

JOHN OF ALEXANDRIA AGAIN: GREEK MEDICAL PHILOSOPHY IN LATIN TRANSLATION

It is a brave scholar who ventures into the murky world of Late Antique medicine in search of information on earlier theories. Not only may the opinions of a Herophilus or a Galen be distorted by their distant interpreters, but frequently the texts themselves present serious challenges to understanding. Nowhere is this more apparent than in the Latin versions made from Greek philosophical and medical commentaries, which interpose an additional linguistic barrier before one can make sense of sometimes complex arguments. Yet as R. J. Hankinson has shown in his recent note on John of Alexandria, there is much to be gained from these forbidding works.¹ But while he has succeeded in elucidating much of the technical terminology and argument that lies behind one of these translations, his lack of familiarity with the textual basis of the relevant commentary has both led him into error and prevented him from resolving still more of its difficulties. His ignorance is easily pardonable, for, as will be shown, modern editors have unwittingly conspired to block the way to the truth, and the essential secondary literature has been published in journals and theses rarely accessible to the classicist.

The commentary on Galen's *On sects, for beginners*, ascribed to John of Alexandria, has a complicated textual history. One Latin version of it survives in eleven manuscripts from the thirteenth century onwards, and was printed, from 1490 to 1515, among the collected *Opera omnia* of Galen in Latin.² Neither translator nor author is entirely certain. If one can trust Pritchett's apparatus, Burgundio of Pisa (c. 1110–1193) is named as the translator, but in only one manuscript and in no printed edition. This hypothesis is at least probable, for Burgundio certainly owned and annotated a Greek manuscript of *On sects*, now Florence, Laur. gr. 74.5, from which in 1185 he made a Latin version for King Henry VI of Germany.³ This translation usually circulates along with John's commentary, and a link between the two is likely.⁴ But there is one snag. The translation of the Galenic text that is found both within the commentary and as lemmata before each section is not that of Burgundio, but is considerably older, being known in Ravenna by the end of the sixth century.⁵ It is perhaps easier to believe that a scribe wrongly assumed that the translations of the Galenic text and the John commentary were made by the same person,

¹ R. J. Hankinson, 'Notes on the Text of John of Alexandria', *CQ* 40 (1990), 585–91.

² Details of nine manuscripts and three editions are given by C. D. Pritchett (ed.), *Johannis Alexandrini Commentaria in Librum de Sectis Galeni* (Leiden, 1982), *Praefatio*, p. vii. He omits Paris, Académie nationale de médecine 51 (s. xv), fos. 31r–69v, and Leipzig, Universitätsbibliothek 1136, which, according to G. Helmreich, 'Galenii libellum *Περὶ αἰδέσεων τοῖς εἰσαγομένους*', *Acta seminarii philologici Erlangensis* 2 (1881), 248, lacks the prologue and the second half of the commentary. In this paper I use John throughout to refer to the Latin translation, not to its putative Greek original, whose authorship is uncertain.

³ P. Classen, 'Burgundio von Pisa, Richter-Gesandter-Übersetzer', *Sitzb. Heidelberg. Akad. Wiss., phil.-hist. Kl.* (1974), p. 78, gives the relevant information on the translation of *On sects*. Burgundio's Greek manuscripts are discussed by N. G. Wilson, 'Aspects of the Tradition of Galen', in G. Cavallo (ed.), *Le strade del testo* (Bari, 1987), p. 54; and 'New Light on Burgundio of Pisa', *Studi italiani di filologia classica*, n.s. 3, 4 (1986), 113–18.

⁴ Cf. R. J. Durling, 'Corrigenda and Addenda to Diels' Galenica', *Traditio* 23 (1967), 470.

⁵ The Ravenna version begins: 'Medicine artis...', that of Burgundio: 'Medicinalis artis...'. There are many similar discrepancies throughout the commentary.

Burgundio, than that Burgundio retained an earlier version of *On sects* as the base text for the commentary. Nonetheless, given that Burgundio translated *On sects* only at the end of his long life, it remains possible that his translation of the commentary was made at an earlier date. But whatever the identity of the translator, there can be no doubt at all that he fitted his version of the commentary around an already existing translation of the Galenic text.

The ascription of the commentary to John is, if anything, even more problematical. John of Alexandria is a very shadowy figure indeed, whose activities, works, and even dates are all disputed.⁶ Authorship of this commentary is attributed to him in only two manuscripts, Paris, Bibl. nat. lat. 6865, and Académie nationale de médecine 51, and in a passing reference in a medieval plague tract. In the 1515 edition of the Latin Galen only the prologue seems to be given to John. In six manuscripts and in the *editio princeps* of 1490 no author is named, and in another manuscript, Munich, lat. 5, the preface is ascribed to one Cascacor (or Cascator).⁷ To complicate matters further, there exists another commentary on *On sects* which, to say the least, has very close links with the John commentary. Of the two names given for its author, one, Gessius, in Vatican, Pal. lat. 1090, fo. 1r, is that of a famous Alexandrian professor of medicine in the late fifth century, the other, Agnellus, that of an iatrosophist from Ravenna in the sixth century. That, in the form in which we have it, this commentary goes back to Agnellus is made certain by the subscription in Milan, Ambr. C 108 inf.: 'Ex voce Agnello yatrosophista ego Simplicius Deo iuvante legi et scripsi in Ravenna feliciter.' Similar subscriptions accompany commentaries in the same manuscript on Galen's *Art of medicine*, *On pulses*, and *Method of medicine, for Glaucôn*, and scholars have often assumed that they represent the actual lectures of Agnellus as taken down by his pupil Simplicius.⁸ Hence, in 1981, while Pritchett's edition was in the press, Leendert Westerink and his pupils at Buffalo published an edition and English translation of these lectures under the name of Agnellus of Ravenna.⁹ The complications do not end here, for, as Temkin and Beccaria showed, there also exist,

⁶ The fundamental survey remains that of O. Temkin, 'Geschichte des Hippokratismus im ausgehenden Altertum', *Kyklos* 4 (1932), 51–80, with full citation of Greek, Latin, and oriental sources. The relationship of this John to John the Grammarian and John Philoponus is still far from settled.

⁷ O. Temkin, 'Studies on Late Alexandrian Medicine. I. Alexandrian Commentaries on Galen's *De sectis ad introducendos*', *Bulletin of the History of Medicine* 3 (1935), 405–30, cited according to the reprint in O. Temkin, *The Double Face of Janus and Other Essays in the History of Medicine* (Baltimore, 1977), pp. 178–97, discusses this commentary in detail, and, p. 182, prints the reference from the plague tract in Turin, Bibl. naz. F. V 25. His emphasis on the weakness of this attribution, p. 189, was taken up by A. Beccaria, 'Sulle tracce di un antico canone latino di Ippocrate e di Galeno. III. Quattro opere di Galeno nei commenti della scuola di Ravenna all'inizio del medioevo', *Italia medioevale e umanistica* 14 (1971), 6. Some manuscripts include as an ending chapters 2–8 of the *Gynaecia* of Vindicianus, ed. V. Rose (Leipzig, 1894), pp. 428–36, in a recension similar to that in Leipzig, Universitätsbibliothek 1118 (=K. Sudhoff, 'Zur Anatomie des Vindicianus', *Archiv für Geschichte der Medizin* 8 [1915], 417–20). This extract is printed as Appendix C by Pritchett, but wrongly identified by him as coming from the pseudo-Galenic *Introduction to medicine*.

⁸ Temkin and Beccaria, op. cit. (n. 7). Cf. also N. Palmieri, 'Un antico commento a Galeno della scuola medica di Ravenna', *Physica* 23 (1981), 197–295, editing the commentary on *For Glaucôn*.

⁹ Agnellus of Ravenna, *Lectures on Galen's De sectis*, Arethusa Monographs viii (Buffalo, 1981). Unfortunately, this group did not know of the existence of the Vatican manuscript and its alternative ascription. A third manuscript, Karlsruhe, Reichenau 120, contains a selection of anonymous fragments. In this paper, I use Agnellus to refer to the text of the Buffalo edition, without implying any opinion on the question of authorship.

in a fragmentary Berlin papyrus and in a manuscript from Bologna, passages in Greek from a commentary (or commentaries) on *On sects*, ascribed to 'Arch...des' and Archelaus, which correspond closely to sections in the Latin of Agnellus.¹⁰

To resolve the question of authorship is far from easy. Although Agnellus' text obviously derives from a Greek original, it is not clear whether he was giving for a Latin audience medical lectures based to a large extent on those of an earlier scholar, e.g. Gessius, that he had heard or read in Greek, or whether, despite his epithet 'iatrosophistes', he was acting merely as a translator. Indeed, if Zetzel is right, the statement that Simplicius took down the Latin 'ex voce Agnello' means only that Agnellus read out the Latin to the scribe, and offers no support for the theory that we have the actual medical lectures of Agnellus.¹¹ Pritchett without any argument or discussion dismissed Agnellus' lectures as an early translation of John's Greek, and equally brusquely annexed the Berlin papyrus as 'a small portion of John's commentary'. He said nothing about the Bologna fragments, or about the problems of authenticity that they raise.¹² Temkin, on the other hand, thought that much of the correspondence was not the result of translation, plagiarism or deliberate takeover of others' lectures, but an inevitable consequence of the same 'type' of lecture on the same text, an idea that found favour also with Beccaria.¹³ Lecturers used the same language because they were lecturing on the same subject within the same medical and philosophical tradition, and it would be foolish in such circumstances to seek to establish priority of authorship or to assign originality.

Such a cautious formulation, however, minimises the degree of overlap. As Westerink and his group show, within the commentary proper there is an almost complete correspondence between Agnellus and John, with one exception. In John the relevant sections of the Galenic text are given as blocks at the beginning of each division of the commentary, in addition to being interspersed as phrases and short sentences within the commentary itself.¹⁴ Only in the prologues are there substantial differences, but even here the parallel passages are many, albeit put together in a

¹⁰ P. Berl. 11739 (= Pack² 456), edited by E. Nachmanson, 'Ein neuplatonischer Galenkommentar auf Papyrus', *Göteborgs Högskolas Årsskrift* 31 (1925), 201–17; summarised in M.-H. Marganne, *Inventaire analytique des papyrus grecs de médecine* (Geneva, 1981), n. 72. The Bolognese fragments, from Bologna, Bibl. Universitaria, gr. 3632, are cited according to the page and line in G. Baffioni, 'Inediti di Archelao da un codice bolognese', *Bollettino del Comitato per la preparazione della edizione nazionale dei Classici greci e latini*, n.s. 3 (1955), 57–76. Baffioni, p. 60, working from photographs, suggested that Nachmanson's reading of the author's name in the Berlin papyrus was far from certain, and proposed to read 'Ἀρχε(λά)ου'. Arabic authors knew of an Alexandrian 'Anqilaus' (which in Arabic differs minutely from Archelaus), who was said to have made the Alexandrian summaries of Galenic 'set texts', cf. Temkin, 'Hippokratismus', pp. 51–2, 71–7; *The Double Face of Janus*, pp. 190, 208. Given that the name Agnellus is found elsewhere in Ravenna, Temkin's suggestion that it might be corruptly derived from the Greek seems unlikely.

¹¹ J. E. G. Zetzel, *Latin Textual Criticism in Antiquity* (New York, 1981), p. 228, arguing from other similar formulae that Agnellus was Simplicius' assistant, who read out to him the text from another manuscript. If he is right, the subscription provides evidence only that a Latin translation of Alexandrian lectures on the Galenic 'set texts' was in circulation at Ravenna. Westerink, *Agnellus*, pp. xii–xiii, also considers (and rejects) the possibility that Agnellus was simply dictating his translation to Simplicius. Whether these lectures were actually delivered as such is, however, irrelevant to this paper. Agnellus' title implies some medical instruction at Ravenna, and it is probable that it in some way reflected that of Alexandria.

¹² Op. cit. (n. 2), p. vii.

¹³ Temkin, op. cit. (n. 7), pp. 189–93; Beccaria, op. cit. (n. 7), 16–23. Beccaria's article was left unfinished at his death, so his full solution to the problems was never revealed.

¹⁴ A list of correspondences within the commentary is given at *Agnellus*, x–xi; but only the opening section of the prologue is here linked with John.

Table 1. *Prologue parallels*

| Agnellus | John |
|------------|---------------|
| 2.1-4.14 | = 1.1-2.29 |
| 6.5-13 | = 5.28-35 |
| 10.16-20 | = 2.32-3.34 |
| 12.12-31 | = 3.34-44 |
| 14.5-17 | = 3.45-4.6 |
| 22.7-27 | = 14.62-15.26 |
| 24.9-13 | = 11.13-19 |
| 24.17-19 | = 10.3-4 |
| 26.1-20 | = 9.50-10.67 |
| 26.1-28.24 | = 11.13-13.48 |
| 30.9-15 | = 17.56-60 |
| 34.33-36.2 | = 17.4-18.8 |

Table 2. *Sections which discuss identical topics*

| Agnellus = John |
|---------------------------------|
| 20.2-34 = 6.42-8.45, 10.7-11.12 |
| 22.31-24.3 = 15.31-16.3 |
| 28.27-8 = 13.52-4 |
| 34.22-33 = 17.61-3 |
| 36.10-15 = 18.14-17 |

different order. Table 1 gives parallels in the prologue.¹⁵ In addition to these sections with a direct verbal correspondence, there are others (Table 2) which discuss identical topics in ways that could represent either summaries or expansions of identical material. But the structure of the argument in both Agnellus and John shows signs of dislocation, almost as if notes had been misplaced, and sections inserted into or lost from the lectures as originally delivered.¹⁶ Some of the extracts attributed to Archelaus also seem to correspond closely to the Latin, although the very nature of the extracts themselves makes it difficult to decide which sections come from lectures by Archelaus and which represent other jottings.¹⁷

The consequences of these overlappings for the constitution of the text of John and Agnellus, and of any Greek original, have been variously estimated. Pritchett

¹⁵ Line numbers in John are given by Pritchett's numbering. The Buffalo group cited John by the lines and pages of the 1515 Pavia edition, which do not correspond to those recorded in the margin by Pritchett. He, somewhat oddly, used the modern page numbering in the Wellcome Library copy of the 1490 edition, and not the original signatures, sigs aa ii-bb i.

¹⁶ In Agnellus, the section on p. 10.21-33 fits oddly; and chapters 7 and 8 are doublets, perhaps representing two different original Greek accounts. The order of the topics within them differs from that in John. John's account of the human body on pp. 9-10 should follow the definition of physiology, p. 11, and the section on temperaments, p. 10, should come between the discussion of humours and that of faculties on p. 9, for it is the temperaments, not the actions, that are nine in number, 10.3-4. The discussion of definitions of medicine, 14.1-15.26, interrupts the account of the various parts of medicine, and John's explanation of the 'modus doctrinae' seems to confuse debates within the medical sects with the 'modus compositivus' and 'modus resolutivus', familiar from the *Art of medicine*.

¹⁷ The section on the causes of voice and speech, Archelaus, p. 65, lines 20-5, which has no parallels in Agnellus and John or in the text of Galen, is thus unlikely to come from a commentary on *On sects*. The sections from the prologue would appear to end on p. 63, line 27, and the following sections, p. 64, lines 1-19, would then have formed part of the actual commentary.

brusquely dismissed the Agnellus version as being of no value whatsoever for an edition of John, and refused to mention in the *testimonia* to his edition relevant portions from a further fragmentary commentary on *On sects*, by Palladius, on the curious grounds that it was both incomplete and damaged.¹⁸ Westerink and his pupils, however, were aware of the close relationship between the two Latin commentaries, and used John at times to correct Agnellus. In their notes they also provided the Greek for several of the technical terms in Agnellus' exemplar, and drew attention to other parallels in late philosophical and medical commentaries. Unfortunately, their prior publication meant that they were unable to derive as much benefit from the text of John as might have been hoped, and their somewhat vague description of it as 'freely written, often much condensed' does not do justice to its translator.¹⁹ On the whole, the differences between Agnellus and John reflect the differences in styles of translation, not a fundamentally different Greek *Vorlage*.²⁰ Taken together with the fragmentary Greek commentaries, they often make it possible to decide between errors in the underlying text, errors of translation, and errors in the process of transmission of Agnellus and John, distinctions which Hankinson does not always remember to make.

The first of the two passages that he discusses, p. 11 Pritchett, concerns the various divisions within the theory of medicine. The text presents a variety of problems, not least in its initial division of the 'speculativum' into 'phisiologion et ethiologion', which conflicts with the discussion later down the page, which adds a third division, *σημειοτικόν*, semeiotics, 'sumoticum'. The fact that Agnellus, 24.10–11, and Palladius, 76.16, also have a triple division confirms Hankinson's supposition that the original of John also had that division. Whether the word was lost in the Greek *Vorlage* or in the course of the transmission of the Latin is unclear, although the latter is perhaps more likely.²¹

John continues with a breakdown of 'phisiologion' into seven modes, 'elements, temperaments, members, humours, faculties ("virtutes"), actions ("sinergie"), and spirits'. The discussion of the various sections and subsections, however, precedes this division, pp. 9–10, and takes as its ostensible starting point the question whether medicine has one or more subject matters. According to John, man is in fact a composite, made up of elements, humours, three faculties (animal, vital, and natural), and actions, under which heading are wrongly included the nine types of temperament, 10.3–4. Neither here nor anywhere else in the treatise is there mention

¹⁸ Pritchett, *op. cit.* (n. 2), pp. vii, x. What remains of the commentary by Palladius, another late Alexandrian professor, was edited by G. Baffioni, 'Scolii inediti di Palladio al *De sectis* di Galeno', *Bollettino del Comitato per la preparazione della edizione nazionale dei Classici greci e latini*, n.s. 6 (1958), 61–78. Palladius is quoted by page and line in this edition.

¹⁹ Agnellus, pp. x, xii, where it is clear that they relied only on the printed edition of 1515, and on a section published by Beccaria, *op. cit.* (n. 7), 7–8. Given the improvements in Pritchett's text over the early printed editions, they were unlucky in the timing of their edition, which is in every way far superior to Pritchett's.

²⁰ If the texts behind John and Agnellus represent two separate transcriptions of the same set of lectures, this would explain some of the (relatively minor) omissions and alterations as well as their close verbal agreement. I have noticed exactly similar phenomena when examining the various versions, both printed and manuscript, of the Paduan medical lectures of Giambattista da Monte (fl. 1540).

²¹ In the *Commentary on Hippocrates' Aphorisms* by Stephanus, ed. L. G. Westerink, *Corpus Medicorum Graecorum*, xi 1.3.1 (Berlin, 1985), an exactly similar omission is found on p. 34, line 20, where *αιτιολογικόν* was lost from the triple division of medicine, and is restored from the later discussion at p. 36.25–8. 'Semeiotics' as a subdivision of theoretical medicine is found at least as early as Ps. Plutarch, *De Homero*, 200–2.

of the 'spirits' as such, and the absence of spirits from the classifications of Agnellus, 24.11–13, Palladius, 76.17, and Stephanus, 34.21 Westerink, would support the idea that in the original Greek prologue only six subdivisions of physiology were given. On this sixfold classification, the three spirits, animal, vital, and natural, which were to play such an important role in Arabic and later medieval medicine, are subsumed under 'virtutes', and do not require to be singled out a second time.

The point at issue here, the possible independence of the three spirits in John, has an importance beyond the merely textual, for it throws considerable light on the development of a Galenist system of medicine. As Temkin has shown, Galen himself was far from certain of the existence of three *spirits*, although he accepted three *faculties*, animal, vital and natural, and was willing to consider the presence of related spirits at least hypothetically.²² However, in *On my own opinions*, the work in which at the end of his life he summarised his doctrines, he talked only of three principles or three faculties, not of three spirits.²³ Apart from this passage in John, if, in fact, it was genuinely present in the original Greek, the earliest reference to the three spirits would seem to be in the *Questions and Answers* of Ḥunain ibn Ishāq, a celebrated Christian doctor and translator in Baghdad, d. 873.²⁴ After Ḥunain, this classification became standard throughout the Muslim world and in the later medieval West. If the text of John here represents accurately Greek lectures at sixth-century Alexandria, then the credit for this logical systematisation of Galen's ideas rests with the Greeks, not their later interpreters. But the balance of probability is against this. Agnellus' text, which at this point sticks closely to that of John, does not include spirits in its classification; and, perhaps more conclusive, the classification 'spirits' is alone in being neither described nor further subdivided into its constituent parts. Given the fact also that this part of the prologue shows other signs of readjustment, and that the three spirits are introduced very awkwardly into what is otherwise a familiar Alexandrian classification, one may suppose that, at the very least, there has been some modification at this point of what was originally delivered as a lecture in Greek. Whether the change from six parts to seven was made in Greek before or after the time of Ḥunain, or whether the sevenfold classification is due to a much later Latin translator wishing to harmonise his text with what everybody then accepted as Galen's belief, is, on this evidence, uncertain. The latter hypothesis, however, seems to me most likely.

A slightly different problem is raised by John's division of the causes of disease into 'procatarticon proegumenon proeptionicon'. As Hankinson notes, the third term is not found in Galen, and the standard item of the trio is τὸ συνεκτικόν. Agnellus, 24.22 and 25, has 'xy/xinection', which is given also by Stephanus and Theophilus.²⁵ Undoubtedly, then, this was what stood in the Greek original of John.²⁶ But we are not thereby entitled to emend the Latin text as it stands, for the fact that 'proeptionicon'

²² O. Temkin, 'On Galen's Pneumatology', *Gesnerus* 8 (1951), 180–9, reprinted in *The Double Face of Janus*, pp. 154–61.

²³ See the summary given by me in 'Galen's Philosophical Testament: "On my own opinions"', in J. Wiesner (ed.), *Aristoteles. Werk und Wirkung, Zweiter Band. Kommentierung, Überlieferung, Nachleben* (Berlin and New York, 1987), pp. 41–4. The only spirit mentioned in this text is the psychic spirit.

²⁴ O. Temkin, 'Byzantine Medicine: Tradition and Empiricism', *Dumbarton Oaks Papers* 16 (1962), 97–115, reprinted in *The Double Face of Janus*, pp. 202–22 n. 54, drew attention to the possible significance of the sevenfold division in John.

²⁵ Stephanus, p. 36.26 Westerink; Theophilus, *Commentary on Aphorisms*, ii.247 Dietz.

²⁶ He also employs the same examples that led Westerink, p. 160, to declare that Agnellus had no understanding of the meaning of the terms.

is read twice in a variety of Latin manuscripts strongly suggests that the corruption had already taken place in the Greek before the Latin translation was made. This is even more likely if, as I think we should, we assume the two-fold process of corruption outlined by Hankinson in his note 20.

An exactly similar development can be posited for another technical term recorded a few lines later. The Latin translation divides the 'sumoticon' into 'diagnosticon', 'pronosticon', and 'moneuticon quod est commemorativum', 11.26. Once again, the third term is anomalous. The usual term is τὸ ἀναμνηστικόν, found in Stephanus and Theophilus, and translated in Agnellus as 'anamnesticon'.²⁷ The translator of John found instead τὸ μνημονευτικόν, which he transcribed and provided with an accurate gloss.²⁸ The presence of 'in' immediately before 'moneuticon' might suggest that the initial three letters were lost in Latin rather than Greek, but this is not conclusive. On either explanation, there can be no doubt that, for some reason, by the time this Greek commentary was turned into Latin, it exhibited an unusual version of the third term, which is unlikely to have been present in the original lecture in the sixth century.

The second section chosen by Hankinson for comment comes from the first division of the commentary proper, and falls into two parts. The first of these, 20.61–4 Pritchett, which attempts to define 'intention', is obviously corrupt. I give Pritchett's text and Hankinson's translation:

intentio est considerato [*sic*] finis; finis vero secta perfecta. sed ista ita sunt quemadmodum sagittator, posito a longe signo, intenderet dirigere sagittam, et, ut direxerit, finit intentio.

An aim is an apprehension of the goal; the goal the completion of the αἵρεσις. This is like the case of the archer who intends to direct an arrow towards a target placed at some distance, and, when he has so directed it, the aim ?finishes?.

Hankinson is on the right lines in understanding this as deriving from the Stoic distinction between an aim and its achievement, and in his notes he reports suggestions for the troublesome 'secta perfecta' and 'finit intentio'. Both cruxes can be resolved by a consideration of the manuscripts and the parallel witnesses. According to Pritchett's apparatus, two manuscripts have the reading 'finis vero primo secta perfecta', and a third, B, the most important in its group, has 'finum primo secta perfecta'. The presence of the even more meaningless 'primo' indicates a misreading of a doublet of 'perfecta', in which 'per-' was written as a compendium. The error here thus lies in the Latin tradition, not with the underlying Greek. The solution is provided by Agnellus, 38.13, whose Latin is otherwise identical with that of John: 'intentio est consideratio finis, finis vero res perfecta'. In John, 'res' was first attracted into 'vero', a procedure made even easier if 'vero' was written as a compendium, and if there was also a duplication of 'perfecta'. Further support for 'res perfecta' is given by the Greek of Archelaus and Palladius, who keep the same definition and the same example of the archer. According to Archelaus, p. 63.13–14: σκοπὸς δ' ἐστὶ προεπινοούμενον τέλος, τέλος δὲ τὸ ἀποτέλεσμα τοῦ σκοποῦ, while for Palladius, p. 78.5–6: σκοπὸς μὲν γάρ ἐστι προεπινοούμενον τέλος, τέλος δὲ σκοπὸς ἀνυσθεῖς. 'Τὸ ἀποτέλεσμα' and 'ἀνυσθεῖς' confirm the correctness of 'perfecta', and, although from the repetition of σκοπός one might assume that

²⁷ Stephanus, p. 36.28 Westerink; Theophilus, ii.247 Dietz; Agnellus, 26.26–7; cf. also Stephanus, *Commentary on Hippocrates' Prognosticon*, ed. J. M. Duffy, *Corpus Medicorum Graecorum*, xi 1.2 (Berlin, 1983), pp. 1.13 and 42.10–11 (*anamnesis, diagnosis, prognosis*).

²⁸ One explanation for the corruption might be confusion with the faculty of memory, mentioned earlier on the same page, and described by Stephanus, p. 36.23 Westerink, as the μνημονευτική δύναμις.

'intentio' ought to have been repeated in the Latin, Agnellus' 'res' is adequate, if somewhat ambiguous.²⁹ The sentence should then be translated: 'An aim is an apprehension of an end, an end the thing's [i.e. the intention's] achievement.'

The evidence of Agnellus further supports Hankinson's hesitant interpretation of the last words. Although the suggestion that one might read 'ut direxerit finis, est intentio' is attractive, especially as one manuscript of John, R, has 'finis' for 'finit', Agnellus, 38.16–18, is decisive against a change of text. Not only does he have a similar text, 'ubi direxerint finit ipsa intentio', but this is followed by an extra sentence confirming the presence of 'finit': 'Sic et medicus intentionem habet operandi et faciendi salutem, at ubi sanauerit finit ipsam intentionem'. The Greek of Archelaus, of which the Latin of Agnellus is here a paraphrase, is more ambiguous, but offers at best only weak support for an emendation of 'finit' to 'finis': ἡ γὰρ ὑγεία, πρὶν μὲν ληφθῆ, σκοπὸς ἐστὶ τῷ ἱατρῷ, ληφθεῖσα δ' ἤδη τέλος γέγονε. The final sentence may then be translated thus: 'and when he has so directed it, his aim finishes'.

In the next paragraph John passes brusquely to an exemplification of the four causes within medicine. As Hankinson notes, Pritchett manages to confuse the efficient and the final causes in his identifications of 'factibilis' and 'perfectibilis'. As Westerink and his colleagues also remark, these expressions, which are found too in Agnellus, correspond to τὸ ποιητικόν and τὸ τελικόν, as in the parallel passages in Archelaus, p. 63.5–6, and Palladius, p. 78.8–10 (although given there in a different order). The parallels in Agnellus and Archelaus also establish beyond any reasonable doubt Hankinson's contention that Pritchett was wrong to bracket the next sentence and its exposition of the four philosophic causes in shorthand form, 'esu. exu. div. dio.' As Archelaus puts it, τὸ μὲν ποιητικὸν αἴτιον καλεῖται ὑφ' οὗ γίνεται τὸ γενόμενον, ὑλικὸν ἐξ οὗ, ὀργανικὸν δι' οὗ, τὸ δὲ τελικὸν δι' ᾧ γίνεται τὸ γενόμενον.³⁰ But what was in the Latin translation of John? Hankinson rightly emends 'div.' to 'diu', and suggests that an original ὑφ' οὗ was transliterated first as 'ifu' and then misread by the scribe [of what?] as 'isu'. But the manuscripts are agreed in reading 'esu', not 'isu', and the change from 'isu' to 'esu' is not easy to explain. The version of these causes in Agnellus, 38.27–8, 'efu, exu, diu, dio', offers a simpler explanation. The common ancestor of both Agnellus and John read ἐφ' οὗ, which, as Westerink notes, is an obvious error for ὑφ' οὗ. This was transcribed as 'efu', which, from a confusion between 'f' and 's', was read as 'esu'.³¹

The close relationship between John and Agnellus can be exploited, even in the absence of the Greek, to reveal an underlying text and, where necessary, to correct the readings of the editors. So, for example, the use of 'perfectivus' to describe an art in John, 8.29 and 36, and 10.9, confirms the existence in the Greek of a rare technical term, ἀποτελεσματικός, transcribed in Agnellus 20.20 and 26, and 22.2 as 'apudelismaticon' and glossed as 'id est perfectium'. Similarly, the agreement of both John, 13.1, and Agnellus, 28.20, in describing a hypothetical doctor who might

²⁹ If John's original Greek corresponded to that of Palladius, the absence of 'intentio' might be harder to explain; if, however, it corresponded to that of Archelaus, the noun ἀποτέλεσμα translated as 'res perfecta' would make adequate sense by itself. Alternatively, one might assume that τοῦ σκοποῦ was not included in the original Greek.

³⁰ Archelaus, p. 63.25–7. Judging from the parallels in Agnellus and John, one may wonder whether the final δι' ᾧ should not also be changed to δι' ὅ.

³¹ Given Pritchett's frequent misunderstandings of the Latin, it is not impossible that the misreading 'esu' is due to him, rather than to the medieval scribes. One cannot exclude the possibility that the same (relatively simple) error ('ifu' → 'efu') was made independently in both traditions.

want to go to Scythia or Francia, implies the existence in their Greek exemplar of *Φραγκία*, a geographical term which, according to the lexika, is not found in Greek before the ninth or tenth century.

Rare idioms may also show through the Latin. Discussing the opening of Galen's second sentence, ἐξ ὧν δ' ἂν τις ἢ μὴ παρούσαν ὑγίειαν ἐργάζοιτο, both John and Agnellus report an answer to the question, 'Why did Galen say "ἐξ ὧν" ("ex quibus autem") instead of "by what means" ("quali [or ex quo] organo")?''.³² Neither answer makes sense. John, 22.19–20, reads according to Pritchett: 'hec prothesis accipitur: sic enim in figuris grammaticorum'. Agnellus, 40.19–21, is equally obscure: 'hic prothesis prothes accipit: sic enim infantes grammaticorum dicent, pro T ponent D'. His commentators' explanation, p. 162, pins the blame fully on Agnellus:

prothesis accepit [sic] i.e. uses a preposition (ex) instead of a noun (organum). This what [sic] the Greek source must have said; Agnellus misunderstands prothesis as meaning 'substitution' (as if from the Latin pro, 'instead of').

This is bad sense, as well as bad Latin, for it does not explain at all why grammarians should decide to replace 't' by 'd'. But grammarians were certainly involved in the explanation in the original Greek, for most of the manuscripts of John agree with Agnellus in reading 'infantes', not 'in figuris'. As Westerink and his seminar brilliantly showed (p. 162), this is a direct translation of a late Greek idiom, *παῖδες* + genitive, which is used to represent the members of a group, here grammarians.³³ John's 'hec prothesis accipitur' is grammatically better than Agnellus' version, even if, with Agnellus' editors, one chooses to excise 'prothes' as a dittography. The fact that the question was raised in the original Greek also excludes an answer based on the difference between the use of a Latin preposition and a Latin noun, 'organum', and the absence from the Greek parallels of a Greek noun equivalent to 'organum' is a strong objection to the sort of explanation suggested by Westerink and his pupils.

The clue to the puzzle is given by Archelaus, p. 64.4–5, who quotes the Galenic lemma and then says: τὸ γὰρ «ἐξ ὧν» ἀντὶ τοῦ «δι' ὧν» παρέλαβε. The original question must thus have focused on Galen's choice of one Greek preposition over another, and since both John and Agnellus use a specifically Greek idiom to refer to the grammarians, the original answer must have included an exposition of some point of Greek grammar, syntax, or lexicography. Such an answer would not have been easy to put into Latin, particularly if the underlying Greek had been corrupted, and one can see why John's translator (or later copyists) faltered. In John, all that is required is a change to 'infantes' (the reading of most of the manuscripts), with the consequent incoherence blamed on the translator. Agnellus' text, by contrast, seems to have been better translated from the Greek, and any corruption is more likely to have occurred during the process of transmission in Latin. But his explanation, as it stands, is open to the objection that the exchange of T and D has nothing to do with Galen's Greek or with the grammatical exposition found in Archelaus. Such a comment, however, would be appropriate for a scribe (or user) of a manuscript in which Greek words such as 'apotelesmatikon' could be transcribed as 'apudelismatikon', and there can be little doubt that it arose within the Latin tradition. Whether it goes back to Agnellus is harder to determine. Although this clause does

³² Compare the similar question about the preposition *περί* in the title, Agnellus, 34.33–6; John, 17.4–6. Pritchett further complicates matters by attaching the lemma *ex quibus autem quis* to the end of the previous paragraph.

³³ For the idiom, see R. Renehan, *Greek Lexicographical Notes* (Göttingen, 1975), pp. 156–7.

make sense in context, the implied justification of Galen's wording by means of a criticism of grammarians' slovely habits is at variance with the later positive appeal, at Agnellus, 50.2.3 = John, 26.34–5, to grammatical usage and would also be unique in its reference to a Latin situation. There are two further possible solutions to this textual problem. One is to assume that, as in John's version, the grammatical explanation was not turned into Latin, but was provided by a later scribe. But the parallel instance at Agnellus, 50.2–3 = John, 26.34–5, of an appeal to grammarians' usage, which is also introduced by 'dicunt', indicates that Agnellus was prepared at times to include grammatical points in his translation, and hence the clause that follows 'dicent' could well have formed part of his translation from the Greek, where it related directly to Galen's choice of prepositions. On this hypothesis, the text of the Milan manuscript of Agnellus, kept by the Buffalo editors, incorporates a scribal corruption (or wrong correction) of the original Latin version, for which I suggest the following reading:

hic prothesis [prothes] accipitur: sic enim et infantes grammaticorum dicent, pro EX ponent DIA.³⁴

Here the preposition is used (is acceptable?), for, the grammarians say, they will put 'ἐξ' instead of 'διά'.

In other passages, the version of John points to errors and misunderstandings in that of Agnellus. At 26.30–2, Agnellus apparently quotes from 'Eraclites in Prognostica sua', a reference which the Buffalo commentators, pp. 160–1, wish to associate with possible commentaries on the Hippocratic *Prognosticon* by Heraclides of Tarentum and Heraclides of Erythrae.³⁵ John gives no author or source, but offers instead a loose version of the Hippocratic text. Whether both title and author were to be found in the original Greek is uncertain, but if an unusual author such as Heraclides had been named, one might have expected his name to have survived in John. But there is no reason to suppose that this very famous section from the opening of the *Prognosticon* was read, at this late date, in a commentary by either Heraclides, especially as the pair make another, equally erroneous, appearance a few paragraphs earlier. At 22.24–7, in a learned little note, Agnellus distinguishes between the two men and ascribes a definition of medicine as 'disciplina sanorum, aegrotantium et neutrorum' to Heraclides of Erythrae. John, 15.25–6, claims a very different authority for this definition, Herophilus of Chalcedon, an attribution he shares with several other writers.³⁶ Agnellus' learning is here misplaced, and it is an open question whether he made a similar misattribution of the passage from Hippocrates or whether, as is perhaps more likely, the name became corrupted under the influence of the earlier discussion. What is also interesting is that the quotation from the *Prognosticon* is not taken from the Latin version that circulated in Northern Italy and was associated plausibly by Beccaria with the Ravenna school.³⁷ Both

³⁴ If 'prothes' is not a dittography, which *prima facie* it is, one might also suggest: 'hec prothesis pro DIA...'

³⁵ These passages are not mentioned in the most recent surveys of Hippocratic commentary in the Hellenistic period, W. D. Smith, *The Hippocratic Tradition* (Ithaca, 1979), and F. Kudlien, 'Hippokrates-Rezeption im Hellenismus', in G. Baader and R. Winau (edd.), *Die hippokratischen Epidemien* (Stuttgart, 1989), pp. 354–76. Whether Heraclides of Erythrae wrote a commentary on the *Prognosticon* is most uncertain.

³⁶ H. Von Staden, *Herophilus. The Art of Medicine in Early Alexandria* (Cambridge, 1989), pp. 89–114, T. 42–5, 48.

³⁷ See the text as edited by H. Kühlewein, 'Die handschriftliche Grundlage des Hippokratischen Prognostikon und eine lateinische Uebersetzung desselben', *Hermes* 25 (1890), 113–40, p. 123.

Agnellus and John's translator appear to have made their own independent versions, with different results: Agnellus is generally accurate, John much freer and concerned to give some sense, albeit distant from the Greek.³⁸

This paper has had a dual purpose; to draw attention to the complexities that lurk behind the words of John of Alexandria, and to emphasise, with Hankinson, the close relationship between medicine and philosophy in Late Antique Alexandria, and beyond. Westerink long ago surmised that a would-be medical student at Alexandria might find himself sitting at the feet of a medical teacher who had already introduced him to the rudiments of philosophy.³⁹ Here the unity between medicine and philosophy insisted upon and put into practice by Galen became institutionalised, bringing with it, for perhaps the first time, a clear distinction between 'proper' medicine and mere handiwork.⁴⁰ It was a combination of intellectual skills, not to speak of set texts, that was transmitted to N. Italy, to the Syriac Christians of the Near East, to the Arabs, to the medieval Latin West, and, ultimately, to the Renaissance.⁴¹ It is no coincidence that many of the most important philosophers of the East, for example, Avicenna, Averroes, and Maimonides, were also famous for their writings on medicine, or that, in the sixteenth century, the most vigorous intellectual debates at European universities raged precisely over the borderland between medicine and philosophy. John of Alexandria and Agnellus of Ravenna were not the intellectual equals of a Rhazes or a William Harvey, but in their humble way they shared in the same tradition and the same purpose – to interpret the truths of medicine and philosophy for the benefit of the sick and for the greater understanding of man.⁴²

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³⁸ The almost illegible word at Agnellus, 26.31, transcribed in the apparatus as 'ertineus', is likely to have been 'experiens' (or just possibly 'credendus'): cf. the old Latin version, 'Praesciens enim et praedicens circa aegrotantes praesentia et praeterita et quae futura sunt et quae praetermittunt aegroti experiens creditur magis intelligere aegrotantium rationes ita ut audeant permittere se ipsos homines medico.'

³⁹ L. G. Westerink, 'Philosophy and Medicine in Late Antiquity', *Janus* 51 (1964), 169–77. This was also stressed by Temkin, 'Alexandrian Commentaries', and 'Geschichte des Hippokratismus', above, nn. 6–7.

⁴⁰ O. Temkin, 'Greek Medicine as Science and Craft', *Isis* 44 (1953), 213–25, reprinted in *The Double Face of Janus*, pp. 137–53. Note his observation, p. 225 = p. 153, that 'From now on, there is only one medical science, based on just those parts of philosophy which Galen accepted.'

⁴¹ See J. Duffy, 'Byzantine Medicine in the Sixth and Seventh Centuries: Aspects of Teaching and Practice', *Dumbarton Oaks Papers* 38 (1984), 21–7; R. B. Todd, 'Philosophy and Medicine in John Philoponus' Commentary on Aristotle's *De Anima*', *ibid.*, 103–10; E. Lieber, 'Galen in Hebrew: the Transmission of Galen's Works in the Mediaeval Islamic World', in V. Nutton (ed.), *Galen: Problems and Prospects* (London, 1981), pp. 167–86; C. B. Schmitt, 'Aristotle among the Physicians', in A. Wear, R. K. French and I. M. Lonie, *The Medical Renaissance of the Sixteenth Century* (Cambridge, 1985), pp. 1–15, reprinted as ch. VII in his *Reappraisals in Renaissance Thought* (London, 1989).

⁴² In a forthcoming paper, 'P. Berol. 11739A e i commenti tardoantichi a Galeno', in the *Acts of the 1990 Capri conference on ancient medicine*, Daniela Manetti discusses, from a different standpoint, John, Agnellus, and Archelaus. Her reexamination of the Berlin papyrus (above, n. 10) confirms Nachmansohn's reading of the author's name.