	was-not	will-not-be
No not-man	is just	was	will be
Not every not-man is just		was	will be

<i>necessary</i>			
Not-Socrates	is-not an animal	was-not	will-not-be, etc

<i>impossible</i>			
Not-Socrates	is-not winged	was-not	will-not-be etc.

Altogether 288 [propositions]. End of propositions, assertions and denials, with third thing predicated in addition, from Division 3.

Assertions with modality, with God's help [subject and predicate both determinate]

Socrates	contingently walks	will walk	walked
Man	contingently walks	will walk	walked
Some man	contingently walks	will walk	walked
Every man	contingently walks	will walk	walked

Notes of necessary propositions

Socrates	necessarily breathes, etc. ²⁸⁷
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Notes of impossible propositions

Socrates	impossibly flies etc.
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[Subject and predicate] both indefinite, contingent [propositions]

Not-Socrates	not-contingently walks etc. ²⁸⁸
Not-man	not-contingently walks etc.
Some not-man	not-contingently walks etc.
Not every man	not-contingently walks etc.

<i>necessary</i>	
Not-Socrates	not-necessarily breathes, etc.

<i>impossible</i>	
Not-Socrates	not-impossibly flies, etc.

Determinate subject, indefinite predicate

Socrates	not-contingently walks	will walk	walked
Man	not-contingently walks	will walk	walked
Some man	not-contingently walks	will walk	walked
Every man	not-contingently walks	will walk	walked

Socrates *necessary*
not-necessarily breathes, etc.

Socrates *impossible*
not-impossibly flies, etc.

Not-Socrates *Indefinite subject, definite predicate, contingent*
contingently walks, etc.

Not-Socrates *necessary*
necessarily breathes, etc.

Not-Socrates *impossible*
impossibly flies, etc.

Altogether 144 assertions.

*With God's help, denials with modality consisting of subject
and predicate [alone, both determinate]
Notes of contingent propositions*

Socrates does-not contingently walk, etc.
Man does-not contingently walk etc.
No man contingently walks
Not every man contingently walks

Socrates *necessary*
does-not necessarily breathe, etc.

Socrates *impossible*
does-not impossibly fly

*Denials, consisting of subject and predicate [alone], both indefinite
Notes of contingent propositions*

Not-Socrates	does-not	will-not	did-not
	not-contingently walk	not-contingently walk	not-contingently walk
Not-man	does not	will-not	did-not
	not-contingently walk	not-contingently walk	not-contingently walk
No not-man	does	will	did
	not-contingently walk ²⁸⁹	not-contingently walk	not-contingently walk
Not every not-man	does	will	did
	not-contingently walk	not-contingently walk	not-contingently walk

Not-Socrates *necessary*
does-not not-necessarily breathe, etc.

Not-Socrates *impossible*
does-not not-impossibly fly, etc.

*Denials, determinate subject, indefinite predicate**Notes of contingent propositions*

Socrates	does-not not-contingently walk, etc.
Man	does-not not-contingently walk, etc.
No man	does not-contingently walk
Not every man	does not-contingently walk

necessary

Socrates	does-not not-necessarily breathe, etc.
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impossible

Socrates	does-not not-impossibly fly, etc.
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*Denials, indefinite subject, <determinate> predicate**Notes of contingent propositions*

Not-Socrates	does-not contingently walk, etc.
Not-man	does-not contingently walk, etc.
No not-man	does contingently walk
Not every not-man	does contingently walk

necessary

Not-Socrates	necessarily does-not breathe, etc.
--------------	------------------------------------

impossible

Not-Socrates	impossibly does-not fly, etc.
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*With God's help, assertions with modality, with third thing predicated in addition**Notes of contingent propositions, <subject and predicate> both determinate*

Socrates	contingently is just	was just	will be just
Man	contingently is just	was just	will be just
Some man	contingently is just	was just	will be just
Every man	contingently is just	was just	will be just

necessary

Socrates necessarily	is an animal, etc.
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impossible

Socrates	impossibly is winged, etc.
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*Assertions with indefinite subject, and determinate predicate and third thing predicated in addition**Notes of contingent propositions*

Not-Socrates	contingently is just	was just	will be just
Not-man	contingently is just	was just	will be just
Some not-man	contingently is just	was just	will be just
Every not-man	contingently is just	was just	will be just

Notes of necessary propositions

Not Socrates	necessarily is an animal, etc.
--------------	--------------------------------

impossible

Not-Socrates impossibly is winged, etc.

*Assertions, subject <determinate>, predications indefinite**Notes of contingent propositions*

Socrates	not-contingently	is not-just	was not-just	will be not-just
Man	not-contingently	is not-just	was not-just	will be not-just
Some man	not-contingently	is not-just	was not-just	will be not-just
Every man	not-contingently	is not-just	was not-just	will be not-just

Notes of necessary propositions

Socrates not-necessarily is a not-animal, etc.

Notes of impossible propositions

Socrates not-impossibly is not-winged, etc.

*Assertions, [subject and predicate] both indefinite**Notes of contingent propositions*

Not-Socrates	contingently is not-just	was not-just	will be not-just
Not-man	contingently is not-just	was not-just	will be not-just
Some not-man	contingently is not-just	was not-just	will be not-just
Every not-man	contingently is not-just	was not-just	will be not-just

Notes of necessary propositions

Not-Socrates necessarily is a not-animal, etc.

Notes of impossible propositions

Not-Socrates impossibly is not-winged, etc.

All taken together, 864 propositions.

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Notes

1. *apophasis* and *kataphasis*: these words could be translated ‘negation’ and ‘affirmation’, and I have translated the adjectives *apophatikos* and *kataphatikos* ‘negative’ and ‘affirmative’; but it seemed better to use the more natural words ‘assertion’ and ‘denial’ for the nouns. Philosophers following Frege sometimes use ‘assertion’ to cover both affirmative and negative statements, but this usage goes with a theory of negation which seems to me dubious, and *kataphasis* is used only in the narrower sense, for affirmative statements.

2. *apophansis*: this could be translated ‘declaration’, and the adjective *apophantikos* which I translate ‘statement-making’ could be translated ‘declarative’. Again I decided to use the less technical English terms, though I do translate the verb *apophainesthai* ‘declare’.

3. *Cat.* 14a26-b23

4. Ammonius also (9,7-24) distinguishes six ways in which *thesthai* is used. Although Stephanus uses some of the same examples, and five of his senses coincide with senses distinguished by Ammonius, in place of projection (*ekthesis*) Ammonius has immediate principles other than definitions.

5. Stephanus seems to be thinking of *Gorgias* 461D, but the quotation is inaccurate, and Socrates is addressing Polus, not Callicles.

6. Adding *ouk esti labein* as Hayduck suggests.

7. So Ammonius, 11,3-4.

8. Accepting Hayduck’s addition.

9. Ammonius calls the temporal conjunction *hote* an *epirrêma* at 68,24.

10. That a sentence is a ‘part’ of *lexis* is said at *Poetics* 20, 1456b20-1.

11. Bracketing *kai* before *hômologêtai* at 4,14.

12. cf. Ammonius 15,28-30.

13. sc. assertion, denial and statement.

14. *sumbola*, a word for the two halves of an object which has been broken, to be used as proofs of identity or authorisation.

15. *Iliad* 11.388.

16. Possibly Stephanus himself, since what we are reading is from his ‘voice’.

17. *prôtôs*; OCT has *prôtôn*, ‘the primary things of which these are the signs’.

18. Reading *eme* for *kai allôs*, as in line 12 below.

19. ‘The horse is beautiful’: we should probably understand a verb of being, though none is present in the Greek. The alternative is to take the words as a phrase, ‘beautiful horse’.

20. Reading *hekastên* for *hekastou* at 7,6; cf. Olympiodorus (Tarán), xxvii.5.

21. Stephanus uses a word (*theôris*) which usually means a sacred or special ship for carrying ambassadors; the context, however, suggests something less special, perhaps a boat for sight-seeing trips on the Nile.

22. Reading *agrammatôn* at 7,17 from *de Int.* 16a28-9, for *haplôs*, which would have to be translated 'from what are simply sounds'.

23. Common as an example of a nonsense-word; also used as an onomatopoeic rendering of the sound of a plucked string.

24. The difference between verbs and temporal 'nouns' is discussed, though not described as a problem, by Ammonius, 32,3-24.

25. This is printed as a lemma by Hayduck, but the continuous exposition seems to go down to 8,29.

26. *Iliad* 3.182.

27. *Iliad* 2.371. These two examples appear in Ammonius 2,11 and 2,17, but as examples of non-declarative sentences.

28. *Iliad* 1.234

29. Not in our text of Aristotle.

30. 1.191.

31. The thought is obscurely expressed but seems to be that although the syllables *ippos* (or rather *hippos*) can mean something, viz. a horse, they do not mean anything as part of *Kallippos*, even a separate part. The word for a horse is not the two last syllables of *Kallippos*, any more than the ace of Diamonds is half of a divided two of Diamonds.

32. cf. Ammonius 9,28-10,31.

33. *Cat.* 1a18-19.

34. See Ammonius 34,17 and ff, whose discussion Stephanus follows but abbreviates, omitting parts touching on sex and religion.

35. Stephanus' choice of words – *hippos*, *ienai posi*, *anthrôpos*, *anô ôpa* – is punning.

36. '*Archelaos*' means 'ruler of people' and 'Basil' (Stephanus uses '*Basilikos*' and '*Basileios*') means 'king'.

37. Accepting Hayduck's suggestion.

38. Accepting Hayduck's suggestion.

39. *Iliad* 2.804.

40. Supplying, v.g., *edei autois, hôs exousi*.

41. In the Greek the prepositions used in this translation are replaced by case-inflections.

42. So says Ammonius 42,30ff.

43. At 11,8 it is better to punctuate '*Sôkratous*' *gar* '*peripatei*' than (as Hayduck does) '*Sôkratous gar peripatei*'.

44. The suggestion is that 'Is of Philo' is not unsyntactical but rather incomplete; it can be completed to 'This is the son of Philo' (cf. Ammonius 43,29-44,1).

45. i.e. they mean the same by these expressions: see Ammonius 44,24-5.

46. Accepting Hayduck's suggestion.

47. Ammonius 45,12.

48. Vancourt (p. 38) thinks this is not the medical writer but a later commentator of the same name.

49. P reads *kai estin aei*; the OCT reads simply *esti de*, 'and is'.

50. This phrase seems to be taken from Ammonius 47,21. Tarán's Anonymous Commentator (103,5) likes it too.

51. Accepting Hayduck's suggestion from *de Int.* 16a5.

52. Accepting Hayduck's suggestion.

53. cf. Anon. (Tarán), 10,1.

54. Correcting *hê* to *ê* at 13,34.

55. Perhaps we should add 'by agreement' from line 9.

56. See note to 12,26 above.

57. Stephanus takes *huparkhonta* to mean 'things that exist' or 'subsist', whereas Aristotle probably used it to mean 'things that belong'. But in any case the comment is careless; the text says that a verb always signifies a *huparkhon*, not that a *huparkhon* is always signified by a verb.

58. 'It' in the lemma refers to *to on*, 'thing that is'. Stephanus' thought is probably: 'Thing that is, by itself, is nothing true or false; it is not nothing at all, for if what is signified by "thing that is" were not a thing that is at all, still less would anything else be a thing that is': so Anon. (Tarán), 12,1-3.

59. I follow Hayduck in making these insertions. They yield a plausible text (*pros tauta oun sumplekomenon prossêmeinei sunthesin tina to on*), though the sense is not entirely satisfactory. It would be better to say '“Socrates” is a noun, “thing that is” is a verb (i.e. a predicate expression), and “is”, constructed with these, signifies a certain composition, true or false.' *on*, 'thing that is', *can* signify a kind of composition, as in 'A person who says "Theaetetus is seated" says a thing that is', but it is not being so used in 'Socrates is a thing that is'.

60. Hayduck here inserts 'by agreement', but these words do not have to be written in for Stephanus to comment on them: see 14,5.9.

61. Correcting Hayduck's punctuation – he has: 'Socrates is walking' and 'Plato is debating' – cf. Ammonius 59,17.

62. A nice opportunity for comment missed. Ammonius (59,14-60,3) takes it that clauses in complex and compound sentences do signify assertions and denials, and suggests that Aristotle ignores them because he is concerned with what is true of all sentences, and sentences containing clauses contain within the clauses parts that have meaning simply as 'sayings'.

63. Stephanus does not notice that he is here using *logos* not in the relevant sense of 'sentence', but in the sense of 'speech'. Similarly at 19,14 he does not notice that in *horistikos logos* it means not 'sentence' but 'account'. In the sentence on which he is commenting here Aristotle's point is probably that whereas the organs by which we signify things, the organs of speech, are products of nature, sentences are products of agreement.

64. Accepting Hayduck's insertion.

65. An insertion is needed. Hayduck inserts <an accomplishment and an instrument>, with the sentence continuing 'and an instrument's being called both natural and artificial'.

66. Listed by Stephanus only at 19,11, but by Ammonius at 2,10-20. See also the anonymous commentator in Bekker, *Aristotle* vol. 4, 93a21-30 for a 'division to prove there are just five'.

67. So Ammonius 66,14-19, probably following Porphyry. Ammonius' text runs: 'It should be known that in these words he gives the definition of statement-making sentence, having no need of assertion or denial in order to teach this, which is what in what follows gave some people to suspect that statement-making sentence is divided into assertion and denial in the way in which one distinguishes the different things signified by equivocal terms, and not as genus into species.' That is, some people (Alexander of Aphrodisias) think that he is defining statement-making sentence at 16b8 ff. where he says 'A first statement-making sentence which is one is an assertion; then a denial.' If that were right, assertion and denial could not be species of statement-making sentence, since one cannot define a genus by giving its species, things that 'are under it'. Stephanus argues at 18,26-35 not only that 17a2-3 is not formally a definition, but that to understand it we do need the notions of assertion and denial.

68. *antiphasis*. As Hayduck observes, this seems to be a slip for *apophansis*,

'statement' (though contradiction *is* defined in terms of assertion and denial at 17a33-4); for the sequence of thought, see the preceding note.

69. Accepting Hayduck's insertion.

70. That is, 'tongue' is used equivocally of the tongue of a shoe and of the tongue of an animal, so defining the former we do not say it is a *species* of tongue. 'Dog' is a more standard example of a word used equivocally. It signifies the land-animal, a dogfish and a star: Ammonius 241,8, Olympiodorus (Tarán), xxxv.14, Anon. (Tarán), 24,16.

71. That is, 'statement' is applied to assertion and denial because of their relation to one thing.

72. That is, a lancet is called 'healthy' because it is an instrument adapted to a certain work connected with health, and bread is called 'healthy' because it causes health.

73. That is, presumably, 'statement' applies primarily to assertions and in a derivative way to denials. It is not plausible to say that 'statement' applies to assertions in the primary way in which 'healthy' applies to a good bodily state; but Stephanus' idea may be that in any language 'unmarked' statement-making sentences are assertions, and to deny, speakers must 'mark' a sentence in some way, e.g. by inserting a negative particle.

74. These words should probably be deleted, since although interrogative particles are comparable to negative, this is supposed to be a division of statement-making sentences.

75. *merê logou*: this one Greek expression does duty both for 'part of speech' and for 'part of sentence'.

76. Hayduck prints *estin men gar, all' oupô dêloi* ... I think *estin* should be given quotation marks as a quotation of the word at 16b29.

77. Presumably at 17a8-9. See above on 16,22-4.

78. Reading *kai* for *ê* at 18,33.

79. Stephanus is again betrayed by the word *logos*, which in this phrase means 'account', not 'sentence'.

80. *Metaph.* 7.4, 1030a7-10, 1037b11-27.

81. Whereas English has two forms of the present, the simple ('Socrates walks') and the continuous ('Socrates is walking'), Greek has only one, in which the present is expressed by a single word. The meaning here is 'Socrates is walking', but the Greek sentence consists of only two words.

82. Aristotle does not, in fact, use a word meaning 'secondarily'.

83. Accepting Hayduck's insertion.

84. Our text here (20,16) has the words *hôs dunamei* after *heis*. Hayduck seems to understand 'and not one as in potentiality', but it is hard to make sense of this. *dunamis* is an equivocal expression (cf. Aristotle, *Metaph.* 5.12, 1019b33-4) meaning not only 'power', 'potentiality', but also, in mathematics, 'root', and it is possible that Stephanus used it here in an example which has dropped out.

85. Supplying *tautên prosethêke*; Hayduck has a similar proposal.

86. The Greek subject term in these sentences is singular, *anthrôpos*, 'man' (in the inclusive sense, i.e. 'human being', not 'adult male human being'), and it would be in line with traditional practice to translate them 'Man walks', 'Man does not walk'. These sentences, however, sound a little unnatural, and the nearest Greek equivalents to them would have the definite article – *ho anthrôpos badizei* – which (as Stephanus insists, 67,3 and ff.) is equivalent to the universal quantifier; indeed, even as it stands, 'Man walks' sounds like a way of saying 'All human beings walk.' I have therefore opted for 'Men walk', which clearly lacks a quantifier and is natural modern English, though it is not perfect, and the fact that the Greek noun is singular will have to be kept in mind below, especially in 'Division 3', pp. 39,24 and ff.

87. e.g. 'Theaetetus lives off roots.'

88. Hayduck, presumably taking *pros touto* at line 28 to mean 'against this', suggests that the reference is to 18,28ff. Despite the use of the accusative and not the dative, I think it is more likely that Stephanus is referring to 14,33ff. and wants Aristotle to mention truth and falsehood.

89. Hayduck rightly brackets this lemma, which interrupts the continuous exposition.

90. Stephanus seems, here and at line 9 below, to be referring to a lost commentary on the *Categories*.

91. Ammonius does not say this in so many words. His summary of the division of statement-making sentence is: 'Of statement-making sentence, one sort is simple and one composed of more sentences than one; of the simple, one sort is first and one second; and of each of these, one sort is unitary in that it signifies one thing, and one plural in that it signifies several' (80,11-14).

92. Though Stephanus and Aristotle use the verb *antikeisthai*, 'to lie opposite', 'to be opposed', they mean the opposition of contradictories, not contraries. Aristotle says below, 17a34-5, 'I say that is opposed which [sc. asserts or denies] the same thing of the same thing.'

93. Accepting Hayduck's suggested addition.

94. *hulê*; for how the word comes to be used in this sense, see 25,23-6. It expresses a notion like that of modality. But whereas the modality of a proposition for us is explicit – we say 'It is necessary for human beings to breathe', 'It is impossible for human beings to fly' – the materiality of a proposition is the modality implicit in its subject-matter. 'Human beings breathe', which for us is assertoric, not apodeictic, for Stephanus has the materiality of necessity.

94a. A slip, by Stephanus or by a copyist, for 'Not every man will be just'.

95. For Stephanus, the materiality of 'Every human being is just' is contingent.

96. To be hale or healthy and to be sick (23,20 below) are both expressed in Greek by verbs (*hugiainein*, *nosein*), so these are propositions consisting of subject and predicate alone.

97. Reading at 23,22 *Sôkratês hugiainei*, *Sôkratês oukh hugiainen*. P has the present in both places and Ammonius at 85,17-18 the past.

98. *sunônumôs*: but the word here seems to mean not just 'speaking univocally', 'using words in the same sense', but 'using words in the same sense without adding further differentiations like quantifiers (*prosdiorismoî*)'.

99. 165b26-7; 166b21-7.

100. i.e. a verb of being: see below 39,24-8.

101. i.e. the quantifier: see below 24,14-36.

102. P reads *epeidê* and OCT *epei de*. The meaning is not affected.

103. The sentence as printed in the OCT has no main clause. I read a comma instead of a full stop after *hekaston* at 17b3.

104. *prosrhêma*. This word is often used to signify a mode of address or a name. Here, however, (and at Ammonius, 89,4,) I think it is used as a grammatical term to signify an adverb or verbal adjunct; *epirrhêma* similarly has a grammatical and a non-grammatical use. Grammatically, of course, quantifiers are adjectives agreeing with subject-expressions, but they do not, like adjectives of quality, signify properties of the subject. Today it is common to say that they signify properties of predicates, which implies that they are similar to adverbs, and it is sometimes possible to replace a quantifier by an adverb or adverbial phrase: instead of 'Few Cretans are truthful' we can say 'Cretans are rarely truthful' or 'Truthfulness belongs to Cretans only in a few instances.'

105. *atomon*; Stephanus explains his use of this word at 27,37-28,1.

106. *hois tês toutôn emelêsen tekhnologias*, a phrase taken from Ammonius 88,17-18.

107. This does not appear to have been said explicitly, though it has been noted (10,15) that utterances like 'not man' are not denials.

108. Correcting Hayduck's punctuation.

109. 'Categorical' here translates *katégorikos*, and the word translated 'predicate' is *katégoroumenon*.

110. A comparison with Ammonius 87,16-18 illustrates the vigour of Stephanus' style.

111. Understanding *sunapsai* with *tôi katégoroumenôi*, and supplying *eirêsthai* after *ou kalôs* at 26,21 with Hayduck. Hayduck, however, might prefer to translate: 'We say that what others have said without further differentiation, that it should definitely be attached to the predicate, is not well said.' 'What others have said without further differentiation' is probably a pun. Stephanus is saying 'In quantified propositions the negative should not be attached to the predicate'; the 'others' say simply 'The negative should not be attached to the predicate' without specifying 'in quantified propositions'.

112. English does not have the same range of negatives as Greek, so Stephanus' discussion does not admit of an exact translation. I have kept the Greek words, with indications of their meaning in brackets. *outis* is indeed poetic, making a famous appearance in *Odyssey* 9, where Odysseus tells Polyphemus it is his name. Whereas we use the different words 'no' and 'no one' in the sentences 'No human being walks' and 'No one walks', Greek would have *oudeis* in both.

113. The text at 27,5 has *outheis*, 'no' or 'no one', but this, though postclassical, does not have a bad sound, and has been dealt with above, 27,3. I follow a hint in Hayduck's apparatus and read *ou heis* from the parallel Ammonius 97,25-6. *ou heis* has a bad sound because of the hiatus and is also objectionable, Ammonius suggests, in that *ou* (or *oukh*) *heis anthrôpos badizei* might mean either 'No human being walks' or 'Not just one human being walks; many do'.

114. *thorubein eiôthen*, a phrase taken from Ammonius 93,19.

115. cf. Ammonius 94,7-18. Ammonius says that particular propositions are true 'through themselves' in the materiality of the contingent, and true or false 'through the universal' in the materialities of the necessary and the impossible. Is Stephanus reproducing this point imperfectly?

116. 'Follow upon' (*hepesthai*) here means no more than 'have the same truth value as'.

117. Stephanus regularly takes equivalence, having the same *dunamis*, to be having the same truth-value.

118. That is, they are definitely false and the universal denial 'No human being flies' is definitely true.

119. Hayduck would like to add *kai atomon* at 27,37, 'and atomic', since otherwise it is hard to see why Stephanus proceeds to discuss the word.

120. Accepting Hayduck's insertion.

121. Accepting Hayduck's insertion.

122. Since what are not contrary are *apophanseis* (17b5), there is a case for emending *enantia* at 28,24 to *enantiai*, the reading of the OCT.

122a. 'Sometimes' (*pote*) is not in the OCT.

123. Our MSS read: *epi de tou katégoroumenou katholou to katholou katégorein katholou ouk estin alêthes*. The OCT omits the *katholou* after *katégoroumenou*; Hayduck retains this and brackets the *katholou* after *katégorin*. Either text should probably be translated in the same way.

124. OCT: there will be no assertion.

125. i.e. not because the propositions are false.

126. *An. Pr.* 1.4, 26a30-9.

127. Accepting Hayduck's insertion.

128. Insertion suggested by Hayduck.

129. Since assertions are the most important kind of propositions. In fact, however, denials like 'No human being is every animal' do seem to be true, which perhaps guided Aristotle's choice of the word 'assertion'.

130. i.e. have the same truth value: see Ammonius 114,22-3.

131. So it is 'equivalent' to a particular negative, Q.E.D.

132. Stephanus follows Ammonius who gives further ingenious arguments, 111,19-112,9, 112,21-114,2, to show that an unquantified denial is equivalent to a universal denial.

133. The phrase with the article, *ho tis anthrôpos*, would mean 'the particular human being walks'.

134. *DA* 3.1, 424b22.

135. Greek has no indefinite article; the English equivalent would be 'There is not a sense', which *would* have a 'further differentiation'.

136. *Phys.* 3.1, 200b32.

137. Our text of the *Physics* has 'the things mentioned'.

138. Hayduck deletes this clause.

139. Accepting Hayduck's insertion.

140. Words suggested by Hayduck.

141. Accepting Hayduck's suggestion.

142. Stephanus is perhaps recalling that Plato and Aristotle mention a second Socrates, 'Socrates the younger'.

143. Printed as a lemma by Hayduck.

144. Filling the lacuna more generously than Hayduck: *pros apophatikên eite apophatikês pros kataphatikên*.

145. Emending *tou antekhomenou* at 34,35, 'the opposing position', to *tou endekhomenou*, 'the contingent', cf. 36,9-10. The parallel Ammonius 131,21 speaks of arguments that 'try to make everything necessary'. If 'the opposing position' were retained, it would have to mean 'the position opposing the position that 'all things come about by necessity' (34,32).

146. 'Logical' in this context means 'starting from considerations not peculiar to the subject matter', but Stephanus is right that in general Aristotle considers such arguments more superficial than 'physical' arguments which start from considerations proper to the subject matter.

147. *pragmateiôdesteron*. For the word, see Ammonius 131,23, where D. Blank translates it 'more troublesome'.

148. *pantôs*, sometimes to be translated 'have to', as at 35,8 below.

149. i.e. it assumes as agreed that your reaping is necessary. Stephanus is reproducing half a dilemma stated in full by Ammonius: 'When you say "If you reap, it is not the case that perhaps you will reap and perhaps you will not reap, but definitely (*pantôs*) you will reap", how do you put forward the hypothesis of reaping, as necessary or as contingent? If as contingent, we have what we are enquiring after. If as necessary, in the first place you are begging that what was originally being enquired into be granted to you as plain ...' (131,33-132,3; similarly Anon. (Tarán), 55,1-5).

150. i.e. in general to establish a proposition *q* it is not enough to show that if *p* then *q*, but you must establish categorically that *p*.

151. i.e. if God's knowledge, like ours, is indeterminate, his nature will be like ours, sc. finite, perishable etc.

152. Accepting Hayduck's suggested insertion.

153. Accepting Hayduck's insertion.

154. Accepting Hayduck's conjecture that these words have fallen out.

155. Stephanus probably means, not, 'when we think of Socrates as being rational', for that is his nature, but 'when we think of Socrates' nature as a universal'.

156. Namely, according to Ammonius 139,27-8, the champions of the opinion that all things are necessary. Ammonius thinks Aristotle is giving this assumption at 18a34-5, though he does not give it in the explicit words used by Ammonius and Stephanus.

157. Accepting Hayduck's insertion.

158. Hayduck marks a lacuna here, and suggests that the lemma has fallen out, 'But in the case of individual things that are future, it is not so.'

159. Aristotle might agree: see *Categories* 7, 7b23-5.

160. Accepting Hayduck's insertion.

161. Accepting Hayduck's insertions.

162. Nonsense word, possibly derived from twanging.

163. Accepting Hayduck's insertion.

164. Vancourt (p. 37) says that here, and also at 52,27 and 62,19, 'he' is being used to refer not to Aristotle but to Stephanus; I am not convinced of this.

165. P has an *êdê* here that is absent from the OCT.

166. Perhaps (as P. Crivelli suggests to me) we should at 40,8 supply words to the effect 'subject indefinite and predicate determinate'.

167. For the diagram, see below. In the simple square of opposition, the universal affirmative 'has under it' the particular affirmative, and the universal negative has under it the particular negative. Here the unquantified affirmative has under it the negation of the assertion 'from transposition'. The second of these explanations of Theophrastus' expression 'from transposition' is given also by Ammonius, but he gives an alternative to the first at 161,30-2.

168. The distinction which I mark with hyphens, *A is-not f* and *A is not-f*, is marked in Greek by the order of the verb 'to be' and the predicate-expression, e.g. *dikaïos ouk esti, ou dikaïos esti*.

169. i.e. 'Every man is a thing that is not just'; but the Greek sentence has in fact the same ambiguity as the English.

170. Stephanus' choice of terms 'parts or propositions' is significant. The Greek word-sequences *anthrôpos dikaïos esti* etc., which I have just translated above as complete sentences 'Men are just' etc., have the noun in the singular (see my note to 20,18-19 above) and can also be understood as complex predicate-expressions: 'is a just man', 'is-not a just man', 'is a not-just man', 'is-not a not-just man'. Stephanus usually understands them in the first way. But in the rest of this 'third section' on what propositions 'follow upon' what he chiefly understands them in the second. It is mandatory to take them so at 42,5-9; and Ammonius is clearly using them thus in the parallel 161,18ff. A sequence of words is said to 'fit', *harmozein*, a thing if we speak truly in using it as a predicate in referring to that thing (whereas if the sequence were treated as a complete sentence, it would be said to fit those things that make it true; 'Men are not-just' fits unjust adults, adults of a middling character and babies).

171. The following diagrams appear in the text at 44,22; for the reader's convenience I have moved them back to here. I have also reordered them; the diagram I put in the middle in the text follows Diagram 2.

172. *q* 'follows' *p* here (contrast 27,17-21) if it is the case that if *p* is true, *q* is true.

173. Stephanus should have said that it fits things that are not human beings, like stones; see note on 42,10.

174. We might expect Stephanus to be making the simple point that whereas 'is a not-just human being' implies 'is-not a just human being', the converse does not hold. In fact he seems to be making the more complicated point formulated by Ammonius at 165,1-3: 'Propositions from transposition have the same relationship to simple propositions as have privative', viz. the negative extend further and the affirmative less far, 'but the simple do not have the same relationship to propositions from transposition that privative have' i.e. 'is-not a just human being' extends further than 'is a not-just human being', but 'is an unjust human being' extends less far, and 'is a just human being' extends less far than 'is-not a not-just human being' (since a stone is-not a not-just human being), but 'is-not an unjust human being' extends further (since a baby is-not an unjust human being, but *is* a not-just one).

175. Socrates' unjust accuser.

176. Babies are not-just (see above on 41,30-1), and therefore do not justify 'Men are-not not-just'. Stephanus could, however, say that the same examples which are used to show that the diagonals in the first pair are true together will also show that the diagonals in the second are. Socrates justifies 'Men are-not not-just'.

177. Accepting Hayduck's insertion.

178. Perhaps we should supply the lemma 19b28-9: '“Men are not-just”; denial of this, “Men are-not not-just”'.

179. Accepting a suggestion of P. Crivelli and reading *prosrhêmatôn* for *prosrhêmatos* at 44,1; P can be read either way.

180. Such as goatstags: cf. Ammonius 183,18.

181. This translates the text we have, but is extremely obscure. Stephanus perhaps wants to say that in the case of things like goatstags, 'is-not not-just' has the same meaning as 'is neither just nor unjust', and that in the case of things that are neither just nor unjust, 'is-not not-just' is not equivalent to 'is just'. This does not accord, however, with his earlier treatment of 'is-not not-just': see nn. 170 and 174.

182. *An. Pr.* 1.46.

183. Paraphrasing 20a1-3.

184. Greek has a straightforward intransitive verb, *hugiaiainein*, for being healthy or hale.

185. Referred to but not named by Ammonius 176,17. Aristotle seems to be saying that as 'Every man is just' is negated by 'Not every man is just' and 'Every man is not-just' by 'Not every man is not-just', so 'Every man is hale' is negated by 'Every man is not-hale' and 'Every not-man is hale' by 'Every not-man is not-hale'. The commentators may feel he could not have made such a howler. But the Greek word-order he uses tempts him into it. At 19b33-5 he has *pas estin anthrôpos dikaios, ou pas estin anthrôpos dikaios, pas estin anthrôpos ou dikaios, ou pas estin anthrôpos ou dikaios*, and at 20a5-7: *hugiaiinei pas anthrôpos, oukh hugiaiinei pas anthrôpos, hugiaiinei pas ouk anthrôpos, oukh hugiaiinei pas ouk anthrôpos*.

186. *anthrôpos dikaios badizei*, apparently similar in grammar to *anthrôpos dikaios estin*.

187. Ammonius (176,30) refers to *An. Pr.* 1.1, 24b16-17.

188. So Ammonius 177,16-17.

189. Supplied from Ammonius 178,13-15, as Hayduck suggests.

190. See above, n. 185. At 20a10 Aristotle adds *hugiaiinei anthrôpos, oukh hugiaiinei anthrôpos* etc., which he thinks are parallel to *esti dikaios anthrôpos, ouk esti dikaios anthrôpos* etc.

191. Presumably in 20a5-7, where the quantifiers are 'every', 'not every'.

192. That is, 'Men are-not not-just' (denial) 'follows on' 'Men are just' (assertion).

193. 'Men are not-just' (assertion) does not follow on 'Men are-not just' (denial).

194. Stephanus does not here proceed to detailed commentary, but to a further continuous exposition. This (47,20-50,12) does not follow Ammonius; perhaps it is a piece of original speculation by Stephanus which he decided to substitute for detailed commentary. The only detailed commentary we have on *de Int.* 20a3-21a6 is the commentary on this lemma, which comes at 50,13.

195. As above, the words Stephanus uses here may be translated either like this or as complete sentences, 'Men are not-just', 'Men are-not just'.

196. What follows (47,25-32) seems confused. Stephanus' opponents (see below 49,3-12) seem to hold that in a statement of the form ' x is-not an f s ' is equivalent to ' x is f & x is an s ', whereas a statement of the form ' x is a not- f s ' is equivalent to ' x is f & x is an s '. Whether or not this is, as Stephanus claims, irrational, it is not necessary for the conclusion that 'is-not an f s ' extends more widely than 'is a not- f s '. It is sufficient to hold that ' x is-not an f s ' is equivalent to ' x is f v x is an s ' or ' $-(x$ is f & x is an s)'. If we hold this last we shall not have to say 'Babies are-not just men' is false, something that by itself suggests that 'is-not an f s ' extends less far than 'is a not- f s '. Stephanus seems unable to distinguish between 'Not (p and q)' and 'Not p and not q '. Hayduck refers us to Ammonius 161,32-162,9, which makes good sense but does not imply that 'Babies are-not just men' is false: 'That if the simple assertion is true, the denial from transposition is definitely true, is plain. Does the statement then convert, so that when the indefinite denial is true, the simple assertion is true? Or not, but there are things for which this denial is true, but the simple assertion is false, for instance things that are not men at all? It is true, at any rate, to say "Dogs are-not not-just men" (for since they are-not men at all, clearly they cannot be said either to be just men or to be not-just men); but to say that they are just men is false. So the denial from transposition extends further than the simple assertion. It follows that the assertion from transposition extends less far than the simple denial. For if of everything either the simple assertion or the simple denial is true, and likewise either the assertion from transposition or the denial, and it is agreed that the denial from transposition extends to more things than the simple assertion, the assertion from transposition will be true of the rest, which are fewer than those of which the simple denial is true.'

197. 'Just' and 'not-just' are simple, 'just-man' and 'not-just-man' composite.

198. Inserted by Hayduck.

199. I do not think it necessary with Hayduck to insert *an*, at 48,21, giving the sense 'both would have been removed'.

200. *Sôkratês ouk anthrôpos dikaios estin*. Earlier (41,18-19) we had *anthrôpos ou dikaios estin*.

201. That is, if every man is just, not every man is not-just; but the converse does not hold: 'Not every man is not-just' holds when there are human beings like babies and Anytus, and when, therefore, it is not true that every man is just. See Ammonius 171,21-9.

202. The reasoning here is unsatisfactory. Stephanus' opponents can allow that both 'No man is not-just' and 'Not every man is not-just' 'follow upon' 'Every man is just' without making the two former propositions equivalent.

203. In view, presumably, of the criticisms just made.

204. A loose quotation of 19b19-24.

205. Accepting Hayduck's insertion.

206. So Hayduck, following Ammonius 202,3-8. Stephanus now at last addresses the passage taken as a lemma at 47,14.

207. *An. Pr.* 1.1, 24a24; Ammonius says Iamblichus was also influenced by Plato, *Phaedo* 65A (202,17).

208. i.e. questions should take the form: 'p or not-p'?

209. Deleting a quotation mark at 50,25 that seems to be a printer's error.

210. Not in what he have; since we have only one brief comment on the text from 20b1 to 21a4, it is possible that a piece of Stephanus' text has been lost.

211. Accepting Hayduck's insertion.

212. e.g. essentially, see line 20 below. Stephanus seems to use *sunônumôs* here to indicate a contrast with the case where one thing is predicated as essential and the other as incidental; for other uses of the word see 13,16; 23,26.

213. That is, it is equivalent to 'White is incidental to something, and so is walking'. Hence it does not follow, because we can say 'Socrates is white' and 'Socrates is walking', that we can say 'Socrates is a white walking thing'.

214. It is equivalent to: 'There are things that are human beings, and they walk'. So we should avoid 'Socrates is a walking human being'.

215. English linguistic practice is different from Greek in that we find the phrase 'two-footed animal' quite natural. But we do not think it means 'two-footed thing that is an animal'. Might a table be described as a four-footed thing that is not an animal but an artifact? Aristotle would say that 'four-footed' is applied only equivocally to tables and to horses, not univocally as a generic term.

216. i.e. feathered. Bats and eunuchs do not fully satisfy the conditions for being, respectively, birds and men (*andres*, the word not for human beings but for adult males).

217. i.e. when the same thing is simultaneously asserted and denied, 'is f and not f', and when different things are, 'is f and g'.

218. Or perhaps a joke is intended: 'between a corpse and a man. The word *nekros* which I am translating as an adjective meaning 'dead' (cf. Ammonius 211,1) can also be used as a noun meaning 'corpse'.

219. Accepting Hayduck's insertion (derived from Ammonius 211,3-4), but reading (with Ammonius) *tethneôs* in place of *nekros*.

220. Translating what Hayduck says the sense requires. The text at 52,14 is corrupt. For the name Simon, see Ammonius 205,6-7.

221. At 20b35-6 Aristotle has said that it does not follow, if someone is both a cobbler and good, that he is a good cobbler.

222. i.e. as a predicate all on its own: see below. Perhaps, however, we should read *agathos esti* (as Hayduck suggests) or simply *agathos* in place of *esti* at 52,17, and understand "good" is predicated incidentally, not of itself'. If so, we should insert to *esti* before *kata sumbebêkos* in 52,19, 'In "Homer is a poet" the "is" is predicated incidentally of Homer'.

223. So Aristotle (21a33), but the remark is feeble. Though *we* think that what we call 'that which is not' is not, the person who opines it thinks it *is*. Stephanus should warn us against taking verbs of saying and thinking like 'asserts', 'opines' as first-order two-place predicate-expressions like 'bumps into', 'is a yard from'.

224. That is, presumably, Plato; but the wording is Aristotelian (*de Anima* 3 429a24) and so, roughly speaking, is the doctrine concerning matter. Plato does, in the *Sophist*, argue that what is not, contrary to the opinion of the Eleatics, in some way is; not, however, on the ground that it is identical with matter, and matter in some way is.

225. *An. Pr.* 1.2, 25a1.

226. Accepting Hayduck's insertion.

227. *An. Pr.* 1.2, 25a1-2.

228. i.e. differences in materiality are differences in kind between propositions determined by their content.

229. The Greek has the definite article here, *to xulon*, but I take it that, as Stephanus puts it below (67,6-8) it is not signifying anaphora but functioning as a universal quantifier, and the meaning is: 'Pieces of wood are white human beings.'

230. This is the analysis rejected in 47,20ff.

231. *selis*, a word used for a cross beam in building or for a block of seats in the theatre.

232. sc. of the possible and the contingent.

233. Accepting Hayduck's insertion.

234. sc. 'A piece of wood is a not-white-human being'; it seems false only because we construe it as 'A piece of wood is a human being and not-white'.

235. An insertion by Stephanus.

236. See above, 55,9-10.

237. Accepting Hayduck's insertion.

238. Hayduck's insertion.

239. Reading *alêthês*, 'true' for *pseudetai*, 'is false' at 57,38, and *pseudeis*, 'false', for *alêtheis*, 'true' at 58,3 (Hayduck proposes a comparably radical emendation at 66,26-7). See Ammonius 226,16-28. Ammonius accepts as true 'It is contingent that all the Athenians there will be at such and such a time will be grey-haired, and it is also contingent that not all will be.' But if there is no such restriction to a particular time and place, propositions like 'It is contingent that every human being should walk' and 'It is contingent that no human being should walk' are both false, because 'it is the nature of the contingent to belong to some and not to others' (226,9-10). The point might be better made in terms of scope. The commentators want to accept 'For all *x*, if *x* is a human being, it is contingent that *x* should walk', but to reject 'It is contingent that for all *x*, if *x* is a human being, *x* does in fact walk.' They think that (because of the nature of the contingent), there must be some human being that walks; they do not think that there is any human being for whom it is necessary to walk.

240. i.e. if I attach 'not' to the 'modality', not to the 'further differentiation', one proposition is true and one false.

241. This seems to be a slip. Stephanus may have been led to make it by Ammonius' example 'It is contingent that no one should be born with six fingers, and contingent that someone should be' (226,24-5).

242. i.e. through *reductio ad impossibile*, see 60,19 below. In fact, however, there is no argument to show that the simple assertion 'necessary to be' is what 'follows upon' 'possible to be'; on the contrary, what is implied by 'possible to be' is the 'denial from transposition' 'not necessary not to be'.

243. Stephanus presents this as a second argument for his 'assumption' that 'possible to be' follows upon 'necessary to be'. He is reproducing, however, an argument in Ammonius (237,18-23) which uses this assumption to show that 'not necessary to be' does not follow upon 'possible to be'.

244. Stephanus seems to be offering a confused version of another argument in Ammonius. Ammonius too, at 237,27, says that the possible *epamphoterizei*, a word I translated 'is both of two things', but his point is that the possible both possibly is and possibly is not, whereas the necessary has a determinate nature in that what necessarily is necessarily is, simply, and what necessarily is not necessarily is not. Ammonius uses this point to eliminate both 'necessary to be' and 'necessary not to be' as candidates for following upon 'possible to be'. Stephanus

makes no use of these considerations in his argument for elimination (though they appear in a different argument below, 61,3-5).

245. i.e. the denials 'not possible to be' and 'not contingent that it should be'.

246. Accepting Hayduck's suggestion of what the sense requires; the text is corrupt.

247. Accepting Hayduck's emendation.

248. At 22b3-7 Aristotle says that the impossible and the necessary are equivalent if construed in a contrary way with 'to be': 'impossible to be' = 'necessary not to be' and 'impossible not to be' = 'necessary to be'.

249. If 'Necessary implies possible' is false, what follows, of course, is not 'Necessary implies not possible' but 'Necessary is consistent with not possible'. This, however, is sufficient for the desired *reductio*.

250. *ê khôris tês dunameôs êtoi tês energeias*: a difficult phrase which Hayduck suspects of corruption. The meaning is perhaps that a thing can be said to be capable of doing something by virtue of an acquired ability both when the ability can be lost without the thing's ceasing to exist and when it cannot.

251. The point of this remark is probably that we have here a kind of possible that is also necessary in a way, namely hypothetically. As long as I actually walk, not only am I able to walk, but it is hypothetically necessary that I walk. This division is not accomplished with Stephanus' usual care, but his strategy seems to be to start with the most contingent kinds of possibility and move steadily towards the more necessary.

252. Accepting Hayduck's insertion.

253. Hayduck suggests inserting 'and to eternal things', but these are mentioned below, 61,19-21.

254. Hayduck suggests inserting 'and that which is part of the nature of things that cease to be' from Ammonius 240,30-2.

255. Perhaps the person referred to at 5,13 as 'our teacher'.

256. i.e. all its species.

257. P reads *tôi de khronôi*, OCT *tôi khronôi de*; the sense is not affected.

258. *polustikhos*, literally 'many lined', a word probably borrowed from Ammonius, in *Porph.* 38,18.

259. *endiatheton*, i.e. in the *diathesis*, mental state: cf. in *de Anima* 3, 556,12-15.

260. *enantios*, 'contrary', is here used to cover contradiction. This untechnical use of the word is one of the reasons people have for doubting the authenticity of this chapter. See J.L. Ackrill, *Aristotle's Categories and De Interpretatione*, p. 153.

261. A misleading example because these opinions are in fact contrary. Aristotle's example (23b4-5) is the opinions that what is good is good and that what is bad is bad.

262. Hayduck suggests inserting here 'and another that says what belongs as not belonging'; see, however, the note 64,3 below.

263. Although the examples are given in *oratio recta*, Stephanus probably has in mind cases in which someone says of something which is in fact good, such as temperance, that it is unprofitable or not good.

264. Just as contrariety is not sharply distinguished in this chapter of the *de Interpretatione* from contradiction, so Stephanus thinks that Aristotle is not distinguishing simple denial ('What is good is-not good') from assertion with transposition ('What is good is not-good'): see 65,27-32, 68,5-9. Stephanus consistently uses the word-order for assertion with transposition, *ouk agathon esti*, not the word-order for denial, *ouk estin agathon*, and in general he thinks of the examples used as assertions with transposition, so I have used the translation

'not-good', but just here he seems to be treat *to agathon ouk agathon esti* as a genuine denial, denying of what is good that it is good.

265. Accepting Hayduck's suggestion that at 64,13-14 we should read *makhes-thai tōi leukōi* in place of *phainesthai tōi de leukōi*.

266. An example would have been helpful, particularly as coloured objects do not, as such, conflict with one another. Perhaps Stephanus' idea is that 'That is black' conflicts of itself with 'That is white' and 'That is a crow' conflicts only incidentally. However that may be, Aristotle's own reasoning at 23b15-21 seems to involve the notions of being of itself true and being incidentally true. Suppose that it is true of snow of itself that it is white. Then it is true of it incidentally that it is not black. So the belief that snow is white is more true than the belief that it is not black. So the belief that it is not white, a mistake about what belongs to it of itself, is more false than the belief that it is black.

267. Accepting Hayduck's insertion.

268. Aristotle says *ouk agathon*, not *agathon ouk estin*.

269. Ammonius does not explicitly characterise this as an argument (*epi-kheirēma*), but he does (259,9) call a 'second argument' what Stephanus reckons as the first.

270. *dustantibleptotaton*, a word taken from Ammonius 266,12.

271. That is, he takes these two true propositions and argues that since the correct denial of 'The not-good is not-good' is 'The not-good is good', it follows that the correct denial of 'The good is good' is 'The good is not-good'.

272. Ammonius also (267,9-25) says that 'The not-good is not-good' and 'The not-good is good' are unlike 'The good is good' and 'The good is not-good', but for what seems to be a different reason: good has a contrary, bad, but a 'privation' like not-good does not have a contrary.

273. Stephanus probably says that an indefinite subject has things following upon it indifferently on the ground that the not-good is consistent with both the bad and the not-bad. That being so, only the good is inconsistent with it. But, Stephanus claims, Aristotle cannot infer that only the not-good is inconsistent with the good. The good being determinate, both the not-good and the bad are inconsistent with it, and Aristotle has still to show that the not-good is 'more contrary' than the bad.

274. That is, when they are not used to refer back to something referred to earlier, as in 'She trod on a snake, and the snake bit her'.

275. The Greek definite article has inflections of number, gender and case.

276. Contrast the above example, 'Eurydice trod on a snake, and the snake bit her' with 'The snake is oviparous'.

277. Reading *amphoterōis* at 67,13 for the MS *amphoterōi*. If we retain P's reading, we must understand 'Both of them, the poets and the orators, use them loosely ...'

278. *de Corona* 1.

279. *theoīs pasi te kai pasais*.

280. He argues (269,20-270,8) that where we use the universal quantifier we can use the article alone, but not conversely; 'All the Athenians are clever' implies 'The Athenians are clever', but the converse implication does not hold. Ammonius is explicit that a distinction between the article and the universal quantifier holds only where the article is dual or plural, not where it is singular, a refinement Stephanus perhaps misses. At 67,9-10 he uses the singular, 'The man', which I correct to plural in translation.

281. *pansudiēi*, here translated 'in all their number', actually means 'in all haste', but seems to have been taken by Ammonius and Stephanus to mean the

same as *panstratiai* 'in all their number'. Agamemnon could not mobilise the Greeks in all their number because Achilles stayed in his tent, and our commentators perhaps thought this let Zeus off his promise to deliver Troy into Agamemnon's hands; though in Homer's time, unlike in the sixth century AD, gods were not expected to be scrupulously truthful, and Homer makes it clear that the Dream was being instructed to deceive Agamemnon.

282. *Iliad* 2.11,28. Although not present, the article is understood, and has to be used in an English translation.

283. OCT has 'it might be' (*eiê*) for *eien*

284. Correcting Hayduck's 3 to P's 4. Hayduck goes on to number the denials in the materialities of the contingent and the necessary, but they are not numbered in P.

285. Here and throughout this appendix where Hayduck prints 'etc.' (*ktl*) P spells out the examples in full.

286. Supplied from P.

287. P gives examples with future and past tense as well as present.

288. *ou Sôkratês ouk endekhomenôs badizei*, the first of many examples Hayduck thinks wrong. In his view it is not an assertion with indefinite predicate, but a denial, the negation of *ou Sôkratês endekhomenôs badizei*. His grounds are that Stephanus at 56,12-14 lays down the principle that you negate a modal proposition by attaching the negative particle to the modality, and that at 75,19 *Sôkratês ouk endekhomenôs badizei* is given as a denial, the negation of *Sôkratês endekhomenôs badizei*. So he says that the example of a contingent assertion with subject and predicate both indefinite should be *ou Sôkratês endekhomenôs ou badizei*, 'Not-Socrates contingently not-walks'.

But *Sôkratês ou badizei* can express not only the assertion with indefinite predicate 'It is the case that Socrates not-walks', but also (and more easily) the denial with determinate predicate 'It is not the case that Socrates walks', or 'Socrates does-not walk' (in English the negation of a proposition consisting of subject and predicate alone has 'do' as a 'third thing predicated in addition'). Similarly with modal propositions. No doubt the negation of 'It is necessary that Socrates should breathe' is 'It is not necessary that Socrates should breathe.' But in our examples the modality is expressed by an adverb. We have 'Socrates necessarily breathes', 'Socrates contingently walks'. Juxtaposing 'not' with the adverb we get 'Socrates not necessarily breathes' or 'Socrates does not necessarily breathe', and this is ambiguous between the genuine denial 'Socrates does-not necessarily breathe' and 'Socrates does not-necessarily breathe', which the author of the examples surely reckons as an assertion with indefinite predicate. There is nothing wrong with the examples if we take *ouk endekhomenôs badizei* here, and also at 75,2 which Hayduck also thinks erroneous, as 'does non-contingently', and at 75,19 as 'does-not contingently'. We should recognise a similar ambiguity in *ouk anankaiôs* and *ouk adunatôs*. 'Socrates does-not contingently fly', i.e. 'False that it is contingent that Socrates should fly' is equivalent to 'It is necessary that Socrates does not fly', whereas 'It is true that Socrates not-contingently breathes' is compatible with 'Socrates necessarily breathes'.

If we adopt this charitable interpretation we find that the only examples we are given of modal propositions consisting of subject and predicate alone and indefinite predicate have indefinite modal predicates, predicates like 'non-contingently walks', not like 'not-walks'. But when we come to modal propositions with third thing predicated in addition we are told at 76,6 that *Sôkratês ouk endekhomenôs ou dikaios esti* is an assertion with determinate subject and indefinite predicates (*katêgoriai*). Hayduck considers this too a mistake. The proposition, he thinks,

must be a denial because the negative is attached to 'contingently'. But this is consistent with the treatment of propositions consisting of subject and predicate alone. 'Not-contingently' is treated as an indefinite predicate, and so is 'not-just'. A genuine denial would be *Sôkratês endekhomenôs dikaios ouk estin*. Although the negative particle here looks far removed from the modal word in the Greek, 'Socrates is-not contingently just' is the true negation of 'Socrates is contingently just'. And the indefinite assertion 'Socrates is not-contingently just' is negated by 'Socrates is-not not-contingently just.'

289. Hayduck says the example should be *oudeis ouk anthrôpos endekhomenôs ou badizei*, presumably meaning 'No not-man contingently not-walks', the negation of 'Some not-man contingently not-walks', which he wants to substitute at 74,17; similarly with 76,18 and 75,4.

English-Greek Glossary

- abolish: *anairein*
absolutely: *haplôs*
accent: *tonos*
accomplishment: *apotelesma*
account: *logos*
achieve: *apergazesthai*
act: *energein*
activity: *energeia*
actual, actually, in actuality:
 energeiai, kat' energeian
actuality: *energeia*
addition: *prosthesis*
additional determination:
 prosdiorismos
adjunct, verbal adjunct: *prosrhêma*
adventitious: *epiktêtos*
adventiously: *epiktêtôs*
adverb: *epirrhêma*
affected, be affected: *paskhein*
affection: *pathos*
affirmative: *kataphatikos*
affirmatively: *kataphatikôs*
agitated, get agitated: *thorubein*
agreement: *homologia; sunthêkê*
aim: *skopos*
 be the aim: *prokeisthai*
ambiguity: *to anamphibolon*
analogous, be analogous to: *analogein*
analogy: *analogia*
analyse: *analuein*
anaphora: *anaphora*
angle: *gônia*
 right angle: *orthê gônia*
animal: *zôion*
animate: *empsychos*
answer (n.): *apokrisis*
answer (v.): *apokrinesthai*
answering part: *antistrophê*
antiposition: *antiprotasis*
appearance: *phantasia*
appellation: *prosêgoria; prosrhêma*
apply: *epipherein*
 applied to: *pheromenos*
 apply oneself: *epikheirein*
appropriateness: *harmonia*
arbitrary: *apoklêrôsis*
arbitrate: *diaitan*
archetypal: *arkhoeidês*
argue: *epikheirein*
argument: *epikheirêma; logos*
arrangement: *taxis*
art of these things: *tekhnologia toutôn*
article: *arthron*
articulate: *enarthros*
 in a yet more articulate way:
 diêrthrômenôs
artificial: *tekhnikos*
assert: *kataphanai*
assertion: *kataphasis*
assumption: *lêmma*
 small preliminary assumption:
 lêmmation
astray, going astray: *planê*
atomic: *atomos*
attach: *sunaptein*
away, do away with: *anairein*
 doing away with: *anairêsis*
baby: *paidion*
bald: *phalakros*
ball, start the ball rolling: *agônôn*
 aparkhesthai
bark: *hulaktein*
barking: *hulakê*
bat: *nukteris*
be: *einai*
 what is, thing that is: *to on*
 what is not, thing that is not: *to mē on*
 verb of being: *huparktikon rhêma*
bereft, be bereft of: *khêreuein*
bipartite: *dimerês*
birth: *genetê*
blityri: *blituri*
block: *selis; selidion*
boat: *kelês*

bond: *desmos*
 both, be both of two things:
 epamphoterizein
 bother about: *polupragmonein*
 brain: *enkephalos*
 brevity: *suntomia*
 bring back: *anagein*
 bring to an end: *katapauein*
 bring (back) under: *anapherein*
 businesslike: *pragmateiodês*
 busy, busy oneself: *polupragmonein*;
 pragmateuesthai

 camel: *kamêlos*
 canon: *kanôn*
 case: *ptôsis*
 direct case: *eutheia ptôsis*
 with an oblique case-inflection:
 ptôtikos
 catalogue: *katagraphein*
 cease, that can cease to be: *phthartos*
 centre: *kentron*
 certainly: *pantelôs*
 change (n.) *metathesis*
 change (v.): *allattein*; *enallattein*;
 ameibein
 subject to change: *kinêtos*
 change of course: *amoibê*
 character: *kharaktêr*
 characterise: *kharaktêrizein*
 claim, lay claim to: *metapoieisthai*
 clarification: *saphêneia*
 clarify, make clear: *saphênizein*
 cloak: *himation*
 clutch onto: *drassesthai*
 cognition: *gnôsis*
 colour: *khroma*
 combined thing: *sumpeplegmenos*
 come back to: *anapherein*
 come before: *protereuein*
 come to be, that comes to be: *genêtos*
 things that come to be: *ta en genesei*
 commentary: *hupomnêma*
 common: *koinos*
 complete: *autotelês*
 complex: *sumpeplegmenos*
 be complex: *sumplekesthai*
 complication: *plokê*
 composite (n.): *sunthesis*
 composite (adj.): *sunthetos*
 composition: *sunthesis*
 conceive: *epinoein*

conclude: *sunagein*
 conclusion: *sumperasma*
 concur: *suntrekhein*
 conflict (n.): *makhê*
 conflict (v.): *makhesthai*
 confront, hard to confront:
 dusantibleptos
 conjunction: *desmos*
 conjunctive: *sumplektikos*
 connective: *sundesmos*
 having no connective: *asundetos*
 consider: *phrontizein*
 construct with: *suntattein*
 well constructed: *eusunthetos*
 construction: *plokê*
 contest: *agôn*
 contingent: *endekhomenos*
 contingently: *endekhomenôs*
 continuous: *sunekhês*
 continuous exposition: *theôria*
 contradiction: *antiphasis*
 contradictorily, as contradictories:
 antiphatikôs
 contradistinction: *antidiastolê*
 contradicting: *antidiastellein*
 contrariety: *enantiotês*
 contrariwise: *tounantion*
 contrary: *enantios*
 as contraries: *enantiôs*
 conversely: *antistrophôs*
 conversion: *antistrophê*
 convert, be convertible: *antistrephein*
 copy: *antigraphon*
 corollary: *porisma*
 corporeal, or corporeal form:
 sômatoeidês
 correct: *diorthoun*
 craft: *tekhnê*
 crasis: *krasis*
 Creative: *dêmiourgikos*
 Creator: *dêmiourgos*
 crown, receive a crown: *stephesthai*
 cut up: *temnein*
 cutting: *tomê*

 dancing: *orkhêsis*
 dead: *nekros*
 deaf: *kôphos*
 deal with: *dialambanein*
 declare: *apophainesthai*
 define: *horizesthai*
 definiendum: *horiston*

- definitely: *pantôs*
 definition: *horismos*
 definitory: *horistikos*
 deliberate: *bouleuesthai*
 that deliberates: *bouleutikos*
 demand: *apaitein*
 demonstrate: *apodeiknunai*
 demonstration: *apodeixis*
 denial: *apophasis*
 derive: *sunagein*
 destroy: *anairein*; *phtheirein*
 be destroyed along with:
 sumphtheiresthai
 detailed commentary, text in detail:
 lexis
 determinate: *hôrismenos*
 determinately, in a determinate way:
 hôrismenôs
 determination, further determination:
 prosdiorismos
 additional determination:
 prosdiorismos
 diagonal (n.): *diametros*
 diagonal (adj): *diagônios*
 diagram: *diagramma*
 dialect: *dialektos*
 dialectic: *dialektika*
 dialectical: *dialektikos*
 dialectician: *dialektikos*
 differentia: *diaphora*
 differentiation: *diaphora*; *diorismos*
 without differentiation: *sunônumos*
 without differentiating: *adiaphorôs*
 difficulty, raise a difficulty: *aporein*
 direct case: *eutheia ptôsis*
 directly: *prosekhôs*
 disagreement, be disagreement:
 amphiballesthai
 disclose, be disclosed: *anaphainesthai*
 discourse: *dialektos*
 discrete: *diorismenos*
 disjunction: *diazeuxis*
 disjunctive: *diazeuktikos*
 disposition: *hexis*
 distinction, draw a distinction:
 dialambanein; *diorizein*
 diverge: *diaphônein*
 divide: *diairein*; *temnein*
 divide into parts: *merizein*
 divide on a level: *antidiairein*
 divide up: *diamerizein*
 divide truth and falsehood between
 them: *merizein to alêthes kai to*
 pseudos
 divine: *theios*
 division: *diairesis*; *diataxis*; *tmêma*
 way of doing a division: *diairesis*
 supplementary division: *epidiairesis*
 dowel: *gomphos*
 dream: *oneiros*

 earnest: *sumbolon*
 easily refuted: *eulenkτος*
 efficient cause: *poiêtikon aition*
 element: *stoikheion*
 elision: *sunaloiphê*
 elliptically: *elleipôs*; *ellipôs*
 embrace: *emperiekhein*
 end, bring to an end: *katapauerein*
 enquire: *zêtein*
 enquiry: *zêtêsis*
 enumeration: *aparithmêsis*
 make an enumeration: *aparithmein*
 equal, be equal: *exisazein*; *isazein*
 equally, be equally universal:
 apexisazein
 equivalent, be equivalent:
 isodunamein; *tên autên dunamin*
 ekhein
 equivocal: *homônumos*
 equivocally: *homônumôs*
 equivocation: *homônumia*
 establish: *kataskeuein*
 establishing argument: *kataskeuê*
 eternal: *aidios*
 ethics: *êthikê pragmateia*
 etymology: *etumologia*
 eunuch: *eunoukhos*
 example: *paradeigma*
 for example: *autika*
 evil: *phaulos*
 exegesis: *exêgêsis*
 exercise: *gymnasia*
 exist: *huparkhein*
 existence: *huparxis*
 explanation: *aitia*
 expression, verbal expression: *lexis*
 extreme: *akron*; *akros*

 falling out: *ekbasis*
 false, falsehood: *pseudos*
 be false, speak falsely, say
 something false: *pseudesthai*
 be false together: *sumψεudesthai*

far, extending less far: *ep' elatton*
 father: *patêr*
 fight: *makhesthai*
 figure: *skhêma*
 fire: *pur*
 first: *prôtos*
 fit: *harmonoizein*
 fitting: *harmodios*
 fittingly: *harmodiôs*
 follow: *akolouthêin*; *hepesthai*;
 sunagesthai
 follow along: *sunepesthai*
 follow along with: *sunakolouthêin*
 follow upon: *parepesthai*
 that follows upon: *akolouthos*
 following, something following:
 akolouthia
 forceful: *suntontos*
 form: *eidôs*
 form of argument: *skhêma*
 form of speech: *idea logou*
 formation: *skhêmatismos*
 agreement in formation:
 suskhêmatismos
 formless matter: *aneideos hulê*
fortiori, a fortiori: ek tou mallon
 four, multiply by four: *tetraplasiazein*
 full, give the full substance:
 sumplêroun tèn ousian
 further differentiation: *prosdiorismos*
 (proposition) with further
 differentiation: *prosdiorismenê*
 (proposition) without further
 differentiation: *aprosdioristos*
 without further differentiation
 (adv.): *aprosdioristôs*
 future, the future: *mellôn, mellôn*
 khronos
 garment: *himation*
 give: *apodidonai*
 general, more general: *koinoteros*
 genus: *genos*
 go through: *diexienai*
 goatstag: *tragelephos*
 God: *theos*
 goodness: *agathotês*
 grammar: *grammatikê; grammatikê*
 tekhne
 grammarian: *grammatikos*
 happy, be happy: *eudaimonizein*

hard to confront: *dustantibleptos*
 hear, power to hear: *akoustikê*
 dunamis
 heart: *kardia*
 heat: *thermotês*
 heavens: *ouranoi*
 hint (n.): *ainigma*
 hint (v.) at: *ainittesthai*
 horse: *hippos*
 horizontal line: *eutheia*
 human being: *anthrôpos*
 hypothesis: *hupothesis*
 preliminary hypothesis:
 proûpokeimenon
 hypothesise, be hypothesised:
 hupokeisthai
 hypothetical: *hupothetikos; sunaptikos*
 hypothetically: *ex hupotheseôs*
 idea: *ennoia*
 idly, speak idly: *adoleskhein*
 illustration: *hupodeigma*
 image (n.): *eikôn*
 image (v.): *eikonizesthai*
 imagine: *phantazesthai*
 immortal: *athanatos*
 imperative: *prostaktikos*
 imperfect: *atelês*
 impiety: *asebêma*
 impious: *asebês; dussebês*
 implication: *akolouthêsis*
 import: *eispherein*
 important: *kurios*
 most important role: *kuros*
 impossibility, lead to impossibility: *eis*
 adunaton paragein
 impossible: *adunatos*
 proof through impossible: *deixis dia*
 tou adunatou
 impossible to encompass: *aperilêptos*
 impossible to grasp: *akatalêptos*
 imprint: *tupos*
 inarticulate: *anarthros*
 incidental: *sumbebêkos*
 incidental predicate: *sumbama*
 include: *emperiekhein*
 include along with: *sumperilambanein*
 indefinite: *aoristos*
 indefiniteness: *aoristia*
 indestructible: *aphthartos*
 indeterminate, in an indeterminate
 way: *aoristôs*

indicate: *episêmainein*
 indifferent: *adiaphoros*
 in an indifferent way: *adiaphorôs*
 individual: *atomos*; *kath' hekaston*
 infant: *brephos*
 inferior: *atimoteros*
 inflection: *paragôgê*
 inflection of the verb: *epirrhêma*
 infinitive: *aparemphton*
 instrument: *organon*
 intermediate: *mesos*
 that has an intermediate: *emmesos*
 interpret: *exêgeisthai*
 interpreter: *exêgêtês*
 interrogative: *erôtēmatikos*
 introduction: *prooimion*
 investigate: *dielenkhein*
 irrational: *alogos*

join: *sunaptein*

keep: *phulattein*
 kind: *eidōs*
 know in advance, know before:
 progignôskein

lancet: *phlebotomon*
 language, uttered language: *lexis*
 laughter, capable of laughter:
 gelastikos

lay down: *thesthai*
 laying down, thing laid down: *thesis*
 lay hold, power to lay hold of things:
 antileptikê dunamis

lead to impossibility: *proagesthai eis*
 adunaton

lead, that which leads: *hêgoumenon*
 lecture: *praxis*
 lengthy: *polustikhos*
 letter: *gramma*
 life, without life: *apsukhos*
 likeness: *homoiôma*
 limb: *skelos*
 line: *grammê*
 horizontal line: *eutheia*
 lip: *kheilos*
 literary composition: *poiêtikê*
 liver: *hêpar*
 locution: *phrasis*
 logic: *logikê pragmateia*
 logical: *logikos*
 lower down: *parakatiôn*

lung: *pneumon*

maleficent: *kakopoios*
 malevolent: *phthoneros*
 man: *anthrôpos*
 of man: *anthrôpinos*
 materiality: *hulê*
 matter: *hulê*
 matters, what matters: *pros ton*
 skopon
 meaning: *sêmainomenon*
 having meaning: *sêmantikos*
 without meaning: *asêmos*
 mention: *mnêmonēuein*
 metre: *metron*
 mind: *nous*
 in the mind: *endiathetos*
 be had in mind: *noeisthai*
 modal: *meta tropou*
 modality: *tropos*
 model, be modelled on: *apomassesthai*
 moment, at the moment: *teôs*
 mortal: *thnêtos*
 motion: *psêphisma*
 much: *panu*
 make much of: *polupragmonein*
 multiply: *pollaplasiazein*;
 poluplasiazein
 multiply by four: *tetraplasiazein*

nail: *hêlos*
 name: *onoma*
 proper name: *kurion onoma*
 many names for the same thing:
 poluônumia
 having many names: *poluônumos*
 have (the) further name:
 prosonomazesthai
 name giver: *onomatothetês*
 natural: *phusikos*; *phusei*
 nature: *phusis*
 part of the nature of: *sumphuês*
 belonging to the study of nature:
 physiologikos
 necessary: *anankaïos*
 negative (n.): *arnêsis*
 negative (adj.): *apophatikos*
 negative particle: *arnêtikon morion*
 negatively: *apophatikôs*
 next: *sunengus*
 nomenclature: *onomasia*
 non-animal: *azôos*

non-existence: *anüparxia*

non-rational: *alogos*

notorious: *pheromenos*

noun: *onoma*

numbers, in all their numbers:
pansudiêi

oblique: *plagios*

with an oblique case-inflection:
ptôtikos

odd: *perittos*

one: *heis*

opine: *doxazein*

opined: *doxastos*

opinion: *doxa*

opposed, be contradictorily opposed:
antikeisthai

opposition: *antithesis*

optative: *euktikos*

orator: *rhêtor*

order, way of being ordered: *taxis*

original: *paradeigma*

outside, from outside: *exôthen*

own, its own: *oikeios*

palate: *huperôia*

paradoxical: *paradoxos*

paralogism: *paralogismos*

way paralogisms arise: *tropos*
paralogismôn

part: *meros*

part of speech: *meros logou*

divide into parts: *merizein*

parts of the same kind: *homoiomereê*

parts not of the same kind:

anômoiomereês

partial incidental: *parasumbama*

lesser partial incidental: *elatton ê*
parasumbama

partial predicate: *parakatêgorêma*

lesser partial predicate: *elatton ê*
parakatêgorêma

participle: *metokhê*

particle: *morion*

particular: *merikos*

pass away, things that pass away: *ta*
en phthorai

passage: *rhêton*

past time, tense: *parelthôn khronos*;
paroikhomenon

(people) of the past: *palaioi*

peculiar: *idikos*

peculiarity: *idion*; *idiotês*

pencil: *grapheion*

perceiving: *aisthêtikos*

perfect: *teleios*

person: *prosôpon*

philosopher: *philosophos*

philosophise: *philosophhein*

phrasing: *phrasis*

pirate-boat: *epaktroskelês*

place (n.): *khôra*; *topos*

place (v.) before: *protattein*

plank: *sanis*

play role: *hupokrinesthai*

plead: *sunêgorein*

pleasure boat: *theôris*

plural: *plêthuntikos*

poet: *poiêtês*

poetic: *poiêtikos*

point: *sêmeion*

pop-eyed: *exopthalmos*

position: *taxis*

with position: *thetos*

not having position: *athetos*

possible: *dunatos*

posterior: *husteros*

postulatory: *thetikos*

potbellied: *prokoilos*

potential, potentially: *dunamei, kata*
dunamin

potentiality: *dunamis*

power: *dunamis*

preceding (lecture): *proteraia*

predicate (n.): *katêgoroumenon*,
katêgoroumenos (horos)

predicate (v.): *katêgorein*

predicate in addition: *proskatêgorein*

third thing predicated in addition:

triton proskatêgoroumenon

predication: *katêgoria*; *katêgorêma*

lesser predication: *elatton ê*
katêgorêma

preliminary hypothesis:

proûpokeimenon

premiss: *protasis*

present time, tense, the present:

enestôs khronos

primarily: *prôtotupôs*

prior: *proteros*

privation: *sterêsis*

privative: *sterêtikos*

problem: *problêma*; *aporia*

raise problem: *aporein*

profitable: *lusitelês*
 procedure: *methodos*
 proceed: *prokhôrein*
 project (n.): *skopos*
 project (v.), be projected: *ekkeisthai*
 projection: *ekthesis*
 pronoun: *antônnumia*
 proof: *epikheirêsis*
 proper name: *kurion onoma*
 propose: *proteinein*
 proposition: *protasis*
 proportion: *logos*
 proportionally: *summetrôs*
 Providence: *pronoia*
 purpose, to no purpose: *matên*
 push away: *apôthein*
 put before: *protithenai*
 put forward: *paradidonai; protithenai*
 put with others: *suntattein*
 putting together: *sunthesis*

quality: *poion; poiotês*
 quantity: *poson*
 question, put into a question: *erôtan*

range: *tattein*
 rank, be ranked: *telein*
 rational: *logikos*
 reap: *therizein*
 reason: *aitia; logos*
reductio ad impossibile: apagôgê eis
adunaton
 refutation: *elenkhos*
 relation: *logos; skhesis*
 relationship: *skhesis*
 remain: *katalimpanesthai*
 remove: *anairein*
 remove along with: *sunanairein*
 resolve: *analuein; epiluesthai*
 resources, with resources to spare: *ek*
periousias
 retract: *anapalaiein*
 reveal, be revealed along with:
sunanaphainesthai
 rhetoric: *rhêtorika*
 rhetorician: *rhêtôr; rhêtorikos*
 rhythm: *rhuthmos*
 right angle: *orthê gônia*
 rule: *kanôn*

same, in the same way (51,10; see
 note): *sunônunos*

saying: *phasis*
 scourge: *loimos*
 sea-fight: *naumakhia*
 scindapsus: *skindapsos*
 section: *kephalaion*
 see, power to see: *oratikê dunamis*
 can see: *theôrein*
 seeing about: *theôria*
 self-determination: *autexousion*
 sentence: *logos*
 sequence: *to stoikhoun*
 separate: *khôrizein*
 separately: *idiôs; idiâi*
 set out: *ektithenai; proagein;*
 proballesthai; protithenai
 set out for: *gumnazein*
 shape: *morphê; skhêma*
 way of shaping: *tupos*
 ship: *ploios*
 significant, significatory: *sêmantikos*
 signify: *sêmainein*
 signify along with: *sussêmainein*
 signify in addition: *prossêmainein*
 simple: *haplous*
 simply: *haplôs*
 single combat, engage in single
 combat: *monomakhêin*
 singular: *henikos*
 sketch (n.): *hupographê*
 sketch (v.), sketch out, give a sketch
 of: *hupographêin*
 smell, power to smell: *osphrantikê*
dunamis
 soldier: *stratiôtês*
 solitary steed: *monozux hippos*
 solution: *lusi; epilusi*
 sorcerer: *goês*
 soul: *soul*
 sound (n.): *phônê; psophos*
 sound (v.): *ekphôneisthai*
 source: *arkhê*
 speak of: *dialegesthai*
 species: *eidos*
 specific: *eidikos; idikos*
 speculation: *theôrêma*
 speculative, make a speculative
 enquiry: *theôrêma zêtein*
 speech: *logos*
 sphere: *sphaira*
 spoken sound: *phônê*
 power to make spoken sounds:
 phônetikê dunamis

start: *proagein*
 start a speculation: *kinein theôrêma*
 start on: *enistasthai*
 state: *apodidonai*; *apophainesthai*
 statement: *apophansis*; *logos*
 statement-making: *apophantikos*
 stick up, part that sticks up: *exokhê*
 strict, in a strict sense: *sunônumos*
 strive: *agônizesthai*
 subcontrary: *hupenantios*
 as subcontraries *hupenantiôs*
 subject: *hupokeimenon*; *hupokeimenos*
 (*horos*)
 be subject: *hupokeisthai*
 subsistence: *huparxis*
 substance: *ousia*
 substantial: *sustatikos*
 suitability: *epitêdeiotês*
 summarise: *anakephalaïoun*
 Sun: *hêlios*
 of the Sun: *hêlikos*
 superfluous: *perittos*
 superior: *timiôteros*
 supplementary division: *epidiairesis*
 supposal: *hupolêpsis*
 supposition: *hupothesis*
 surface, stays on the surface:
 epipolaïos
 survey: *theôrein*
 suspect: *huponoein*
 suspicion: *huponoia*
 sword: *xiphos*
 syllable: *sullabê*
 syllogism: *sullogismos*
 not a valid syllogism: *asullogistos*
 syllogistic: *sullogistikos*
 syllogistically: *sullogistikôs*

 take back: *anatithenai*
 teacher: *didaskalos*
 temperance: *sôphrosunê*
 temporal: *khronikos*
 tense: *khronos*
 term: *horos*
 theological: *theologikos*
 thesis: *thesis*
 thing: *pragma*
 think: *noein*
 thought: *dianoia*; *noêma*; *phrontis*
 three parts: *trimereia*
 throw out: *ekballein*
 time: *khronos*

together: *koinôs*
 tongue: *glôssa*
 tooth: *odous*
 top, one on top of the other:
 allepallêlôs
 spring up on top of: *epiphuesthai*
 transfer: *metapherein*
 transposition: *metathesis*
 treatise: *pragmateia*
 triangle: *trigônon*
 triplicity: *triploê*
 true: *alêthês*
 be true, say something true, speak
 truly: *alêtheuein*
 be true together: *sunalêtheuein*
 truly: *alêthôs*
 truth: *alêtheia*
 attain truth: *alêtheuein*
 try: *prokheirizesthai*
 try against: *antexetazein*
 turn away from: *apostrephesthai*

 understand with: *sunûpakouein*
 understand in addition: *prosûpakouein*
 undifferentiated: *adiaphoros*;
 sunônumos
 unitary: *henikos*
 unity: *henotês*
 universal (n.): *katholou*
 universal (adj.): *katholikos*
 universally: *to katholou*
 universe: *to pan*
 unlimited: *apeiros*
 unprofitable: *alusitelês*
 unsyntactical: *asuntaktos*
 usage: *khêrsis*; *sunêtheia*
 use wrongly, loosely: *katakhrethai*
 useless: *anôphelês*
 utterance: *logos*; *phrasis*
 uttered: *prophorikos*
 uttered language: *lexis*
 uttered speech: *prophora tôn lexeôn*

 valid, not a valid syllogism:
 asullogistos
 vary: *poikillesthai*
 vehemence: *gorgotês*
 verb: *rhêma*
 verbal expression: *lexis*
 vice: *kakia*
 vicious: *mokkhthêros*
 virtue: *aretê*

vocative: *klêtikos*

walk, that can walk: *badistikos*

wander: *planasthai*

watch out for: *paraphulattein*

weave together: *sumplekein*

well constructed: *eusunthetos*

whinnying: *khremetistikos*

whole: *holos*

whole to which it belongs: *oikeia*
holotês

windpipe: *artêria trakheia*

womb, be in the womb: *kuophoreisthai*

word: *onoma*

workmanship, be the workmanship of:
dêmiourgein

worry about: *phrontizein*

write: *graphein*

written work: *sungramma*

Greek-English Index

- adiaphoros**, indifferent, 44,5.6; 68,11
undifferentiated, 39,2
- adiaphorós**, in an indifferent way,
66,32
without differentiating, 65,28
- adoleskhein**, speak idly, 51,4
- adunatos**, impossible
adunatos hulê, skhesis,
impossible materiality,
relationship, 25,23; 27,11
- adunatos tropos**, impossible
modality, 53,16; 57,5
- eis adunaton proagein**, lead to
impossibility, 37,5
- eis adunaton apagôgê**, *reductio
ad impossibile* 37,5.6; 60,19
- deixis dia tou adunatou**, proof
through the impossible, 58,25-6
- agathotês**, goodness, 66,21
- agôn**, contest, 36,7
- agônôn aparkhesthai**, start the ball
rolling, 24,11
- agônizein**, strive, 36,2
- aïdios**, eternal, 35,26; 38,20.26;
61,20.21; 62,12.26.28
- ainigma**, hint, 53,21
- ainittesthai**, hint at, 21,31; 28,28;
37,8; 45,4; 65,31
- aisthêtikos**, perceiving, 61,31; 62,6
- aitia**, explanation, 57,22
reason, 6,36; 13,20; 15,9; 17,15;
25,2.5; 26,8.21; 30,9; 50,26; 59,39;
60,2.4; 62,10.11
- akatalêptos**, impossible to grasp,
53,15
- akolouthein**, follow, 37,13; 46,21;
49,25; 50,12
- akolouthesis**, implication, 59,30
- akolouthia**, implications, 38,1; 39,31;
41,10.22; 50,7.10; 53,7; 55,29;
56,26; 57,4; 66,29.33-4
following, 20,19.20; 45,17.19; 60,2-4
something following, 18,2
- akolouthos**, that follows upon,
47,18.20
- akoustikê dunamis**, power to hear,
15,33
- akros**, extreme, 54,32.33
- akron**, extreme, 65,2.3
- alêtheia**, truth, 10,17; 13,31.34.36;
16,20-2; 36,10
- alêthês**, true, 6,19.20; 14,37; 15,1.4;
23,1
- alêtheuein**, attain truth, 2,4
speak truly, say something true,
11,4.23; 16,20; 23,24; 49,7
be true, 22,11; 23,2.6.18.29; 27,23;
32,6; 33,3.7; 37,19-21; 49,10;
56,20; 65,8
- alêthôs**, truly, 27,23
- allattein**, change, 46,27
- allepallêlôs**, one on top of the other,
44,8
- alogos**, non-rational, 8,20; 21,11;
61,33
irrational, 49,10; 59,6
- alusitelês**, unprofitable, 64,2
- ameibein**, change, 47,1; 49,26; 60,4
- amesos**, without intermediary,
28,28.29
- amoibê**, change of course, 36,6
- amphiballesthai**, be disagreement,
4,31
- anagein**, bring back, 19,16
- anathesthai** take back 2,28.30
- anairein**, abolish, 37,25; 38,4
destroy, 40,35.42; 56,11.13; 57,19;
66,14
do away with, 8,14; 24,5; 26,11.15;
36,12.21
remove, 17,6-8; 26,7; 42,6; 48,18-20;
49,9.12
- anairêsis**, demolition, 18,20
doing away with, 26,16; 36,10
- anakephalaïoun**, summarise, 53,15
- analogein**, be analogous to, 7,10.11

analogia, analogy, 1,10; 2,2; 6,16.17

analuein, analyse, 45,27.28
resolve, 13,34

anamphibolon, to anamphibolon,
ambiguity, 5,9-10

anankaïos, necessary, 38,15-17

anankaïos hulê, skhesis, necessary
materiality, relationship, 25,23;
27,13; 57,37

anankaïos tropos, necessary
modality, 53,16-17; 55,12

anapalaiein, retract, 2,29.31

anarthros, inarticulate, 7,16

anaphainesthai, be disclosed, 47,18

anapherein, come back to, 3,20
bring (back) under, 19,14.15

anaphora, anaphora, 67,6.11

aneideos hulê, formless matter, 62,18

anomoïomerês, parts not of the same
kind, 4,17.21.26.27

anôphelês, useless, 64,9

antexetazein, try against, 65,21;
66,31

anthrôpinos, of man, 21,24

anthrôpos, human being, 16,37; 17,1;
21,13

man, 2,35.36; 9,14

antidiairein, divide on a level, 17,5-6

antidiastellein, contradistinguish,
16,18

antidiastolê, contradistinction, 7,21;
8,10

antigraphon, copy, 14,30

antithesis, opposition,
30,20.22.27.30.34.36; 41,12.13;
50,5; 66,8.25.29.34

antikeisthai, be opposed, be
contradictorily opposed, 22,10
(see note); 23,38; 25,29; 27,31;
48,26; 67,35-6

antileptikê dunamis, power to lay
hold of things, 15,33

antiphasis, contradiction, 21,15.16;
22,7.8; (defined) 22,25-6; 23,1-2;
24,1; 26,26; 30,28; 31,19.24-5;
33,36; 38,37-9.1; 41,4.7;
50,15.16.20; 52,2.6; 57,4-5;
58,8.10; 65,6

antiphatikôs, contradictorily, 26,31;
30,26.27.31; 32,12.15.27;
33,12.19.21; 34,15; 43,4; 48,26;
49,17.21; 59,28

as contradictories, 32,23-24

antiprotasis, antiproposition, 24,1

antistrephein, be convertible, 16,37
convert, 42,10.22-23; 47,39; 61,34;
62,4.8

antistrophê, conversion, 54,2

antistrophon, answering part, 51,29

antistrophôs, conversely, 36,14;
47,9-10

antônnumia, pronoun, 3,17.18; 19,18

anuparxia, non-existence, 36,11;
37,4; 38,3.11.12

aoristia, indefiniteness, 13,24

aoristos, indefinite, 8,15;

11,25.27.30.32; 13,19; 14,9.13;
25,32.33; 26,7; 29,14; 35,13;
39,11.17; 40,4.8.22.30

aoristôs, in an indeterminate way,
35,33

apagôgê eis adunaton, *reductio ad
impossibile*, 37,5-6; 60,19

apaitein, demand, 18,2

aparemphaton, infinitive, 3,17.19;
19,18

aparithmeisthai, make an
enumeration, 62,15

aparithmêsis, enumeration,
1,8.10.13; 15,10; 54,13

apeiros, unlimited, 8,15; 26,8

apergazesthai, achieve, 56,2

aperilêptos, impossible to
encompass, 53,15

apexisazein, be equally (universal),
16,33

aphorizesthai, determine, 53,14

aphthartos, indestructible, 35,26

apodeiknunai, demonstrate, 16,14;
17,16.26; 33,10; 39,35; 47,32;
62,31

apodeixis, demonstration, 2,32; 21,9

apodidonai, give, 6,37

state, 40,41; 49,11

apoklêrôsis, arbitrary, 45,31-2

apokrinesthai, answer, 50,17.19

apokrisis, answer, 50,20

apomassesthai, be modelled on, 6,3

apophainesthai, state, 22,2.12;
declare, 46,19; 63,15

apophansis, statement, 1,12 (see
note); 4,4.8.13.20.23; 15,13; 16,24;
17,9.13.14.21; 18,34;
20,25.26.32.33; 22,5; 28,10; 33,19

apophantikos, statement-making,
16,18.19; 17,29.30; 18,4.6;
19,1.11-12; 20,16-17

apophasis, denial, 1,12;
4,3.9.14.23-5; 14,35.37; 16,24;
17,2.5.8.9; 18,31-2;
20,7.27-8.32.34; 21,21-2.25;
22,6.10.18.20; 24,18; 26,2;
27,21.25; 31,27.28; 40,18;
41,18.20.21.23.25; 42,5-6; 43,38;
47,22; 49,4.14.29-30; 55,28; 56,8

apophatikos, negative, 24,26-8;
28,12.20; 31,20; 34,12.14;
46,29.30; 67,2-3

apophatikós, negatively, 20,17.18;
24,31

aporein, raise difficulty, problem,
3,13

apostrephesthai, turn away from,
34,32-3

apotelesma, accomplishment, 9,11;
16,2-3.8

apothēin, push away, 11,33-4

aprosdioristos, without further
differentiation, 26,4.23; 30,37;
34,11; 37,8; 40,13.38; 42,23; 44,17;
45,1; 47,9.21-2; 49,13-14; 55,2-3;
67,24

aprosdioristós, without further
differentiation, 26,20

apsukhos, without life, 48,35.36.39

areté, virtue, 34,32

arkhê, source, 62,32

arkhoeidês, archetypal, 13,33

arnêsis, negative, 6,25; 18,12-13;
26,3.5.6.9; 27,1.9; 31,8; 39,18;
40,19.23-4; 43,39; 44,8.9; 46,9;
49,11; 54,21; 55,30; 56,11.15.25;
57,34; 58,7

arnêtikon morion, negative particle,
26,38; 46,10; 48,17

artêria trakheia, windpipe, 16,10

arthron, article, 31,30;
67,3.7.12.15.17.21.23.25

asebêma, impiety, 35,13-14

asebês, impious, 35,12

asêmos, without meaning, 7,16

asullogistos, not a valid syllogism,
30,14.16

asundetos, having no connective,
20,24

asuntaktos, unsyntactical, 11,8

atelês, imperfect, 63,1

athanatos, immortal, 21,12

athetos, not having position, 21,7

atimoteros, inferior, 63,1

atomos, atomic, 25,7; 27,38-28,4
individual, 29,5

autexousion, self-determination,
36,5

autika, for example, 16,4

autotelês, complete, 3,16;
11,11.12.15-16

azôos, non-animal, 52,8

badistikos, that can walk, 61,13

blituri, blityri, 7,18

bouleuesthai, deliberate, 36,21-4;
38,6

bouleutikos, (being) that deliberates,
36,21; 38,6

brephos, infant, 36,1

deixis, proof, 58,26

dektikos, receptive, 16,36
capable of receiving, 41,37

dêmiourgein

phusis dêmiourgei, the
workmanship of nature is ...,
1,24

dêmiourgikos, Creative, 35,18

dêmiourgos, Creator, 36,5

desmos, conjunction, 21,2
bond, 40,35.37

diagônios (adj.),
diagonal, 42,27.30.35; 43,1.8.10;
45,2-4; 57,7

diagramma, diagram, 40,25; 42,29;
47,19.21; 49,16; 53,30; 56,27;
57,3.8.9; 58,19; 59,17.18.32-4;
60,24; 62,8.14

diairein, divide, 4,15.17

diairesis, division, 6,24; 16,27; 17,29;
19,8.34; 20,1.2.31; 38,14; 61,8
way of doing a division, 4,11

diaitan, arbitrate, 9,25

dialambanein, deal with, 53,5
draw distinction, 15,17

dialegesthai, speak of, 1,8

dialektikos, dialectical, 16,9.12

dialektikos philosophos,
philosopher-dialectician, 2,26

dialektika, dialectic, 2,25

dialektos, dialect, 9,29.35.36

- discourse, 16,10.12
diamerizein, divide up, 49,5
diametros (n.), diagonal, 42,25
dianoia, thought, 13,29; 23,34
diaphonein, diverge, 54,7
diaphora, differentia, 7,11.15; 38,21
diataxis, division, 11,9
diazeuktikos, disjunctive, 17,35.37; 18,28.29
diazeuxis, disjunction, 20,20
didaskalos, teacher, 5,13
dielenkhein, investigate, 15,28
diérthroménos, in a yet more articulate way, 38,14
diexienai, go through, 1,10
dimerês, bipartite, 1,7
diôrismenos, discrete, 21,6
diorismos, differentiation, 29,24
diorizein, draw a distinction, 33,18; 48,1
diorthoun, correct, 57,8
doxa, opinion, 52,25.33; 63,17.19; 65,35; 67,28-31
doxastos, opined, 52,23.32
doxazein, opine, 63,24; 64,4.22.30; 65,4
drassesthai, clutch onto, 16,28
dunamis, power, 5,6; 15,29-32; 16,9; 61,10; 62,22.25
 potentiality, 20,16 (see note); 62,17.18.36.37.39; 63,2
dunamei, potential, potentially, in potentiality, 23,16.20; 45,25.26; 62,17.28
dunamei phanai, say the equivalent, 28,6
tên autên dunamin ekhein, be equivalent, 27,3.18
dunasthai, mean, 27,4
dunatos, possible, 53,16.21; 55,9; 59,12.13; 61,6-9.21; 62,31
dusantibleptos, hard to confront, 67,7-8
duskerês, troublesome, 67,7
dussebês, impious, 36,3

eidikos, specific, 28,3-4
eidos, species, 4,12; 29,16.18.20; 32,23
 form, 7,12.13; 25,25
 kind, 16,16; 19,11.13; 24,15; 55,1
eikonizesthai, image (v.), 6,2

eikôn, image (n.), 6,3
einai, be
 to on, what is, thing that is, 38,15; 43,39; 52,30
 mê on, what is not, thing that is not, 13,21; 38,31; 44,4-5; 52,31.32
eisagein, introduce, 8,15; 26,8; 28,30; 35,4; 67,8
eispherein, import, 64,8
ekballein, throw out, 11,30.32; 13,22
ekbasis, falling out, 37,13
ekkeisthai, be projected, 2,22
ekphônēisthai, sound, 5,8-9
ekphônēsis, phoneme, 5,6.7.12
ekthesis, projection, 2,22
ektiithenai, set out, 65,34
elaton
 ep' elaton, extending less far, 41,33.37-8
elenkhos, refutation, 64,31
elleipôs, elliptically, 18,16; 28,38
ellipôs, elliptically, 14,33
emmesos, that has an intermediate, 28,14
emperiēkhein, embrace, 21,4
 include, 46,17; 51,26.27
empasukhos, animate, 61,31
enallattein, change, 23,4; 60,3
enantios, contrary, 26,28;
 28,9.13.14.26-36; 30,36; 31,13;
 34,11; 63,14; 65,9.10; 67,32-6;
 68,1.2
tounantion, contrariwise, 38,11
enantiōs, as contraries, 30,35; 32,24
enantiōsis, contrariety, 30,37
enantiotês, contrariety, 65,16
enarthros, articulate, 7,16
endekhomenos, contingent
 to endekhomenon, the contingent,
 34,22-3; 35,5; 36,10.12.25;
 37,25-6; 38,4; 54,11; 57,23
endekhomenê hulê skhesis,
 contingent materiality,
 relationship, 25,22; 57,34
endekhomenos tropos, contingent
 modality, 53,16
endekhomenôs, contingently,
 54,10.16; 56,12-14
endiathetos, in the mind, 63,18; 64,35
energeia, activity, 2,5; 3,10.11;
 7,34-5; 13,12-15; 14,24; 35,14;
 61,11.15; 62,25-7; 63,2

- actuality, 61,18-19; 62,16.17.36.37
energeîai, kat' energeian, actual,
 actually, in actuality, 23,16-17.19;
 62,17.23.29
energein, act, 2,6; 57,24.26
enestós khronos, present tense, 6,31
 present time, the present, 14,6;
 34,19; 48,6
enistasthai, start on, 18,20
enkephalos, brain, 26,18
ennoia, idea, 12,28; 13,27; 21,4.33;
 64,31
epaktrokelēs, pirate-boat, 8,18.21-3
epamphoterizein, be both of two
 things, 59,13; 61,3
epidiairesis, supplementary division,
 17,30; 18,7; 19,35
epikheirein, argue, 31,12
 apply oneself, 37,29
epikheirēma, argument, 31,20.21;
 32,16; 34,35; 35,10; 37,35; 63,23;
 64,15.25.30; 65,6.16.25.26;
 66,2.28; 67,1.32
epikheirēsis, proof, 4,35
epiktētos, adventitious, 17,34
epiktētōs, adventitiously, 17,31
epiluesthai, resolve, 30,34; 34,1.33-4;
 35,19; 38,14; 59,34; 61,5
epilusis, solution, 36,28
epinoein, conceive, 35,28
epipherein, apply, 67,28
epiphuesthai, spring up on top of,
 35,34
epipolaion, stays on the surface,
 34,36
epirrēma, inflection of the verb, 2,23
 adverb, 3,33
episēmainein, indicate, 11,5
epitēdeiotēs, suitability, 61,9.25;
 62,22
erōtan, put into a question, 50,15
erōtēmatikos, interrogative, 17,35
 (see note); 19,12
ēthikē pragmateia, ethics, 34,31
etumologia, etymology, 10,13
eudaimonein, be happy, 3,19
euelenktos, easily refuted, 65,17
euktikos, optative, 19,12.22
eunoukhos, eunuch, 51,31.32
eusunthetos, well constructed, 19,4
euthus (straight)
- eutheia**, horizontal line, 42,34;
 43,3; 49,17.20; 57,9; 59,29
eutheia ptōsis, direct case,
 10,25.26; 11,10
exēgeisthai, interpret, 15,18
exēgēsis, exegesis, 13,1; 39,28; 53,8
exēgētēs, interpreter, 4,35; 5,18;
 10,22; 45,16-17; 53,24; 61,33; 66,1
exisazein, be equal, 47,39
exokhē, part which sticks up, 17,11
exophthalmos, pop-eyed, 6,4
exōthen, from outside (sc. Aristotle's
 works), 34,34; 36,9
- gelastikos**, capable of laughter,
 16,36.37; 17,1; 47,39
genesis
ta en genesei kai phthorai,
 things that come to be and pass
 away, 38,21.27-8; 62,13.24
genetē, birth, 10,1
genētos, that comes to be, 61,15.16;
 62,14.17.27
genos, genus, 4,12; 7,6.7
glōssa, tongue, 16,11; 17,12
gnōsis, cognition, 35,11.14.29; 36,37;
 37,35
goēs, sorcerer, 36,1
gomphos, dowel, 3,36
gōnia, angle, 2,35
orthē gōnia, right angle, 2,35
gorgotēs vehemence, 19,4
gramma, letter, 1,13-19;
 5,2.14.16.35.36
grammatikē, grammar, 18,37
grammatikos, grammarian, 3,22.31;
 10,23; 12,11; 18,38; 19,2.5;
 23,19.20
grammatikē tekhnē, grammatical
 art, 10,24
grammē, line, 2,23; 65,14.15
graphein, write, 5,2.23.29.30.32
grapheion, pencil, 10,29
gumnasia, exercise, 63,9
gumnazein, set out for, 44,18; 45,8;
 64,35-65,1; 67,28
- haplous**, simple, 2,4.7; 6,17.19;
 8,24.31.32; 12,3; 13,5; 17,31.32;
 19,11.20; 20,31.32; 21,35;
 41,18.21; 43,2.8.28.30.38;
 49,4.14.16.23; 64,25-8

- haplós**, simply, 6,30
absolutely 38,16.20
- harmodios**, fitting, 19,2
- harmodiós**, fittingly, 9,13.17
- harmonia**, appropriateness, 10,9
- harmozein**, fit, 13,21; 16,16; 47,30
- hégoumenon**, that which leads,
(logically) 61,34.35; 62,2.4.10
- heis**, one, 20,4.5.12; 27,2
aph' henos kai pros hen, from one
thing and in relation to one thing,
17,17-18,23
- hekaston**, **kath hekaston**,
individual, 25,6
- hêliakê sphaira**, sphere of the Sun,
2,22
- hêlios**, the Sun, 38,26; 53,18.19;
57,25; 61,20.21
- hêlos**, nail, 3,36
- henikos**, unitary, 21,24
singular, 67,7
- henotês**, unity, 17,30.32.34; 21,2
- hêpar**, liver, 26,18
- hepesthai**, follow upon, follow,
27,17(see note).21.27.33; 31,32.33;
32,1.2.5.7; 35,17; 41,11.24;
46,19.21; 57,5; 58,19-20.22;
59,17.20.21; 60,16.20; 61,2; 66,14
- hexis**, disposition, 41,29; 42,3;
61,10.14; 66,18.20; 68,12
- himation**, garment, 56,17.19; 61,26
cloak, 33,30.32.35
- hippos**, horse, 9,13
- holon**, whole, 4,12
- holotês oikeia**, whole to which it
belongs, 8,25-6
- homoioîma**, likeness, 5,38; 6,1-3
- homoiomerê**, parts of the same kind,
4,16.18.21
- homologia**, agreement, 2,28.29
- homônumia**, equivocation, 9,27; 61,5
- homônumos**, equivocal, 4,12.32; 9,34;
17,8.10; 20,14.24; 23,29; 33,20.23
- homônumós**, equivocally, 17,9.26.27;
23,23
- hôrismenos**, determinate, 8,13;
11,36; 25,31; 61,4
- hôrismenós**, determinately, in a
determinate way, 34,21; 35,33;
36,17.26.31.33; 37,25; 39,1.3
- horismos**, definition, 2,32; 3,2;
4,10.19.24.26; 11,24.34; 12,2.3.28;
14,2-4; 15,12; 16,31; 17,10;
18,28.31.35; 19,28; 52,2.7
- horistikos**, definitory, 19,13.14.20
- horiston**, definiendum, 16,31
- horizesthai**, define, 1,11; 6,37; 12,2;
15,13.27
determine, 61,4
- horos**, term, 8,33; 9,1.3; 23,29;
33,20.23; 44,1; 54,23.29.30
- hulakê**, barking, 7,21.22
- hulaktein**, bark, 7,24
- hulê**, materiality, 22,23.26; 25,23;
27,10.16.28.33; 28,19; 30,32; 32,3;
48,4.37
(distinguished from *tropos*) 54,3-4;
57,34
- hulê anankaia**, necessary
materiality, materiality of
necessity, 27,13
- hulê adunatos**, impossible
materiality, materiality of
impossibility, 27,11; 30,4; 33,6
- hulê endekhomenê**, contingent
materiality, materiality of the
contingent, 27,26; 28,18; 30,5;
32,5.16-17; 33,1.3; 34,12-13; 41,6;
42,26; 48,5; 56,18
matter, 7,11.13.14; 52,31; 62,18
- huparkhein**, exist, 14,29-31
- huparktikos**, **huparktikon rhêma**,
(verb) of being, 11,6; 13,33-4;
39,27; 40,36-7; 52,12.20
- huparxis**, existence, 3,10; 35,17;
36,11; 37,3; 38,10; 52,22
subsistence, 8,10
- hupenantios**, subcontrary, 30,24.38;
34,9
- hupenantíōs**, as subcontraries, 32,24
- huperôia**, palate, 16,10
- hupodeigma**, illustration, 43,13
- hupographein**, sketch out, give a
sketch of, 6,37; 17,11; 20,25; show
in table, 29,28
- hupographê**, sketch, written sketch,
7,13; 8,27; 16,30; 17,10.18-19;
18,29.34
- hupokeisthai**, be hypothesised, 2,21;
37,20
be subject, 14,20
- hupokeimenon**, subject, 8,33;
13,16-18
- hupokeimenon**, **hupokeimenos**

- (*horos*) subject (as contrasted with predicate), 3,21.23.28.34; 6,24.25; 8,35-6; 11,14; 18,11; 20,7.13-15; 22,33; 23,4; 24,12-20; 25,2-3.5.31-4; 28,11.25; 29,3.4.7.8.13; 33,24; 39,10.11; 40,2-4; 43,14; 45,22; 46,2.27.33-47,1; 66,7
- hupokrinesthai*, play role, 53,19
- hupolēpsis*, supposal, 2,18
- hupomnēma*, commentary, 63,10
- huponoein*, suspect, 16,22
- huponoia*, suspicion, 8,19
- hupopteuēin*, suspect, 46,6; 57,15-16
- hypothesis*, hypothesis, 2,20; 35,6.8; 37,3.5; 52,30
supposition, 10,34
ex hypothesēōs, hypothetically, 38,16.22; 61,13.23
- hupothetikos*, hypothetical, 21,31
- husteros*, posterior, 17,3.27
- idea logou*, form of speech, 19,3-4
- idikos*, specific, 3,5
peculiar, 14,23.24; 43,27
- idios, idion*, peculiarity, 37,8
- idiōs, idiāi*, separately, 50,34; 51,2.30; 52,3
- idiotēs*, peculiarity, 9,36
- isazein*, be equal, 16,36.37
- isodunamein*, be equivalent to, 17,35; 18,1; 31,27; 32,30; 49,27; 67,11.24
- kakia*, vice, 34,33
- kakopoios*, maleficent, 36,4
- kamēlos*, camel, 10,10.11
- kanōn*, canon, 49,24.29.31; 50,1
rule, 51,6.34-5
- kardia*, heart, 26,18
- katakhresthai*, use wrongly, use loosely, 5,14; 67,13
- katagraphein*, catalogue, 13,6
- katalimpanesthai*, remain, be left, 17,17; 66,22
- katapauēin*, bring to an end, 34,4; 43,16
- kataphanai*, assert, 26,16
- kataphasis*, assertion, 1,12 (see note); 4,3-4.9.14.23.25; 6,23; 13,31; 14,35.37; 15,1.19; 16,24; 17,2.4.7.9; 18,31.32; 20,7.27.32.34; 21,22; 22,6.10.19.20; 27,24-7; 31,6.7; 40,22.30.31; 41,18.19.22.24; 42,8,10; 43,2.6; 54,22
- kataphatikos*, affirmative, 24,26.28; 28,11-12.22; 31,20; 34,12.14; 40,12-13; 46,29.30; 55,2; 58,27; 67,2
- kataphatikōs*, affirmatively, 20,17.18; 24,31
- kataskeuazein*, establish, 8,16; 13,33; 35,7-8; 47,24; 49,4; 58,25; 67,35
- kataskeuē*, establishing argument, 37,12
- katēgorein*, predicate
katēgoroumenon,
katēgoroumenos (horos), predicate, 3,29; 6,24.25; 8.36; 18,12; 20,7-8.12-13; 22,32-4; 23,3.11; 24,3.12.17; 25,1; 29,2; 33,24; 46,28.30; 47,1; 48,1.15-18
- katēgorēma*, predication, 11,12
elaton ē katēgorēma, lesser predication, 11,18
- katēgoria*, predication, 52,13.17; 78,5
- katēgorikos*, categorical, 26,13; 35,8.10
- katholikos*, universal, 2,25; 4,13; 29,1.6; 42,9.12; 46,13; 50,1-2.9; 51,9.10; 57,16; 61,35; 62,7.11
- katholou*, universal; 24,25-31; 25,7; 38,28.29
to katholou, universally, 2,26
- kelēs*, boat, 8,21
- kentron*, centre, 2,21
- kephalaia*, section, 24,14.36.37; 25,4.39; 26,1.33; 27,34; 33,12.13.35; 39,29; 40,17.18; 55,22; 63,8.11
- kharaktēr*, character, 5,3.9; 6,4
- kharaktērizein*, characterise, 21,16
- kheilos*, lip, 16,10
- khreuein*, be bereft of, 62,37
- khōra*, place (in a diagram), 59,26; 62,9
- khōrizein*, separate, 38,23-5.28; 52,13; 61,12; 62,22
- khremetistikos*, whinnying, 8,20
- khreōsis*, usage, 27,5
- khroma*, colour, 64,12
- khronikos*, temporal, 7,26

- khronos**, time, 7,4.25.27-9; 14,6.13;
30,33; 33,37; 34,17.20; 48,4.6; 63,1
tense, 6,31; 7,32; 22,23.26
- kinein theôrema**, start a
speculation, 34,23-4
- kinêtos**, subject to change, 62,24
- klêtikos**, vocative, 19,12
- koinos**, common, 12,32; 13,3; 64,31
koinoteros, more general, 3,4
- koinôs**, together, 51,1
- krasis**, crasis, 27,8
- kuophoreisthai**, be in the womb,
31,23.24
- kurios**, important, 4,11; 26,14.15.17;
31,7; 43,30
kurion onoma, proper name,
9,28.30
- kuriôs**, properly speaking, 68,6
- kuros**, most important role, 26,12.24;
40,32.40; 56,10
- kôphos**, deaf, 9,29; 10,2
- lêmma**, assumption, 58,26
- lêmmation**, small preliminary
assumption, 22,9; 36,9; 58,25
- lexis**, detailed commentary, text in
detail, 8,28; 24,14; 31,3; 34,3.34;
39,28; 43,16; 53,7
expression, 7,6; 10,16; 12,6;
20,5.12.14; 23,34; 51,36-8; 52,1
uttered language, 3,38
verbal expression, 20,3
- logikos**, logical, 34,29.35.36
rational, 21,11; 35,24.25; 52,8; 61,32
logikê pragmateia, logic, 34,30
- logos**, account, 4,7.9; 11,22; 12,2;
14,14; 18,5; 19,13.14.20; 52,1
argument, 31,28
proportion, 6,17
reason, 10,9; 57,22
relation, 42,11.12
sentence, 1,12; 3,38; 4,4.6.8; 12,4;
15,5.24.27; 16,16-19; 17,29.30;
18,3; 19,1.11.14; 20,17; 33,17
speech, 16,1.2.13; 18,21; 64,35; 67,29
statement 35,16-17; 36,10; 38,2-4
utterance, 8,2.11
meros logou, part of speech,
3,9.13-14.32.37-8; 12,4; 14,25;
18,11(see note).38; 19,3
- loimos**, scourge, 36,2
- lusi**, solution, 37,35
- lusitelês**, profitable, 63,25
- makhê** (n), conflict, 22,25; 52,6
- makhesthai** (v), conflict, 26,30.31;
63,14; 64,4.6; 65,19; 66,16
fight, 65,23, 24
- mallon**
ek tou mallon, *a fortiori*, 8,16;
13,33
- maten**, to no purpose, 36,22
- methodos**, procedure, 30,13; 46,25;
47,8
- mellôn, mellôn khronos**; the future,
future time, 6,32; 22,30; 30,33;
33,37; 34,20
- merizein**, divide into parts, 57,19
**merizein to alêthes kai to
pseudos**, divide truth and
falsehood between them, 22,25-6;
33,37; 34,9-10.17.19-22; 57,37-8
- merikos**, particular, 2,26; 15,10;
16,31; 17,1.2; 24,25.28.32; 25,6.10;
26,38; 27,24; 31,11; 33,3; 34,10;
38,28.29; 40,13; 42,12-13;
46,22.23.33; 47,12.22.24;
49,14.18.19; 51,9; 55,3; 62,32
- meros**, part, 1,7; 16,14
meros logou, part of speech, see
under **logos**
- mesos**, intermediate, 41,29; 42,3;
65,3; 66,20
- metapherein**, transfer, 63,16
- metapoieisthai**, lay claim to, 19,1
- metathesis**, change, 9,28
transposition, 40,23; 41,16.19.20;
42,7.10; 43,5.37.38; 46,19-20;
47,21; 49,3.13.15.19; 56,22.32;
57,16; 60,7 65,27-8.30; 68,7
- metokhê**, participle, 3,16.22.26; 45,27
- metron**, metre, 67,13.26
- mnênoneuein**, mention, 46,1
- mokhthêros**, vicious, 66,17; 68,12
- monomakhein**, engage in single
combat, 23,23.26
- monozux hippos**, solitary steed, 8,21
- morion**, particle, see **arnêtikon
morion**
- morphê**, shape, 35,28
- naumakhia**, seafight, 36,18.33;
37,18.21
- nekros**, dead, 52,3-8

noein, think, 2,4,6

noeisthai, be had in mind, 50,24

noêma, thought, 1,10.14.25-7; 2,3,4;
5,22.25.26.30.34.35.38; 6,9.16.18;
10,28-9; 12,3

nous demiourgikos, Creative mind,
35,18

nukteris, bat, 51,31.32

odous, tooth, 16,11; 23,11

oikeios, its own, 63,15; 64,24

oneiros (n), dream, 67,19

onoma, word, 1,15.16.20; 3,5,8; 5,35;
6,11.12; 13,25; 27,7,9

name, 9,10.20.23.25.29; 10,4.9.12;
11,26; 33,29; 43,24-6

noun, 1,11; 3,4,5; 4,1.37; 5,21;

6,27.33.36; 7,7.26.28.34;

8,16.17.23.24.32.33; 9,3; 10,3.32;

11,3.25.27; (defined) 11,34-12,1;

12,2.6-7; 14,10.17.26; 18,4;

19,17.18; 25,33; 43,26

kurion onoma, proper name,
9,28.30

onomasia, nomenclature, 31,7

onomatothetês, name-giver, 10,8.9.12

oratikê dunamis, power to see, 15,32

orkhêsis, dancing, 16,3

organon, instrument, 15,29-16,11;
17,19

osphrantikê dunamis, power to
smell, 15,33

ouranoi, the heavens, 62,28

ousia, substance, 3,10.11; 14,32;
19,27; 35,15; 51,8.16; 61,31;
62,6.17; 65,11

prôtê ousia, first substance, 62,35

pathos, pathêma, affection, 2,5;
4,38-9; 7,35; 13,12.14.15; 14,24;
67,30

paidion, baby, 36,13; 42,37

palaioi, of the past; people in the
past, 5,18; 25,23; 43,27

pan, to pan, the universe, 52,30

pansudiêi, in all their numbers,
67,21 (see note)

pantelôs, certainly, 63,8

pantôs, definitely, 35,4 (see note)

panu, much, 53,22

paragôgê, inflection, 12,10.11

paradeigma, example, 33,28;

39,1.18; 40,5; 46,1; 51,11; 52,22;
54,37; original, 6,9

paradidonai, put forward, 1,9; 2,3

paradoxos, paradoxical, 2,18

parakatégorêma, partial predicate,
11,16

elotton ê parakatégorêma, lesser
partial predication, 11,20

parakatiôn, lower down, further
down, 3,6; 16,25; 18,27; 20,1;
21,35; 30,38; 43,13

paralogismos, paralogism, 23,33

parasumbama, partial incidental,
11,16

elotton ê parasumbama, lesser
partial incidental, 11,20

paraphulattesthai, watch out for,
23,34

parelkein, distort, 51,5

parelthôn khronos, past tense, 6,31

parepesthai, follow upon, 13,13

parôikhomenon past (time, tense),
7,33; 22,28; 34,19

paskhein, be affected, 2,6

patêr, father, 63,15

periousia

ek periousias, with resources to
spare, 8,15-16

perittos, odd, 28,32

superfluous, 30,10

phalakros, bald, 6,4-5

phantasia, appearance, 8,19.26;
27,12.15

phantazesthai, imagine, 53,25

phasis, saying, 8,33; 9,1.3; 15,19.21;
18,11.13; 24,4.5

phaulos, evil, 36,1

pheromenos, applied to, 57,23.24
notorious, 30,33; 37,33

philosophhein, philosophise, 3,19;
13,10

philosophos, philosopher, 5,13.18;
7,28; 12,9.13

the Philosopher, 19,1-2; 21,33;
50,33-4; 60,10

dialektikos philosophos,
philosopher-dialectician, 2,26

phlebotomon, lancet, 17,19

phônê, sound, 7,16

spoken sound, 1,10.14; 2,3;
4,12.36-8; 5,25.27-9; 6,16;
7,6.9.14; 10,2; 12,30

- haplê phônê**, simple spoken sound, 2,7; 6,19; 8,31.32
- phônētikê dunamis**, power to make spoken sounds, 15,29
- phoneus**, murderer, 36,2
- phrasis**, locution, 19,4
utterance, 15,1
phrasing, 28,38; 44,12
- phrontis**, thought, 63,11
- phrontizein**, consider, 19,3
worry about, 34,32
- phthartos**, thing that can cease to be, 61,15-17; 62,14.17
- phtheirein**, destroy, 61,11
- phthoneros**, malevolent, 36,4
- phthora**
ta en phthorai, things that pass away, 38,21.28; 62,13
- phulattein**, keep, 46,27; 49,26
- phusikos**, natural, 15,30.31; 16,4.5.8.9
- phusiologikos**, belonging to study of nature, 34,26
- phusis**, nature, 1,24; 11,31.36; 14,23.24; 29,1.6; 34,26.27 35,23; 36,22; 38,6; 46,14
- phusis anthrôpinê**, nature of man, 21,24
- phusei**, due to nature, by nature, natural, naturally, 1,14.16.23; 2,1; 5,33; 7,8.9; 9,9-13; 15,29-32; 17,30; 18,21.24
- plagios**, oblique, 12,11
- planasthai**, wander, 13,29
- planê**, going astray, 49,3; 67,22
- plêthuntikos**, plural, 67,7
- ploios**, ship, 3,35
- plokê**, construction, 30,13.14
complication, 51,28.35
- pneuma**, breathing (gr.), 19,5
- pneumôn**, lung, 16,10
- poiêtês**, poet, 67,12
- poiêtikê**, literary composition, 18,36-7
- poiêtikos**, poetic, 27,5
- poiêtikon aition**, efficient cause, 17,20
- poikillesthai**, vary, 29,28; 54,20.28
- poion**, quality (of a proposition), 46,28; 47,1.4; 49,27.33; 53,14; 56,12
- poiôtês**, quality, 8,10
- pollaplasiazein**, multiply, 25,14
- poluônumia**, many names for the same thing, 9,28
- poluônumos**, having many names, 9,32
- poluplasiazein**, multiply, 25,20-1.28.35-6; 29,25; 40,9-11; 55,1.5.7
- polupragmonein**, make much of, 19,5
busy oneself, 43,17
bother about, 57,31
- polustikhos**, lengthy, 63,10 (see note)
- porisma**, corollary, 32,25
- poson**, quantity, 21,5; 65,11
(of a proposition), 40,41.42; 46,27; 47,4; 49,26.32; 53,12
- pragma**, thing, 1,14.25.27; 5,22.24.30.33; 6,12; 28,6
- pragmateia**, treatise, 68,3
êthikê pragmateia, ethics, 34,31
logikê pragmateia, logic, 34,30
- pragmateiôdês**, businesslike, 34,36 (see note)
- pragmateuesthai**, busy oneself, 37,28-9
- praxis**, lecture, 68,6
- proagein**, set out, 34,36; 35,11
start, 38,14-15
- proagesthai eis adunaton**, lead to impossibility, 37,5
- proballesthai**, set out, 18,22; 19,8
- problêma**, problem, 63,15
- prognôskein**, know in advance, 36,38
know from before, 67,10
- prokeisthai**, be the aim, 2,37-3,1
- prokheirizesthai**, try, 35,27
- prokhôrein**, proceed, 65,20
- prokoilos**, potbellied, 6,4
- pronoia**, Providence, 38,5
- prooimion**, introduction, 1,7; 2,2.9; 6,15; 15,9
- prosdiorizein**, determine in addition, 45,23; 48,17
- prosdiorismenê protasis**, proposition with further differentiation, 26,19.24; 42,24
- dis prosdiôrismenê**, twice further differentiated, 30,19
- prosdiorismos**, further differentiation, 23,30-1
(i.e. quantifier), 24,4.15.16; (defined) 24,19-20.25; 25,4.9;

- 26,22.25.35.37; 28,11.26;
29,15.17.19.22.24.25; 40,39.40;
44,2; 46,7; 53,12; 57,33; 67,2.4
additional determination, 63,22;
65,34
prosekhôs, directly, 46,1
prosêgoria, appellation, 3,27;
26,14.35
prosthesis, addition, 58,13
proskatêgorein, predicate
additionally, 39,28
triton proskatêgoroumenon,
third thing predicated in addition,
24,3-4; 39,25; 40,24.29.33; 44,2;
52,11-12.21; 54,18.27.29-30
prosonomazesthai, have further
name, 40,33-4
prosrhêma, verbal adjunct, 24,19;
44,1; 53,10; 58,13
appellation, 43,25
prossêmeinein, signify in addition,
7,29.30.34; 11,29.35; 12,30; 13,1;
15,2
prostaktikos, imperative, 19,12.22
prosupakouein, understand in
addition, 13,32; 19,16
prosôpon, person (grammat.), 19,5
protasis, proposition, 9,1.4-5;
13,39; 14,8; 21,31; 23,38;
24,11-12; 26,19-25.28.29; 29,20-3;
30,21.22.30.35.37; 34,10; 37,9;
39,24; 40,12.13.15.38.39; 42,11.12;
43,28-9, 31; 44,17-18; 45,1.7;
46,26.29; 47,2.6.7; 49,25; 55,20
premiss, 2,31; 15,31; 18,23; 67,37
protattein, place before, place, 3,12;
62,8.10-11.15
proteinein, propose, 46,26.28; 49,25
proteraios, preceding (lecture),
50,33; 55,26
protereuein, come before, 3,11
proteros, prior, 17,3.27; 19,34; 62,39
protitheînai, put before, 3,5
put forward, 47,2
add, 52,9
set out, 63,23
prôtos, first, 2,11
prôtotupôs, primarily, 5,3.7
proûpokeimenos, preliminary
hypothesis, 2,32-3
prophora tôn lexeôn, uttered
speech, 64,34
prophorikos, uttered, 67,29-31
psêphisma, motion, 12,16.19
pseudesthai, run into falsehood,
speak falsely, say something
false, 2,4; 11,4.23; 12,1.23; 16,20
be false, 22,11; 23,2.6; 32,6; 33,5;
37,20.25; 49,10; 56,20
pseudos, false, falsehood, 2,7; 10,17;
13,31.34.36; 14,37; 16,21.22
psophos, sound, 7,17
psukhê, soul, 2,3; 4,38; 50,18.23; 67,30
ptôsis, case, 10,23.25.28.34;
11,2.7.10.17.25.31; 12,9.13; 13,22
inflection, 13,22; 14,8.14; 18,4; 19,5;
39,12
ptôtikos, with an oblique
case-inflection, 6,27
pur, fire, 38,24.25; 61,17; burning
light, 6,7
rhêma, verb, 1,11; 3,4-8; 4,2.37; 5,21;
6,27; 7,25; 8,32.33; 9,3; 11,30;
11,6.30; 12,24.28; (defined)
12,30-1; 13,5.13.24.33; 14,4.7;
15,3; 18,4.6; 19,17; 39,12.13.27;
40,37; 43,26; 45,27.28; 52,12.20
rhêton, passage, 44,12; 45,4
rhêtôr, rhetorician, 2,24.27; 18,37;
19,3
orator, 67,12
rhêtorikos, rhetorician, 19,2
rhêtorika, rhetoric, 2,25
rhuthmos, rhythm, 67,13.26
sanis, plank, 3,36
saphêneia, clarification, 63,11
saphênizein, make clear, clarify,
13,1; 15,28; 18,21; 43,17; 63,12
selidion, block, 59,26
selis, block, 56.32.36.39
sêmeinein, to signify, 3,11.33; 4,36;
8,9-10; 11,26; 13,4
sêmainomenon, meaning, thing
signified, 9,19-22.25; 61,7
sêmantikos, significant, 7,17; 9,4
significatory, 3,10
having meaning, 11,34; 12,30;
15,17-18; 18,11
sêmantikon einai, signify, 9,2;
14,23.32
sêmasia, meaning, 20,4.10
sêmeion, point, 2,21; 28,3

- skelos**, limb, 21,3.4.34.37
- skhêma**, shape, 7,11
figure, 35,28
figure (of syllogism), 30,16
form of argument, 37,5
- skhêmatismos**, formation, 12,10
- skhesis**, relation
relationship, 3,33; 8,34; 20,19.22;
25,3.22.23.27; 29,2.14
- skindapsos**, scindapsus, 38,32
- skopos**, aim, 32,17
project, 62,19; 63,7
pros ton skopon, what matters,
26,10
- skuteus**, shoemaker, 52,16
- sômatoeidês**, of corporeal form, 35,28
- sôphrosunê**, temperance, 63,21
- sphaira**, sphere, 2,22
- stephesthai**, receive a crown, 36,6
- sterêsis**, privation, 50,7
- sterêtikos**, privative, 41,22.23; 42,11
- stoikheion**, element, 5,2.7.17
- stoikhoun**
to stoikhoun, sequence, 50,7
- stratiôtês**, soldier, 16,5
- sullabê**, syllable, 7,5; 13,4
- sullogismos**, syllogism, 15,28;
18,20.22
- sullogistikos**, syllogistic, 30,12-13.18
- sullogistikôs**, syllogistically, 67,35
- sumbama**, incidental predication,
11,12
- sumbebêkos**, incidental,
51,7.8.12.16.17; 64,15-23
- sumbolon**, earnest, 4,38; 5,11.16;
6,1.6.13; 14,27.28; 67,30
- summetrôs**, proportionally, 17,20
- sumperasma**, conclusion, 67,37
- sumperilambanein**, include along
with, 21,26
- sumphtheiresthai**, be destroyed
along with, 61,19
- sumphuês**, part of the nature of,
61,15 (see note)
- sumplekein**, weave together, 3,15;
62,29; combine, 57,13
sumplekesthai, be complex, 64,32
sumpeplegmenos, complex, 64,28;
65,4
- sumplektikos**, conjunctive, 17,35;
21,29
- sumplêroun tên ousian**, give the
full substance, 19,26-7
- sumpseudesthai**, be false together,
26,27; 28,17; 32,32; 34,18; 37,9;
42,28; 43,9; 45,4; 49,2; 55,33; 56,3;
57,30
- sunagein**, derive, 32,25.28
conclude, 60,18
- sunagesthai**, follow, 34,22
- sunakolouthein**, follow along with,
49,28
- sunalêtheuein**, be true together, true
along with, 27,19; 28,26-7.31;
31,18.24; 32,15.37; 33,21-2;
34,10.18; 37,8; 42,25-8;
43,1.11-12; 45,3 49,2; 56,16;
57,30.32-5; 66,17; 67,33.35
- sunaloiphê**, elision, 27,8
- sunanairein**, remove along with,
17,6-7
- sunanaphainesthai**, be revealed
along with, 25,24.25; 54,3.5
- sunaptein**, join, attach, 20,30;
26,2.4.5
- sunaptikos**, hypothetical, 17,34.37
- sundesmos**, connective, 9,23; 17,34;
18,12.29; 19,30; 20,8; 21,29; 27,9
- sunêgorein**, plead, 37,28
- sunekhês**, continuous, 21,6-8
- sunengus**, next (to one another), 19,29
- sunepesthai**, follow along, 27,28.34;
39,32
- sunêtheia**, usage, 12,15; 44,7
- sungramma**, written work, 63,10
- sunônumos**, undifferentiated, 23,30
(see note to 23,26)
- sunômumôs**, in strict sense, 13,16
without differentiation, 23,26 (see
note)
in the same way, 51,10 (see note);
51,20
- sunthesis**, putting together, 6,23-4
composite, 8,25
composition, 13,39; 14,1
- sunthetos**, composite, 2,5.8; 6,20.21;
8,17.23; 13,6; 15,24; 20,32.33;
21,36; 45,22; 48,2.16.28.30;
64,25-7
- sunthêkê**, agreement, 6,34; 7,3;
11,28.35; 15,27
- suntattein**, put with others, 5,8
construct with (gr.), 11,4.7; 12,22

suntomia, brevity, 12,32
suntonos, forceful, 19,4
suntrekhein, concur, 22,8.24.32; 23,7
sunüpakouein, understand with, 19,17
suskhêmatismos, agreement in formation, 12,10
sussêmainein, signify along with, 13,38; 15,2
sustatikos, substantial, 7,11.15; 38,21.22

tattein, range, 59,26; 60,6
taxis, order, way of being ordered, 2,13; 3,3; 14,12; 15,9; 45,17.19; 60,3
 position, 3,23.28; 6,28
 arrangement, 52,15; 59,24; 60,5; 62,8
tekhne, craft, 52,14
tekhnikos, artificial, 16,4.6
tekhnologia toutôn, art of these things, 25,24
teleios, perfect, 36,28; 63,1
telein, be ranked, 29,8
temnein, divide, 4,16.22.26
 cut up, 28,3.5
teôs, at the moment, 25,12
tetraplasiazerein, multiply by four, 40,12.14; 55,4
theios, divine, 62,16
 to theion, the Divine, 35,11.27.31-3; 36,32.37.38
theologikos, theological, 34,24
theôrein, can see, 2,6.8; 14,37
 survey, 34,3
theôrêma, speculation, 1,9.13; 33,13.16; 34,23; 39,8; 45,16; 47,18; 50,33; 61,33-4 63,13; 66,7
theôrêma zêtein, make speculative enquiry, 53,5; 55,27-8
theôria, continuous exposition, 2,10; 8,28; 18,8.21; 19,8; 21,16; 23,35; 27,34; 39,19; 43,16; 59,36; 60,8.15; 65,26

 seeing about, 19,3
theôris, pleasure boat, 7,12 (see note)
theos, God, 36,22.33; 38,5.27
therizein, reap, 35,1-4
thermotês, heat, 38,25; 61,18.19
thesthai, lay down, 2,17
thesis, laying down, 1,15.23; 16,12
 thing laid down, 2,33
 thesis, 2,20.22
thetika epirrhêmata, postulatory inflections of the verb, 2,23
thetos, with position, 21,6.7.9
thnêtos, mortal, 21,11; 35,24
thorubein, get agitated, 27,10
timiôteros, superior, 63,1
tmêma, division, 1,9; 2,14; 23,35; 33,14.17; 39,20.24; 52,27; 53,4
tomê, cutting, 28,5
tonos, accent (gr.), 19,5
topos, place, 3,21.24
tragelaphos, goatstag, 7,18; 13,21-2
trigônos, triangle, 2,33.34
trimereia, three parts, 25,14.20.36; 40,10; 55,5.6
triploê, triplicity, 25,36
tropos, modality, 53,8
 (defined) 53,10-14
 (distinguished from materiality) 54,3-7
meta tropou, modal, 53,4-5
tropos paralogismôn, way in which paralogisms arise, 23,33
tupos, imprint, 5,3.11
 way of shaping, 1,19

xesis, carving, 5,3
xiphos, sword, 9,33; 16,6; 26,17

zêtein, enquire, 3,3
zêtêsis, enquiry, 45,31
zôion, animal, 21,11; 35,24; 61,32; 62,1-5

Subject Index

References in italics are to the Introduction. Other references are to page and line of Hayduck's text.

- Achilles, as example, 31,16
Ackrill, J.L., 63,19n.
actual and potential, 62,15-29;
62,35-63,2
Aeschines, 8,22
Agamemnon, 67,22
agreement, see laying down
Ajax of Locris, Ajax of Salamis,
23,23-6; 33,22
Alcibiades, as example, 11,21; 24,22
Alexander, i.e. Paris, 9,31
Alexander of Aphrodisias, 4,33; 5,19;
16,22n.; 16,28-17,8; 50,14-26
Ammonius, 2, 5, 6, 9, 12-14; 2,17n.;
3,15n.; 4,31n.; 5,1-19; 7,25n.;
8,5n.; 8,30n.; 9,8n.; 10,22n.;
11,23n.; 12,32n.; 15,25n.; 15,27n.;
16,16n.; 16,22n.; 17,12n.; 21,38;
23,22n.; 24,19n.; 25,24n.;
26,16-18n.; 27,10n.; 27,16n.;
31,26n.; 34,35n.; 34,36n.; 35,6n.;
36,9n.; 42,10n.; 44,5n.; 44,7n.;
45,17n.; 46,6n.; 46,24n.; 47,14n.;
47,25n.; 50,13n.; 52,6n.; 52,8n.;
58,3n.; 58,5n.; 59,6n.; 59,13n.;
66,1; 66,8n; 66,31n.; 67,17-22
Ananias of Shirah, 4
animal, 61,30-1; 62,5-6
Anonymous commentator on the *De*
Interpretatione, 12-14; 12,32n.;
13,27n.; 15,2n.; 17,12n.; 35,6n.
Antiochus, 8
Anytus, 42,33 and n.
Archelaus, as example, 9,15
Aristocles, 9,31-2
Aristotelian, 34,34
Aristotle, 4,34; 5,13-14; 9,8; 11,2.26;
12,5.20; 16,25; 17,4; 29,29; 30,20;
31,33; 32,16; 34,24.33; 35,17; 36,9;
38,5; 45,16; 46,24; 50,4; 8-9;
52,32; 53,25.29; 54,1; 63,7.9.12
Categories, 9,2
Cat 1a18-19, 8,30
Cat 14a26-b23, 2,12
Analytics, 9,5-6; 44,12-15; 45,24
APr 1 24a24, 50,13
APr 1 26a30-9, 30,17
APr 1 25a1, 53,25-6
APr 1 25a1-4, 54,1-2
Soph El 165b26-7 and 166b21-7,
23,32-4
Ph 3 200b32, 31,37
DA 3 424b22, 31,35-6
Met Z, 19,25-8
article and universal quantifier,
67,1-27
assertion, 4,2-4; 22,10-11; 31,6-9
atomic, 27,37-28,5
Attic, 12,15; 44,7
Basil, as example, 9,16
Blank, D., 34,36n.
Blumenthal, H., 1, 4, 5
Busse, A., 12
Calippus, example, 8,18.19
case, 10,22-11,23; 12,9-13
Christianity, 4-5, 10-12, 13-14
composition and division (of terms),
50,33-52,25
connectives, 3,35-8; 21,28-33
contradiction, 22,6-24,6; 30,27-34;
32,23-33,26; 57,29-58,8
contrariety, 28,9-36; 30,23.35-6;
67,35-68,2
Crivelli, P., 40,8n., 44,1n.
definitory sentence, 19,12-22
Demosthenes, 12,18; 67,14-16

denial, 4,2-4; 45,24-46,16
 double denial, 43,39-44,10; 48,17-30
 and assertion of contrary,
 63,13-65,26; 66,7-34
 dialectic, 2,25
 Diodorus, 9,21-4
 Dionysius Telmahrens, 2, 3, 4
 division, 4,11-13

Egyptians, 1,19.21.26; 7,19
 element, 5,2-19
 Elias, 3, 4
 ethics, 34,30-3
 Ethiopian, 23,9
 Evrard, E., 2, 4, 5

 first, 2,11-13
 focal meaning, 17,17-28
 form, 7,11-14
 further differentiation (i.e. quantifier),
 24,18-35
 ‘not some’, 26,35-27,9
 ‘every’, 28,38-29,8
 ‘not every’, 27,10-35
 and predicate-term, 29,17-30,19
 future singular propositions, 30,33-4;
 34,18-36,27; 38,13-39,7

Galen, 3, 13
 God, 35,11-36,8; 36,21-2; 36,32-8;
 38,5-8; 38,27
 grammarians, 3,22,31; 10,23; 12,11;
 18,35-19,6
 Greeks, 1,19.21.27; 7,20
 Greek language, 27,5

Hayduck, 1, 6, 9-11, 13, 15, 74,17n.;
 76,8n.
 Heraclitus, 2,19
 Heraclius, 3
 Hippocrates, 3, 8
 Homer, 52,19,20
 Iliad 1.234, 8,7
 Iliad 2.11, 67,19-21
 Iliad 2.371, 8,5
 Iliad 2.804, 9,36-10,1
 Iliad 3.182, 8,3
 Iliad 11.388, 5,5
 homonymity, 9,34; 17,8-13; 23,23-30;
 33,20-6

Iamblichus, 21,28-32; 35,19-33; 38,1;
 50,13-25
 incidental, 51,7-19; 52,11-26; 64,15-24
 indefinite noun, 8,13-15; 10,14-18
 indefinite verb, 13,18-22
 infinitive, 3,17,19

John Barbur, 2
 John Moschus, 2, 3
 Justinian, 5

Lautner, P., 2, 4, 5, 15
 laying down (*thesthai*), 2,17-36;
 9,18-22; 15,27-16,15
 letter, 1,15-24; 5,1-19; 5,23-36
 likeness and earnest, 5,37-6,13

materiality, 22,23.26.31; 54,2-12
 matter, 7,9-14; 52,31
 modality, 53,10-54,12; 55,8-12

name (*onoma*), 1,17-18; 3,3-13;
 3,20-28; 6,26-9; 33,27-35; 43,24-8
 definition of noun, 6,37-8,29;
 11,23-12,6
 whether by nature, 9,8-10,13
 name-givers, 10,8-13
 necessity, absolute and hypothetical,
 38,14-39,7; 61,13-14,23

Neleus, 31,16
 Neoptolemos, 9,31
 noun, see name

Olympiodorus, 6, 15, 17,12n.
 opposition, 30,20-31,3; 41,12-17

Paris, 9,30
 Parmenides, 2,20
 participle, 3,16.22.26; 45,27
 Peripatetics, 10,31-11,2
 Phocas, 3
 phoneme, 5,6-12
 Plato, 3,8; 9,31-2; 52,30-2 and n.
 as example, 15,25; 17,36; 20,9; 23,5;
 24,21
 Cratylus 9,9-27
 Gorgias 461D, 2,29
 Porphyry, 4,32; 5,19; 7,28-35; 11,5-6;
 13,6-8; 16,22n.; 17,8-15; 63,9-11
 Isagoge 2,32, 17,25-7
 possible, 55,8-12; 57,23-7
 division of, 61,8-21

- and necessary, 58,26-59,19; 61,2-30;
62,12-15; 62,31-3
- predicates, Stoics, division of, 11,9-21
see also subject
- privative propositions, 41,22-42,23;
50,6-12
- Proclus, 46,25-47,2; 49,24
- pronoun, 3,17.18.22.27
- propositions, consisting of subject and
predicate alone, how many, 25,1-39
how negated, 26,1-34
with third thing predicated in
addition, how many, 39,32-40,16
how negated, 40,18-41,8
implications among, 41,10-43,15;
46,17-47,12; 47,20-50,3
modal, how many, 54,13-55,22
how negated, 55,29-56,25
implications among, 56,26-57,10;
58,21-59,35; 60,1-12; 62,7-15
without further differentiation,
equivalent to particular,
31,11-32,18
see also transposition
- Providence, 38,5
- Pseudo-Elias, 3, 4
- Pyrrhus, 9,31
- quantifier, see further differentiation
- quantity, 21,5-9
- questions, 50,13-27
- rhetoricians, 2,24-5; 18,37-19,4
- Romans, 1,22
- Roueché, M., 1, 4
- saying (*phasis*), 15,18-23; 24,4-6
- sentence, 4,7-8; 16,16-18; 19,10-22
definition of, 15,13-16,15
composite, 15,24-7; 17,35-18,3;
20,8-10; 20,20-2
statement making (i.e. declarative),
17,29-18,8; 18,26-35; 19,34-21,4
- Simon the shoemaker, 52,16-18
- Socrates, 9,24
- as example, 2,5; 3,23.24; 4,18.28;
6,3-5; 7,3; 10,28; 11,8.15.17.19.20;
13,18.22.28; 14,18.19;
15,2.3.20.24; 16,20; 17,32.36;
20,5.6.9.33; 22,12-21.35;
23,5.12.13.14.21.22; 24,1.13.21;
25,6.12.15.16.26.27.33.34; 26,7.11;
28,1.33; 30,22.30-1; 33,9.10.25.26;
35,24.25.31; 38,18; 39,14-16;
42,33; 45,26-30; 47,15.16;
48,19.28; 53,20.22.23; 54,5.6.16
- speech, parts of, 3,13-38; 18,12-14
whether natural, 15,27-16,15; 18,20-5
- spoken sounds, 1,14; 2,2-9; 4,36-8;
5,25-30; 7,15-24; 8,32-9,6
- statement, 4,7-9; 4,13-35; 16,18-17,28
universal statements, 21,21-7
- Stephanus, Introduction *passim*;
21,5n.
- Stoics, 10,23-34; 11,9-21
- subject and predicate, 3,20-31;
22,32-23,35
- subcontrariety, 30,24.38
- Tarán, L., 12, 13; 7,6n.
- tense, see time
- Theophrastus, 40,23-8
- Theophylact Simocatta, 3
- Thersites, 31,17
- thought (*noëma*), 1,25-7; 2,2-9;
5,21-6,21; 10,28-9
- time, 6,30-2; 7,4; 7,24-35; 12,34-13,2;
13,23-4; 22,23-30
- transposition, propositions from,
40,21-8; 41,15-20; 43,36-44,7;
47,20-50,3
and privative propositions,
41,20-42,23
assertion from, and simple denial,
47,33-49,12; 57,15-21; 65,27-32;
68,6-9
- truth and falsehood, 6,18-25; 12,22-3;
13,31-8; 16,18-22; 36,10-12;
37,15-22; 38,8-13
- Tychikos, 4
- Usener, H., 2, 3, 4, 7
- Vancourt, R., 1, 2; 12,1n.; 39,18n.
- verb, 3,5-6; 3,28-31; 6,26-9; 14,16-15,4;
39,8-18
definition of, 12,28-14,14
of being, 11,6; 13,33-14,1; 39,27;
40,36-7; 52,12; 52,20-6
not of being, 45,16-33
- Westerink, L.G., 1, 4
- Wolska-Conus, W., 1-4, 9
- word, see name