

THE MANUSCRIPT LECTURE-NOTES OF ALEXANDER MONRO *PRIMUS* (1697-1767)

by

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INTRODUCTION

In the latter half of the eighteenth century, Edinburgh by common consent possessed the leading medical school in the English-speaking world. To it flocked students from all over Britain and her colonies in North America and the Caribbean. In the 1770s, half a century after the foundation of the Faculty, they came to hear men of the calibre of Joseph Black, William Cullen, and Alexander Monro *secundus*, while Robert Whytt and Alexander Monro *primus* had been active teachers until their deaths a decade earlier.

In recent years, historians of medicine have shown increasing interest in the development of medical education in eighteenth-century Edinburgh and in the combination of scientific and social reasons for the transformation of a curriculum at first deliberately based on that of Leyden, to which all but one of the early teachers in the Faculty owed allegiance,¹ into something peculiarly characteristic of the Scottish Enlightenment.

Necessary for any thorough study is a detailed knowledge of what was actually taught to the students as the years passed. While in the cases of Black and Cullen, for example, some inkling of this may be obtained from printed sources,² the same is not true of most of the early Edinburgh teachers. Very importantly, it is not true of either

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¹ This was Joseph Gibson, professor of midwifery. See E. Ashworth Underwood, *Boerhaave's men at Leyden and after*, Edinburgh University Press, 1977, pp. 119 and 123. The reader should also consult Christopher Lawrence, 'Medicine as culture: Edinburgh and the Scottish Enlightenment', University of London PhD thesis, 1984.

² Black's lectures were published after his death: see *Joseph Black, Lectures on the elements of chemistry delivered in the University of Edinburgh . . . now published from his manuscript by John Robison, LLD*, 2 vols., Edinburgh, printed by Mundell for Longman & Rees, London; and William Creech, Edinburgh, 1803. However, see also J. R. R. Christie, *Joseph Black and John Robison*, in A. D. C. Simpson (editor), *Joseph Black 1728-1799: a commemorative symposium*, Edinburgh, Royal Scottish Museum, 1982, pp.47-52.

Cullen's lectures on *materia medica* were published, originally without his authority: William Cullen, *Lectures on the materia medica*, London, T. Lowndes, 1773. They were "very incorrect but well-received and often reprinted" as he later pointed out (William Cullen, *A treatise of the materia medica*, 2 vols., Edinburgh, C. Elliot, 1789, p.5). Also published in his lifetime was: William Cullen, *Institutions of medicine. Part I, Physiology. For the use of students in Edinburgh*, 2nd ed., corrected, Edinburgh, William Creech, 1677 [1777]. His *First lines . . .* too was originally published "chiefly for the use of those gentlemen who attended my lectures" (William Cullen, *First lines of the practice of physic*, 4 vols., 4th ed., Edinburgh, printed for C. Elliot, Edinburgh; and T. Cadell, London, 1784, preface p.iv). See also John Thomson (editor), *The works of William Cullen, containing his physiology, nosology and first lines of the practice of physic: with numerous extracts from his manuscript papers, and from his treatise of the materia medica*, 2 vols., Edinburgh and London, William Blackwood & T. & G. Underwood, 1827.

Monro *primus* (1697–1767) or Monro *secundus* (1733–1817), whose combined influence extended over a period of eighty years, from the very beginnings of the Faculty.

Monro *secundus* wrote books, but these were addressed to his peers and not to students. His father wrote a textbook on osteology which went through many editions,³ and his lectures on comparative anatomy were plagiarized and anonymously published in 1744.⁴ Otherwise, his published work was almost entirely confined to contributions to the *Medical Essays*.⁵

If, therefore, we wish to know in any detail what these men taught to successive cohorts of students we must have recourse to the notes taken by the students themselves, supplemented in the case of Monro *primus* by manuscripts in his own hand, which bear a distinct if not always easily definable relation to what he taught in the classroom.⁶

In an earlier paper⁷ I dated and compared the surviving sets of notes taken from the lectures of Monro *secundus*, of which in my opinion the most important is a set of bound volumes taken down in shorthand by a student from the lectures of session 1773/4, transcribed, and subsequently bought back and annotated by Monro himself.⁸ We have thus an authoritative record of his teaching at the height of his career, with which earlier and later manuscripts can be compared.

In this paper I attempt to do the same for the notes taken from the lectures of Monro *primus*, a task that is just as necessary but in many ways much more difficult. For this there are a number of reasons. First, out of all the manuscripts known to me, only one, ES Haswell,⁹ is so dated and headed that from it we can form a reasonable idea of the contents of the whole course as it was given from day to day in a particular session. Even in this instance, the surgical part of the course, which comes at the end, is not so

³ Alexander Monro, *The anatomy of the humane bones*, Edinburgh and London, Thomas Ruddiman, for Will. Monro; and T. Longman, 1726. This work went through many editions, and Monro's references to them in his lectures provide us with one of the few available means of dating the various student MSS. The editions are fully described in Kenneth F. Russell, *British anatomy 1525–1800. A bibliography*, Melbourne University Press, 1963, pp.160–164.

⁴ *An essay on comparative anatomy*, London, John Nourse, 1744. See Russell, *op. cit.*, note 3 above, p. 164.

⁵ *Medical Essays and Observations, published by a society in Edinburgh*, vols. 1–5 [vol. 5 in 2 pts.] 6 vols., Edinburgh, Ruddimans, 1733–1744. The volumes of the first edition were published at intervals, and they and subsequent editions comprise another valuable tool for dating these MSS.

⁶ See Table. All the Monro manuscripts in Dunedin have been fully described and annotated in Douglass W. Taylor, *The Monro collection in the medical library of the University of Otago*, Dunedin, University of Otago Press, 1979. I also refer briefly in that work to a number of other MSS that are more fully treated in this paper.

⁷ D. W. Taylor, 'The manuscript lecture-notes of Alexander Monro, *secundus* (1733–1817)', *Med. Hist.*, 1978, 22: 174–186.

⁸ Items M 175, [175a], [175b], M 176–9 in Taylor, *op. cit.*, note 6 above. For a full discussion see Taylor, *op. cit.*, note 7 above.

⁹ I have used the following abbreviations: AU = Aberdeen University Library; DNLM = National Library of Medicine, National Institutes of Health, Bethesda, Maryland; DU:M = Dunedin, University of Otago Medical Library; EPH = Library of the Royal College of Physicians, Edinburgh; ES = Library of the Royal College of Surgeons, Edinburgh; EU = Edinburgh University Library; GD = Innes of Stow Papers, Library of the General Register Office (Scotland); LS = Library of the Royal College of Surgeons, London; LW = Library of the Wellcome Institute for the History of Medicine, London; MAC = Medical Archives Centre, Edinburgh; MSL = Library of the Medical Society of London; PPC = Library of the College of Physicians, Philadelphia.

labelled. Second, many manuscripts are clearly composite, as is shown by the presence of different hands and the fact that they often contain material from different teachers delivered at different times. This makes the correct dating of the material, even where dates are given, a hazardous business, and has in the past misled editors, so that a library catalogue entry cannot, unfortunately, always be taken to mean what it says.¹⁰ Third, most of the manuscripts contain only one or two segments of the course, so that where a date is reliably given or can be inferred it is still quite impossible to reconstruct *in toto* the course for that particular session. For example, I have traced (see Table) fifteen recensions of the lectures on the history of anatomy, eight of those on the physiology, and only three of those on the muscles and viscera. All this is in contrast to the case of Monro *secundus*. Several sets of notes taken from his lectures have survived more or less complete. Many of them have the lectures numbered and, although their dating poses its own problems, once that is accomplished we know where we stand. Many other manuscripts comprise easily recognizable segments of his courses and can thus be fitted into the general picture.

RECONSTRUCTION OF MONRO'S COURSE

In his autobiography,¹¹ Monro *primus* makes three important references to his teaching and writing. On p.83 he describes in outline the course which, as he says, he gave annually for forty years, from about mid-October to mid-April. His description runs as follows:

1. Preliminary Discourses, among which was comprehended the History of Anatomy from its rise to the then present Time.—2. The demonstration of the human Bones according to the Account of them afterwards printed.—3. The Muscles and Bowels of a human subject.—4. The Bloodvessels and Nerves of another Subject,—After each Demonstration he endeavoured to explain the Uses and Functions of the Organs, so far as could be deduced from the Fabrick immediately before exhibited, and remarked what Diseases they were subject to, with some Account of their Symptoms and the method of Cure in each.—5. A Sketch of comparative Anatomy published long ago from the Notes of some of his Scholars.—6. Physiological Discourses on the more abstruse Parts of the animal Oeconomy, These were accompanied with the demonstration of the more subtle Structure of the Organs then talked of.—7. All the chirurgical Operations performed on a human Body, with an Account of the Diseases which made these Operations necessary.—8. The application of the Laques Bandages and other chirurgical Dressings.

A little later (p.84), *Primus* refers to “publick Lectures on Surgery” which he says his father obliged him to give in the summers of 1721 and 1722. “In the former of these two Years the Subject of his Discourses was Wounds, and in the latter it was Tumors. Of these Lectures imperfect and erroneous copies are in many Hands, but as they were wrote in a hurry and before the Professor had sufficient Experience, tho often solicited

¹⁰ See, for example, Appendix, items 28 and 40. Another example is to be found in Joan G. Emmerson (compiler), *Catalogue of the Pybus collection of medical books, letters and engravings, fifteenth to twentieth centuries held in the University Library, Newcastle-upon-Tyne*, Manchester University Press, 1981. PYB H.iv.21 is listed (1388, p. 79) under *Primus* but is in fact a copy of the 1774/5 recension of *Secundus*'s lectures. Lectures 102 and 107 contain the *loci classici* referred to in Taylor, op. cit., note 7 above, p. 178.

¹¹ *Life of Dr. A. Monro 1 in his own handwriting*, item [A21] in Taylor, op. cit., note 6 above. This is the only MS from the Monro Collection to have been transcribed in full and published (H. D. Erlam, *Univ. Edinb. J.*, summer 1954, pp. 77–105). I use the page-numbers of Erlam's paper and henceforth refer to the MS as *Life*.

he never would give countenance to their being printed.” Finally, he provides (p.92) a list of treatises “besides the medical books which have been wrote or published by him”. These were:

1. A History of Anatomy from its Rise to the Time when he ceased to teach.
2. *Encheiresis anatomica* or method of dissecting and preparing all the Parts of the Body.
3. A large Commentary on his own Treatise of the Bones.
4. The like Commentary on his Neurology.
5. Critical Notes on Albinus’s *historia Musculorum*.
6. Critical Notes on Winslow’s *Expositions des Artères et Veines*.
7. A common Place Book for the Bowels.
8. His Lectures on comparative Anatomy.
9. A system of the subtiler animal Physiology in a new Order.
10. Observations on a Part of Heister’s Surgery.
11. A Treatise on Bandages & chirurgical Dressings.
12. A common Place Book on the Practice of Medicine in Boerhaaves order.
13. A critical Examination of Dr. Hunters Works.

All except nos. 7, 10, 12, and 13 survive in the Monro Collection in Dunedin, and I have described and commented on them in detail elsewhere.¹² Most of them were written after 1747 and thus could be directly related only to his later teaching. This in no way detracts from their importance. In general, the text of ES Haswell corresponds with Monro’s own outline except that the lectures on bandages precede those on operations. The evidence of the manuscript is that Monro lectured on four days each week until the Christmas break—unless we assume that Mr Haswell absented himself regularly every Friday—and thereafter on five days in the week, often utilizing the Saturday. To some extent, the programme depended on factors outside Monro’s control. Thus on 4 and 5 January 1732 the comparative anatomy was begun, but on the 6th, “Having got the opportunity of a human subject I shall leave of [*sic*] the comparative anatomy . . .”. No lectures were given between Saturday 15 and Tuesday 25 January, but on that day and the following the lectures were given by Andrew St Clair, “Because my colleg Mr. Monro is indisposed and that this brain which you see so much corrupted already may not be quite lost I have this day taken upon me to demonstrate . . .”. From Thursday 3 until Saturday 12 February there were no lectures because the profesor was again ill, and, for no reason that is given, three days appear to have been missed in the first week in March. Dates are entirely lacking after 29 March, and the surgical part of the course was given in what must have amounted to ten or twelve lectures from then until mid-April. Finally, Haswell’s notes on the history of anatomy are confined to the first two lectures and begin with authors who lived between 1680 and 1700; it therefore seems fair to assume that he was one of those students who arrived late in Edinburgh and missed most of that part of the course.¹³ The evidence, then, points to Monro’s course in the session in question, 1731–2, having been covered in about 100 lectures and that, but for his absences, it might have extended to about 115. The distribution, actual and probable, of the lectures that were given is shown in the Table.

¹² Taylor, *op. cit.*, note 6 above, *passim*.

¹³ Appendix, item 38, PPC 10a–89, f2^r, introductory lecture.

TABLE*

Components of course as listed in <i>Life</i>	No. of lectures (as in ES Haswell 1731/2)	Surviving student MSS with actual or probable dates of writing	Related MSS in Monro Collection written by <i>Primus</i>
1. History of Anatomy	2 (ES Haswell incomplete; 8–10 from evidence of <i>Secundus</i> & David Skene letters)	LS 42.a.40 (1733) EU Gen.1986 (1733–6) EU Gen.578D (1736) EPH M.8.27–28 (1738) MSL No.82B (1739) DNLM 87922 (1742) PPC 10d–148 (?) PPC 10a–137 (1746) DNLM 84011 (1746) EU Gen.577D (1746) MAC GD 1/2 (1747) EU Dk.5.1 (1750) DNLM 135955 (1750) PPC 10a–89 (1752)	M 166 (1733)
2. Demonstration on bones according to account afterwards printed	28	EPH M.8.14 (1738) EPH M.9.27 (1739) DNLM 84210 (1746)	M 160–1 (1750)
3. Muscles and viscera	16	EPH M.8.30 (1738) DNLM 84210 (1746)	M 168 (1753)
4. Vessels and nerves	8	EPH M.8.30 (1738) EPH M.9.27 (1739) DNLM 84210 (1746) EPH MS Blegborough (1754)	M 168 (1753)
5. Comparative anatomy	11	MSL No. 74 (1732) MSL No. 39 (1735) LW MS 3615 (1734–7) AU MS 2206–31 (?)	M 180 (1740)
6. Physiology	8	MSL No.74 (1732) EU Gen. 578D (1736) EPH M.8.29–30 (1738) DU: M [A20] (after 1741) DNLM 91637 (1746) GD 113 V.438 (1751) DU: M M187–8(1750–53)	M 181–2 (1754)
7. Operations of Surgery	?? (no longer shown in ES Haswell)	MSL No. 74 (1732) LW 934 (1734) EPH M.8.15 (1738) DNLM 84210 (1746) LS Add.100 Monro (1747–51) EU Dk.5.7 (1753) DU: M Maxfield (1738; copied 1768)	

*The abbreviations used in this Table and in the Appendix are set out in footnote 9.

The manuscript lecture-notes of Alexander Monro primus

Components of course as listed in <i>Life</i>	No. of lectures (as in ES Haswell 1731/2)	Surviving student MSS with actual or probable dates of writing	Related MSS in Monro Collection written by <i>Primus</i>
8. Bandages	5	MSL No. 74 (1732) EPH M.8.16 (1738) LW MS 3615 (1734–7) DNLM 84210 (1746) LW MS 4217 (?) EU Dc.5.129 (?; text as EPH M8.16)	M 164 (?)
Wounds and Tumours		MSL No.33 (1735) EPH M.8.10–14 (1738) EPH M.9.27 (1739) EPH M.9.26 (?) LS 129 ^A .a.5 (?)	
(Wounds only)		MSL No. 82A (1740) LW 4217 (?) DU: M M167, 167a (?) DU: Maxfield (1768)	
(Tumours only)		MSL No. 74 (1732) LW 934 (1734) MSL No. 106 (1740)	
Commentary on the Osteology		GD 113 V.438 (1751) PPC 10a–89 (1752) EPH MS Blegborough (1754)	M 163 (1750)

Various scraps of evidence provide further corroboration. Thus, in MSL No. 74 the lectures on physiology ended on 22 March 1732, and those on bandages began on the following day, as in ES Haswell, while the lectures on surgery have as colophon “Finis April 8 1732”. MSL No. 39 has, after the lectures on bandaging, “Finis March 20, 1735”. Such dates, however, are few and far between. Only in the letters written by David Skene to his father in 1751 and 1752 do we find more details.¹⁴ On 1 November 1751, he wrote “. . . [Monro] begins his lectures on Monday as the rest do on Tuesday. They are all Publick for 8 Days so I shall attend most of them.” The public lectures were those on the history and uses of anatomy. By 13 November, “. . . Mr Monro not yet done with his History of Anatomy. He is by far the most graceful speaker among them; only the difficulty he has sometimes to recover himself after mistaking a word makes it look as if his style was too much studied.” On 30 November, “These several days no lectures from Mr Monro his son having had a very dangerous relapse.” A little later 8 December 1751, “We have lost about Eight lectures from Sandie Monro’s illness, but the Professor makes a great many apologies, and is on a hurry to make it up.

¹⁴ AU, David Skene papers, MS 38/1–176, correspondence, *passim*.

He is certainly far behind so we have not yet got through the Introductory Piece on Bones in Generall.” On 14 January 1751, Skene wrote: “Mr Monro has now got through the abdominall viscera very expeditiously indeed as it is but Four days since we got the Subject.” By 9 February, Monro “has been three or four days on his angeology subject”. Human anatomy gave place to comparative on 26 February, and on 15 March, “We are just now ending our Comparative Anatomy and on Thursday shall get a subject for operations.” The correspondence with ES Haswell written two decades before is quite sufficient to put us under no obligation to question Monro’s assertion about the general nature of his course. Further supporting evidence is provided by Monro *secundus* in the form of rough notes on the flyleaf of DU:M M174 headed ‘Number of lectures in a course of Anatomy’.¹⁵

I have examined forty manuscripts or sets of manuscripts, almost all of them in the original or on microfilm. In the case of a very few I have had to depend on selected xeroxed copies. Since the material is often confusing, not to say at times intractable, I have listed in an Appendix to this paper all those known to me, together with such bibliographical details as have been used in drawing conclusions. The Table displays against Monro’s sub-division of his course the various recensions with their most likely dates. Rough word-counts and the relating of these to the number of lectures devoted to each topic, presuming they remained about the same in number, then give us some idea whether we are dealing with notes in the conventional sense or with a verbatim account. Obviously, different lecturers talk at different speeds. The 1773/4 transcript of *Secundus*’s lectures¹⁶ works out at around 3500 words per lecture, but this text, as he acidly pointed out, does not include any of the drawings with which he was wont to embellish his presentation,¹⁷ and which would have taken time. Some of his lectures, on the other hand, are clearly labelled as demonstrations and discussed in a few lines and the same applies less explicitly to *Primus*; these have not been allowed to distort the average word-counts. On this sort of analysis ES Haswell itself is a good deal less than half the length we would expect for a course that ran to over 100 lectures, and that it is a shortened version is confirmed by many phrases scattered in the text. It has, in fact, the appearance of a fair copy made at leisure from conventional notes, as shown by some repetition of phrases necessitating scoring out, and (p.211) “as I have already showed vide page 177” built in without change of hand or ink.

Certain other assumptions and deductions seem justifiable. Since students taking notes of the conventional sort—or writing fair copies of such notes—independently from the same lecturer will paraphrase and abbreviate differently, two versions that differ hardly at all or only in minute details are likely to be copies, one of the other or both of them of a third. Versions that differ by more than this could have been made by students in the same class or in different sessions. The historian can only judge from the order and content of the material. On the other hand, where we are clearly dealing with virtually word-for-word records of a lecture, a measurable difference in texts must

¹⁵ Taylor, *op. cit.*, note 6 above, p. 96. *Secundus*, writing some time between 1753 and 1756 when he was gradually taking over his father’s course (*Life*, pp. 90–91), proposed the following distribution: history of anatomy 8, bones 32, big subject 21, little subject and female organs 20, comparative anatomy 14, operations 9, bandages 7, physiology 8.

¹⁶ *Ibid.*, p. 97, and note 8 above.

¹⁷ Taylor, *op. cit.*, note 7 above, p. 178.

imply different dates, while identical texts must indicate copies of the same set of lectures—unless, of course, either the class contained more than one shorthand writer, each of whom then had his work transcribed, or the lecturer made absolutely no change in his material from year to year, shorthand writers always being available. In such a case he must almost certainly have read out to his class a fully prepared text, something that *Primus* denied ever doing after an initial disastrous experience.¹⁸

There is a further complication, however. The amount of copying of lecture-notes taken from the various early Edinburgh teachers was very considerable and, quite apart from the fact that some were more careless than others, copyists did sometimes exercise what they would have considered their discretion.¹⁹ I have no doubt that many MSS have been treated in this way. Therefore, in studying the teaching of Monro *primus* as it evolved over a long career, I have tried to do three things—to establish as far as possible the date of each separate component of a given manuscript, decide whether or not the account is more or less verbatim, such as might have been taken in the first place by a student who wrote shorthand, and finally compare, word by word, as many passages as possible, long and short, chosen from as many versions as are not obviously quite different from each other.

THE MANUSCRIPT EVIDENCE

Let us now consider the manuscripts that have survived. In the case of some sections of the course, for example the *Comparative Anatomy* or the *Muscles and Viscera*, available versions are so few as to make comparison hardly worth while, but the *History of Anatomy*, and to a lesser extent the *Physiology* and the *Operations of Surgery* afford us a series of texts written at intervals across a period of more than twenty years.

Obviously in a paper such as this one cannot present in detail substantial portions of the text of a large number of manuscripts. I give here only two brief sets of excerpts, one from the *History of Anatomy* and one from the *Physiology*, in order to illustrate the differences that obtain.

(a) *The History of Anatomy*

There are fifteen extant versions of this part of the course (Table), including ES Haswell which contains only the latter part of it. The material is dismissed in a few pages in PPC 10a–89. PPC 10a–137 is incomplete and is a copy of DNLM 84011 from which PPC 10d–148 is said also scarcely to differ.²⁰ MAC GD 1/2 does not differ from EU Gen.577D by more than one minor detail in every 500 words and must be regarded

¹⁸ *Life*, p. 83.

¹⁹ Witness John Pennington: "In the perusal of these manuscripts the Reader may find some incoherency in the concatenation as from the original copy several parts were left out as very verbose and of little signification which is the real foundation of their perplexity if any be found—Edinburgh, Nov. 14 1778." See Library of the Royal Army Medical College, London, MS 513 Pennington, facing p. 212.

²⁰ Appendix, items 38, 39, and 40. These three MSS are described in Rudolf Hirsch (editor), *A catalogue of the manuscripts and archives of the library of the College of Physicians, Philadelphia*, Philadelphia, University of Pennsylvania Press, 1983, nos. 694, 689, and 690, pp. 146–147. I have examined a microfilm of PPC 10a–89 but only a few xeroxed sheets of the other two.

as the same text. EU Dk.5.1 and DNLM 135955, while not identical, are very similar. EU Gen.1986 is obviously abbreviated to some extent. This leaves us with eight texts, all of them approximately 40,000 words in length, which agrees with David Skene's statement about eight lectures, and all written according to internal evidence at different times between 1733 and 1750. The three extracts that follow help to illustrate the nature of the differences between these various manuscripts.

(i) EU Gen. 578D p.56 (1736)

... To him succeeded Gothofredus Bidloo, who was much of the same disposition with Drillincurt but not near so learned. Most of his Cotemporaries and he were frequently at variance, particularly He and Ruysch could never agree. His Work (being mostly observation) are collected into a small 4^{to} volume, but for none of these was he so famed as for his large system, wherein the Figures are all as large as the life & very beautiful. M^r. Cowper being about this time to publish his Book, buys up two or three Copies from his Booksellers adding a new Text to his figures & publishing them under his own name, without mentioning Bidloo thro' the whole Work, except with a design to criticise upon him, and that only two or three times. Cowper's intent coming to Bidloo's Ears writes him a very civil Letter assuring him that if he is about to translate his Book he would give him all possible assistance; but upon Cowper's still proceeding in his own way without taking any Notice of his Letter, He writes a Second to the Royal Society entitled *Gulielmus Cowper citatus coram Tribunali*, for in it he arraigns him before them to whom he has applied for justice entreating them to put him out of their Society and brand him with the name of *Homo trium litterarum* i.e. Fur

(ii) EU Gen.577D, p.85–86 (1746)

... Gothofredus Bidloo was a very bustling & ambitious man with all the ill nature of Drelincourt but without his learning. He & most of his cotemporaries were frequently at odds, particularly he and Ruysch were perpetually snarling at each other. His Works are collected into a small quarto Volume, but for none of these was he so famed as for his great work, wherein the Figures are many of them as large as the life & very beautiful. M^r. Cowper buys up about three hundred Copies of them without the text and writing a new Text (or Explication) [*sic: caret*] of his own he publishes them under his own name, without mentioning Bidloo through the whole Text, unless with a design to criticise upon him, and that only 2 or 3 times. Cowper's design coming to Bidloo's Ear he writes him a very civil Letter telling him that if he inclined to translate his Book he would give him all possible assistance; but upon Cowpers still going on in his own way and taking no Notice of his Letter, He writes a Second directed to the Royal Society entitled *Gulielmus Cowperus Tribunali citatus coram*, wherein he arraigns him before them to whom he applies for justice designing them to expel him from their Society and brand him with the name of a *Homo trium litterarum* i.e. Fur

(iii) DNLM 135955, pp.376–378 (1750)

... To him succeeded Gothofredus Bidloo, who was much of the same temper with Drelincourt but not near so learned. He & most of his contemporaries were continually at odds, particularly he and Ruysch were perpetually snarling at each other; His works being most part observations are collected into a small quarto Volume, but for none of these is he so famed as for his large work, wherein his figures are very near as large as the life and very beautiful. M^r. Cowper having about this time published his Book buys up 200 or 300 copies from his Booksellers adding a new Text of his own & publishing them under his own Name, without mentioning him thro' the whole Work, unless with a design to criticise on him, and that only 2 or 3 times. Cowper's design coming to Bidloo's Ears he writes a very civil Letter to Mr. Cowper telling him that if he inclined to translate his Book he would give him all possible assistance; but upon Cowpers going on in his own way and taking no Notice of Bidloo's Letter, He writes a Second directed to the Royal Society and styled it *Gulielmus Cooper citatus coram Tribunali*, wherein he arraigns him before them to whom he applies for justice designing them to expell him their Society and brand him with the name of Fur

The reliability of the dating, based largely on the material that brings the various versions up to date, rules out copying of lectures delivered some years before. The differences seem to preclude Monro's having read to his class year by year an otherwise

fixed text that differed only in the updating. Students trying to write down such a text are hardly likely, for example, to describe Bidloo at one time as in (i) and on another occasion as in (ii).²¹ Other and more extended instances could be given. For example, in the various versions of the Prolegomena the differences are often of a sort that could only originate with the lecturer. However, given the contrasts, one is struck by the similarities.

Of course, the topic is such that there is no need for its general tenor to change, but many phrases and sentences do not differ from each other by a single word and some quite lengthy passages scarcely by more. For example, LS 42.a.40, which to avoid anachronism we must accept as 1733 (see Appendix), differs in the case of the Bidloo passage (pp.111–112) only in nine minor respects from DNLM 135955 written in 1750 and carrying references up to 1744. Perhaps the best explanation is that the lecturer was so familiar with his material and had given such thought to its presentation—again, witness David Skene’s reference to Monro’s style²²—that much of it was indelibly engraved in his memory.

(b) *The Physiology*

Here we have eight versions of the material to consider, including ES Haswell. We must assume from their dates that it and MSL No. 74 are records of the same course of lectures. The latter MS vouchsafes us very few dates, but on 14, 17 and 21 March the topics treated of are as in ES Haswell.²³ Both have an account of the experiment described in the quotations below. They differ from each other to the extent that one might expect, given that the two writers were making independent fair copies from notes of the conventional sort. MSL No. 74 is by a good deal the fuller of the two records, taking, for example, almost twice as many words over this experiment. Neither text resembles any other in the way that EPH M8.29–30, EU Gen. 578D, DU:M [A20] and to a lesser degree DNLM 91637 all resemble each other. The remaining two MSS, GD 113 V.438 and DU:M M187–8, while resembling each other to some degree, show appreciable changes when compared with the earlier versions. The section quoted below occurs under ‘Circulation’ in GD 113 V.438, and under ‘Respiration’ in the others. Both the later texts are longer (40,000 rather than 30,000 words), the rephrasing is substantial, and whole paragraphs have been omitted and others added. Again I quote:

(i) EU Gen. 578D p.(13) (1736)

... That there is Air in the Blood is certain but in a sound state it does not act. This is evind [sic] by an experiment that I assisted Mr Stewart professor of Natural Philosophy in this Academy in which was cut out a large piece of the Vena cava inferior and of the Carotid Artery before it divides after letting them be well filled with blood and tying them (these vessells are the properest because they run a good

²¹ This topic is briefly dealt with in ES Haswell, pp. 2–3; “[Bidloo] was a very quarrelsome man and was almost always engaged in a Paper war with some of his contemporaries. He has published a vast large system of Anatomy in the year 1683 the copper plates of which Mr. Cowper assumes to him, which copper plates are thought to belong to neither of them but that they were done by Mr. Swammerdam”. The compression quite apart, the flavour is different.

²² Loc. cit. note 14 above, letter dated 13 November 1751, no. 26.

²³ MSL No. 74, 7. Lectures on physiology, pp. 20, 58 and 91 (ff 181^r 200^r and 217^r).

way without sending off any Branches) then we threw ym into water which we had before by the Thermometer brought to the same heat as the Blood in a living animal is and out of which we had exhausted all the air least that in the water should have kept an Equilibrium with that in the Blood and so hinder this to act and distend the vessells then we set the water with the Blood Vessells under a Rec^t and exhausted all the air leaving it thus for a good while we found the Air did expand itself very inconsiderably and not till the mercuriall gage had risen 17 inches for the vein & 22 before the Artery rose. This experiment (I say) proves that the Air in our Blood can't be brought to act but with great difficulty but the question is which way this air gets in to the Body . . .

(ii) DNLM 91637 pp.59–60 (1746)

. . . That there is Air in the Blood is certain but in a sound state; This is evinced in an Experiment in which I assisted Mr. Stewart professor of Natural Philosophy. We cut a large piece of the vena cava inferior and of the Carotid Artery before it divides after letting them be well filled with blood and tying them then we threw these vessels into the water which we before had prepared by the help of the thermometer brought of the same heat as the Blood of a living animal and out of which we had exhausted all the air least that in the water should keep up an Equilibrium with that in the Blood and so hinder this to act and distend the vessels, and they immediately sink then we put the Vessels with the water into a receiver and exhausted the Air & leaving it thus for a good while we found that this Blood did expand itself very considerably and not till the mercuriall gage had risen itself a great way. The Blood did not rise in the Artery till the mercury had risen to 22 inches, and in the vein till 15 inches. This experiment proves that the Air in our Blood cannot be brought to act but with great difficulty which when it does produces the worst effects

(iii) GD 113 V.438 p.39 (1751)

. . . The common expt. to prove what there is of this air in the blood and how it exerts itself by taking off the pressure of the atmosphere is to apply the air pump upon the blood newly let out and observing how it bubbles up in the vessel but this proves nothing at all for it is certain the air may get into it in the very same time of letting it out. To make the experiment more exactly my colleague Mr. Stuart and I tried it thus. Having all our Instruments ready I then opened the Animal alive and made a ligature on the Vena cava inferior and Carotid artery (these vessells being the most proper for such Experiments as they run a good way without sending off any Branches) and having allowed them to be well filled with blood made another ligature and took that piece of each included between the two ligatures of out the Body then we threw them into water which we had before by help of the Thermometer of the same heat as the Blood of a living animal; having exhausted all the air from it lest the Air in the water should have kept up an Equilibrium with that in the Blood and so hinder this last to act and distend the vessells. We then immediately applied the air pump and having a Barometer exhausted the Air and found the Vena cava did not come to the top of the water till the mercury was at 23 in the mercurial page [gauge] (that in the specific gravity of blood and water, there is but very little odds) the carotid artery did not swim till the mercury was at 25, from all which it is plain that tho' the air could get into the lungs it could not get out again; but in the Phil. Trans. Mr. Boyle's expts on animals shut up in the receiver of an air-pump seem to prove that air does not get into the blood. However that there is somewhat in the air necessary for life without which no creature can live a minute is most certain, but what it is we know not . . .

Four of our eight texts thus appear to be more or less verbatim and resemble each other very strongly although, once more, differences exist that could scarcely have been supplied by student discretion. The evidence for different dates of delivery is as hard as we are likely to get, and so we seem to be again faced with examples of Monro's memory for his material. In the early 1750s, however, there are more substantial differences and a change of emphasis is apparent.

One may well ask why physiology should figure at all in Monro's course, since he was appointed to profess anatomy and surgery, and had a colleague whose duty it was, as he freely admitted, to teach the institutes of medicine. At the beginning of DU:M M181 there is a disclaimer, in which he refers to an earlier statement of intention "in

mentioning this subject at all which is not properly my Province, being fully and with great accuracy taught by my Colleague the Professor of the Theory of Medicine". Since this was written almost certainly in 1753 or 1754, his colleague was presumably Robert Whytt.²⁴ But twenty years earlier we find in ES Haswell (p.326): ". . . I shall as much as I can follow Mr. Boerhaave's method which may perhaps be of the more use to you who are att & those to be att his Institutes". At this time, 1731–2, Andrew St Clair was the professor in question and he lectured in Latin on Boerhaave's *Institutiones*, sticking pretty closely to his text.²⁵ It seems fairly likely that the weaker students would have appreciated Monro's incursion. At any rate, the subject was one to which he seems to have increasingly devoted serious thought as witness the very existence of DU:M M181–2.

(c) *The Operations of Surgery*

Of the seven texts under consideration—DU:M Maxfield can be dismissed for obvious reasons (see Appendix, item 10)—no two deal with the various topics in exactly the same order, and the wording varies appreciably from one to another. The point is made at the very beginning of EU Dk.5.7 that the order will be determined by the corruptibility of the parts, and there is no doubt that Monro's exposition was accompanied by demonstrations on the cadaver. This may, in turn, have ensured a delivery that was truly extempore. It could well be that other sections of the course, for example the description of the viscera, similarly dependent on the state of the tissues, would show the same sort of manuscript variation. The evidence is insufficient to warrant a firm statement, but in EPH M.8.30 the angiology and neurology reads quite differently from the section thus designated in EPH M.9.27, and the splanchnology is very skimpy.

EU Dk.5.7 is a good deal longer than any of the others.²⁶ It is written in the juvenile hand of *Secundus* and is glossed in that of *Primus* and the later hand of *Secundus*. From its provenance²⁷ it obviously must have formed at one time part of the Monro Collection, whence it may be held to derive additional authority.

(d) *The Wounds and Tumours*

This brings us to the vexed question of the status of the manuscripts that deal with *Wounds* and *Tumours*. Five of the surviving MSS contain both texts, a further seven contain, in four cases the *Wounds* only, and in three the *Tumours* only, although MSL Nos. 82A and 106 should be considered as one.²⁸ The texts are of the order of 50,000 words in length which, since they all read as if they were more or less verbatim records, points to two sets, each of about ten or twelve lectures.

²⁴ See Taylor, op. cit., note 6 above for further discussion of Monro's incursion into physiology and for the dating of DU:M M181–2.

²⁵ See, for example, EPH M9.35–37, EPH M7.60–62 and M8.1–9, and EPH Fc*8.32. These are identical texts, except that Fc*8.32 is incomplete and contains a number of obvious errors in the Latin.

²⁶ To illustrate the variation, EPH M8.15 covers 'Of Hydrocele' in less than 200 words; DNLM 84210 takes about 700; EU Dk.5.7 takes about 1300.

²⁷ Appendix, item 20.

²⁸ Appendix, items 35 and 37.

Monro's own opinion of these lectures has already been quoted. He does not say explicitly whether or not he gave the lectures again, but simply that he refused to have them printed. Lawrence has stated²⁹ with some apparent surprise that I have implied that the lectures were not repeated,³⁰ and points as evidence to the contrary to LW 934, MSL No. 33 and MSL No. 74.

The index to the *Tumours* in LW 934 carries the date Sat. Oct. 26 1734. The lecturer talks (p.27) of addressing the same students the previous year, presumably on *Wounds*. The *Tumours* is followed by the *Operations of Chirurgery* which is signed R. Hamilton 21/11/1734. Since the surgical lectures usually brought up the rear in Monro's course, surely the dates are those on which Hamilton finished writing his copy. MSL No. 33 carries the flyleaf date 1735, but this tells us little. MSL No. 74 contains various dates in 1732, but these all apply to the *Surgery and Bandages* or to the *Physiology*. The lectures on *Tumours* carry no date and are for the most part in a hand quite different from that in the rest of this collection. Then, on f 137 (p.49), the hand changes back to the original without a break in the sense, indicating a copy. The text breaks off about two-thirds of the way through and comprises the only part of this MS closely to resemble any other. MSL Nos. 82A and 106 were written by Sam. Holland in 1739/40; but the firm date "Febv 12th 1740 S.H." once again does not fit with anything else that we know of the ordering of Monro's course and suggests that the copy was completed on that day.

All these manuscripts seem to have been copied from others; none reads as if it had been taken down in class or expanded from the student's own notes. Some appear to have been elaborately "edited"; for example, EPH M.9.26 and LS 129^A.a.5 are written in elegant copperplate and subdivided by chapters and section headings. The former contains, embedded in the section on wounds of the abdomen, ten pages on gastraphia which occur not in EPH M.8.11 on wounds but in M.8.15 on the operations of surgery; LS 129^A.a.5 contains the last two of these ten pages similarly placed. Much more than in the case of any other group of Monro manuscripts, different readings represent differences between sense and nonsense in the context rather than legitimate differences in phraseology. Thus we find in DU:M M167 such errors as "discharged" for "destroyed", "uvulas" for "vulvas", and "medication" for "indication". Only the fact that such errors tend to be different in different MSS permits the reader, by comparison, to arrive at what is meant. When it comes to Greek terms and proper names, matters are much worse. One often finds the same writer grossly misapprehending a name on one page, spelling it apparently correctly on another, and leaving a blank on a third. Clearly there has been no cross-checking. Comparisons again help; thus Pandaling becomes Podalirius, Tottenhance Nottingham, and Parlett Barbette. Even so, although using these references to establish a *terminus* becomes a highly uncertain business, I have been unable to identify any that are clearly later than 1720. For Monro to deliver a course of lectures with his latest reference many years old, seems to me quite out of character.

²⁹ Christopher Lawrence, 'Ornate physicians and learned artisans: Edinburgh medical men 1726-76', in W. F. Bynum and Roy Porter (editors), *William Hunter and the eighteenth-century medical world*, Cambridge University Press, 1985, pp. 153-176, n.14. I am greatly indebted to Dr Lawrence for giving me (June 1983) a copy of the typescript of his paper.

³⁰ Taylor, op. cit., note 6 above, pp. 89-90.

The manuscript lecture-notes of Alexander Monro primus

EPH M.8.15, *Operations of Surgery*, carries four references to *Wounds* or to *Tumours*. All are incomplete and of the form (p.263) “. . . is treated of in MSS of Tumours under this head vide Vol the__page the__”. The whole series, EPH M.8.10–8.14, contains lengthy Latin quotations—M.8.12, pp.95–147, comprises, in fact, twenty-six pages of continuous Latin—and cross references such as (M.8.11, p.163) “. . . till we come to the operations. See Voll: of Operations”. EPH M.9.27 has (p.95), “When on these wounds last year . . .”, as does LS 129^A.a.5 (p.201). EPH M.8.14 reads (p.97), “. . . I took particular of when on the wounds last year”. Either the lectures must have been repeated in alternate years, if anachronism is to be avoided, or the surviving manuscripts are copies of the original two courses of lectures. EPH M9.26, which seems to have been substantially edited, does not contain the words “last year”.

EPH M.9.27 (p.23) and LS 129^A.a.5 (p.49) also refer to “. . . our Treatise of Wounds in our Public Lectures”. The flyleaf of DU:M M167 is entitled “The Public Lectures of Mr. Alex^r Monro. Read in the Surgeons Hall Edinburgh. Of wounds.” Whenever they were copied, surely they must have been originally delivered prior to late 1725.³¹

The differences in wording between one MS and another are minor as the following quotations from the *Wounds* show:

(i) MSL No. 33, ff 20^v and 21^r (1735)

. . . Hildan. tells us of two who were wounded in the hand and by laughing at a merry jest, raised a terrible pain in the wounded part and thro’ the whole arm so much that they were in hazard of falling into convulsions, in his Cent. 1 Hist. 12 relates the History of a youth who after a wound in the head and fracture of his skull was in a fair way of recovery, but being provoked to anger turned feverish Phrenitick and dyed in four days . . . All acts of venery are to be shunned for these increase the circulation in the mean time and enervate afterwards. Hildan. tells of a young man who had got a wound in the head with a fractured skull after 5 weeks time when the wound was almost cicatrised by the use of venery fell into a fever and died.

(ii) EPH M.9.27, p.37 (1739)

. . . Hildan. Cent. 1. observ. 23 tells us of two who were wounded in the hand and by laughing heartily at a merry tale, raised a pain in the wound and thro’ the whole arm so much that they were in hazard of convulsions, in his Cent. 1 hist. 12 relates the History of a youth who was wounded in the head and skull fractured, was in a fair way of recovery, but being provoked to anger turned feverish and Phrenitick and dyed four days after . . . All acts of venery are to be shunned for these increase the circulation much at the time and enervate afterwards. Hildan. Cent. 1. Obs. 9 proves the ill effects of this by the example of a young man who was wounded in the head with a fracture in the skull after 5 weeks when the wound was almost cicatrised by lying with his miss fell into a fever and died.

(iii) LS 129^A.a.5, pp.80–81 (c.1750)

. . . Hild. Cent. 1. Obs. 23 tells us of two that were wounded in the hand and at laughing at a merry Tale raised a Great Pain in the wound, and thro’ the whole Arm in so much that They were in hazard of falling into Convulsions: In Obs. 17, Cent. 1 He relates the case of a youth who after a Wound in the Head and Fracture in the skull was in a fair way of recovery but being provoked to Anger immediately turned feverish and phrenetick and died 4 days after . . . All acts of venery are to be shunned for they increase the circulation much in the meantime and enervate afterwards: Hild. Obs. 19. Cent. 1 proves

³¹ Rex E. Wright-St Clair, *Doctors Monro: a medical saga*, London, Wellcome Historical Medical Library, 1964, pp. 36–37.

the ill affects of this by the example of a young man who was wounded in the head with a fracture in the skull after 5 weeks when the wound was almost cicatrized, by lying with his miss fell into a fever and died.

The various texts of the *Tumours* are characterized by the same degree of likeness:

(i) MSL No. 74 f 114^r (1732)

... Sphacelus after being exposed to cold, or the heats of Summer, and Schirrous Tumours from any irregular cause, now tho both Liquids and Solids are in perfect good condition, yet if the larger Globules make their way into the smaller vessels then they can circulate it, an obstruction will follow, which may happen from a too great an impulse given, or a Relaxation of some of the Vessels, especially if upon these Causes their opposites follow, E.G. if one after heating himself by exercise, would swallow down a quantity of cold water or expose himself to a cold Wind, by the further Contraction from the cold the Vessels, that were beforehand very much dilated, would in a moment become contracted he would hardly escape one of the Inflammatory Diseases, such as Angina, Pleuritis &c. a Phlegmon, or Erysipelas externally

(ii) EPH M.9.27 p.4 (1739)

... Sphacelus after being exposed to cold, or the heats of Summer, and Schirrous Tumours from an irregular Diet, now tho both Liquids and Solids are in a perfect good condition, yet if the larger Globules make their way into smaller vessels than they can circulate in, then an obstruction will follow, which may happen from a too great impulse given to them, or a Relaxation given to some of the Vessels, especially if upon these Causes their opposites follow, E.G. if one after heating by exercise, or any other way would swallow down a quantity of any cold Liquor, or expose himself to a cold Wind, by the sudden Contraction from the cold of the Vessels, which were before very much dilated, he could hardly escape one of the Inflammatory Diseases, such as Angina, Pleuritis &c. a Phlegmon, or Erysipelas externally

(iii) LS 129^A.a.5. p.7 (c.1750)

... Sphacelus after being exposed to cold, or the heats of Summer and Scirous Tumours after an irregular course of Diet, Now tho both Liquids and Solids are in a perfect good Condition, yet if the smaller Globules make their way into smaller vessels than they can circulate in, then an obstruction will follow, which may happen from too great impulse given to them, or a Relaxation of the Vessels, especially if upon these Causes their opposites follow, E.G. if one after heating himself by exercise, or otherwise, would swallow down a great quantity of cold Liquor, or expose himself to cold Wind, by the sudden Contraction of the Vessels by the cold, which were before very much dilated, he would hardly escape one of the Inflammatory Diseases, such as Angina, Pleuritis &c. a Phlegmon, or Erysipelas externally

To me at least, comparison of these and other passages argues the errors of repeated copying rather than the words of lectures repeatedly given. To suppose the latter is to accept either that Monro's standard course incorporated first one topic and then the other in alternate years, for which there is no evidence, or that the lectures were indeed given publicly outside the course on a number of occasions, in which case it is odd that there is no such statement in the *Life*. That copyists could be extremely careless is shown by the variations—and violence done to the sense—in the quotations from Pope's translation of the *Iliad*, which occur in the first few pages of all the MSS of the *Wounds*, something that Monro is likely to have got right, whether he gave the lectures once or a score of times.

I know of only one possible piece of evidence to the contrary. In LS 129^A.a.5, p.143, we find: "This belongs to the Class of Tumours, which you have in the second volume

of my Book and therefore I pass it over at present . . . ” Monro, of course, explicitly denied that there was any such printed book. EPH M.8.11 has in the corresponding place (p.89), “. . . which are in the Vol. of Tumours”. DU:M M167a has the same words (p.349) as LS 129^A.a.5. Both could have been actually copied after 1725 and a reference such as that in EPH M.8.11 misunderstood, but it does not seem to be possible to prove that the lectures were not given a second time before Monro left the Surgeons’ Hall.

Of course, none of this detracts from the value of the lectures, which clearly was perceived by generations of students to be very great. Early as they may be, they show a concern with local pathology and straightforward clinical description, despite the essentially Boerhaavian nature of the underlying theory.

(e) *The Commentary on the Osteology*

Finally, brief reference must be made to Monro’s *Commentary on the Osteology*. I have already discussed its significance at some length elsewhere.³² Osteology was an important component of Monro’s course, taking up in ES Haswell twenty-eight lectures. It forms, however, a very small part of the earlier surviving student notes, if indeed it figures at all. The first edition of his book on the subject was published in 1726, and it was kept up to date in successive editions.³³ Students were expected to buy the book and doubtless they did. However, there is evidence suggesting that the *Commentary*, when it came to be written, formed the basis of his teaching on osteology in the early fifties, and in preliminary form as early as 1746.

CONCLUSIONS

Such evidence as we possess supports Monro’s statement in the *Life* about the general nature of the course he taught over so many years. Careful comparison of the texts of student lecture notes that can with reasonable confidence be assigned to various dates between 1731 and 1753 permits us to sketch out the evolution of that course and shows that while the substance of his lectures changed only slowly over the years, he did gradually and consciously move away from the teaching of his master, Boerhaave.

A detailed analysis of this change in perspective will require the careful examination of a number of MSS. The value of ES Haswell for the study of Monro’s teaching in its earlier days is clear. A more ample account of the *Physiology*, dating from about the same time, is provided by EU Gen.578D. The Redman set (Appendix, items 3, 4, and 5), written roughly a decade later, is almost complete; it shares the disadvantage of many of these MSS that parts are extremely hard to read. GD 113 V.438, which can be fairly safely dated 1751, is limited in its contents but is important especially in relation to DU:M M163.

In my opinion, the evidence points to the lectures on *Wounds* and *Tumours* having indeed been delivered only once, and thus the various recensions represent Monro’s earliest teaching. For this reason, they are valuable; moreover, replete with references as they are, they provide interesting insight into his background reading.

³² Taylor, op. cit., note 6 above, pp. 84–85.

³³ See note 3 above.

A number of specific questions I find myself unable to answer with any conviction. Why have so few MSS survived that are anything like records of the complete course? Only ES Haswell and the Redman volumes could be said to qualify. In my view, the whole EPH series (Appendix, item 11) is anomalous in many ways. It is so in appearance. With its elaborately engraved title-pages, its copious rubrication, wide margins (the page size is only 18.5 × 12 cm), and uneconomic use of paper it is unlike the average student MS. Many proper names give difficulty, and these, together with many failures of sense, suggest to me the transcription of ill-understood shorthand. The long Latin quotations would seem to defy any sort of extempore delivery or any sort of direct delivery by Monro, who eschewed the use of Latin in his lectures although not, of course, in his own manuscript writings. We find, for example, (EPH M.8.10, p.311 *et seq*): “The description of it [Paracelsus’s weapon salve] with all its circumstances of the preparation is too long to be inserted here Inferr [*sic*] to the 40th chapter of that Book . . .”. Nevertheless, there then follows “R” and three pages of Latin text. One has the impression that many of the references have been followed up and transcribed, the whole comprising a considerable undertaking possibly aimed at plagiarized publication. The same few hands wrote St Clair’s lectures, *Praelectiones medicinae theoreticae* (EPH M.7.60–62 and M.8.1–9) and also John Rutherford’s *Praelectiones medicinae practicae* (EPH M.8.31–39), the format of both of which is exactly the same as that of the Monro volumes.

Why, on the other hand, have so relatively many MSS of the *History of Anatomy* survived? The modern student would certainly regard the material as highly dispensable, and even Monro himself seems to decry its importance at one point.³⁴

Finally, we require an annotated edition of the *Discourses on the human physiology*, DU:M M181–2, which enshrines Monro’s latest thinking on the function he was always at pains to associate with structure and which presumably informed his teaching to the end of his career. Although *Secundus* was effectively responsible for the whole course from 1759, his father continued to give clinical lectures until 1766. A number of records of these have survived, although they are not dealt with in this paper.

APPENDIX

SURVIVING STUDENT MSS NOTES FROM THE LECTURES OF ALEXANDER MONRO *PRIMUS*

1. AU 2206–31
‘A Treatise of Comparative Anatomy or the Dissection of the Bodies of Terrestrial Aerial & Aqueous animals. By Mr. Alexander Monro, Professor of Anatomy in the University of Edinburgh & F.R.S.’ No date. 71 pp.
Hand appears to be the same as that of LS 129^A.a.5., presumably, from its elegance, that of a professional scribe.

³⁴ See note 13 above. It is of some interest that Monro *secundus*, who in his early career regarded eight lectures on the subject as desirable, later cut this back considerably (Taylor, *op. cit.*, note 7 above, p. 182).

The manuscript lecture-notes of Alexander Monro primus

2. DNLM 87922
'The History & Progress of Anatomy from the Earliest Ages of the World down to this present time—to which is added An Appendix on the Uses of Anatomy and division of parts of the Body. Collected from the Lectures of Alexander Monro F.R.S. and Professor of Anatomy in the University of Edinburgh, 1742.' 235 pp. + 16pp. (index).
Flyleaf has "Chorley 1742" in the writer's hand. Contains references to Cheselden's *Anatomy* 1741³⁵ (p.206), to Albinus's edition of Eustachius³⁶ as being not yet published (p.200), and to the 6th vol. of *Medical Essays* as being in press (p.215). Date of 1742 can thus be accepted.
3. DNLM 84011 (B.31 Vol. 3)
'A course of Public Lectures in Anatomy. By Alexander Monro Professor of Anatomy In the College of Edinburgh Taken from him during ye time of Lecturing by John Redman Student of Physick & Surg in the same College. In proprium usum Anno Domini 1746.' 131 pp.
Comprises only the History of Anatomy. References (p.115) to Albinus's edition of Eustachius 1744 and to all six vols. of *Medical Essays* (p.119) help to confirm date.
4. DNLM 84210 (B.31 Vol. 2)
No t.p. Part of the 3-vol. Redman set (see items 3 and 5) and thus 1746. 184 pp.
Contains: Osteology (pp.1–48), Viscera and muscles (pp. 49–75), Nerves and blood vessels (pp.77–114), Bandages in general (pp. 118–128), and "of operations & bandages" (pp. 128–184).
Despite what might be supposed from the t.p. of vols. 1 and 3, these notes can hardly have been made actually in class. On p.158 we find "for this see MS taken at ye Class Jan'y 24 Lecture 60th, under bronchotomy"; and on p.82 "Lects v vi & vii" in a marginal note indicates conflation. Redman was certainly a student in 1746. (EU Dc.5.95).
5. DNLM 91637 (B.31 Vol. 1)
'The Physiology. By Alexander Monro Proff: of Anatomy In the Colledge of Edinburgh taken from him during his course of lectures. By John Redman, Student of Physiology & Surgery. In the same Colledge In proprium usum. Anno Domini 1746.' 144 pp.
6. DNLM 135955
'The History of Anatomy containing a brief Acct. of the Rise & Progress from the earliest Ages of the World to the present Time . . . Being the Public Lectures of Mr Alex^r Munro, Professor of Anatomy & Surgery & F.R.S. 1750.' pp.486.
At pp.216–217 there is a change without any break in sense to a different hand, writing not approx. 60 but 240 words/page and responsible also for various glosses and brief inserts. After three sides (pp.217 a b and c) the original hand resumes. Reference (p. 472) to Albinus's edition of Eustachius confirms a date after 1744.
7. DU:M M 167 & M[167a]
'The Public Lectures of Mr Alex^r Monro. Read in the Surgeons Hall Edinburgh. Of Wounds.' No date.
Two-vol. set each of 140 ff. See Taylor, op. cit., note 6 above, pp.89–90.

³⁵ W. Cheselden, *The anatomy of the human body*, 6th ed., London, William Bowyer, 1741.

³⁶ Bernardhi Siegfried Albinus, *Explicatio tabularum anatomicarum B. Eustachii . . . Accedit tabularum editio nova*, Leyden, J. A. Langerak & J. H. Verbeek, 1744. Monro's references to works of Albinus—published, not published, or believed about to be published!—in the various recensions of the History of Anatomy are extremely useful in dating. Others mentioned are the *Historia musculorum hominis*, Leyden, T. Haak & H. Mulhoviuis, 1734, and the *Icones ossium foetus humani. Accedit osteogeniae brevis historia*, Leyden, J. & H. Verbeek, 1737.

8. DU:M [A20]
Monro's Physiology. No date. 82ff.
Inscribed "William Gray". A reference (p.70) to "the Osteology 3rd edition" shows it to be later than 1741. See Taylor, *ibid.*, p.92. A W^m Gray appears in the class lists for 1749 (EU Dc.5.95).
9. DU:M M 187-188
No t.p. No date. A 2-vol. set of 226 and 178 ff. respectively.
Contains only the Physiology. Probably 1753. See Taylor, *ibid.*, pp.103-104.
10. DU:M MS Maxfield
No t.p. Index (p.108) ends with "Finished January 10th 1768. Begun the operations on February 1st 1768." Contains 37 ff., paginated 43-116, initial pages having been torn out. Running title 'Treatise of Wounds in Generall' on each of pages 43-108.
On p.109 we find, "Having gone through ye treatise of Wounds w^{ch} I promised to give you both in general & also in particular, our method above laid down leads us next to consider and perform before you a variety of chirurgical operations w^{ch} cannot be so well understood by giving a bare description thereof as they may be learned by seeing them done before your eyes:
"So y^e: I now proceed to make some remarks of ye chyurgical operations, as they were performed and delivered by Professor Monro, at his Anatomical Theatre at Edinburgh, in ye same method & order w^{ch} he handled & treated them w^{ch} Lectures were commenced there on ye 26th of January 1738."
This MS was presented to the Library too late to be included in my account of the Monro Collection. Its very existence with the dates given seems good evidence for the continuing popularity of Monro's lectures delivered many years before.
11. EPH M. 8.10-16, M. 8.27-30 and M. 8.45.
Various t.p. No dates.
The individual vols. are as follows:
M. 8.10-11 - 'Lectures on Wounds by A: Monro'. 376 and 375 pp.
M. 8.12-14 - 'Lectures on Tumours by A: Monro'. 336, 321 and 214 pp.
 'Of the Bones'. 118 pp.
M. 8.15 - 'Lectures on Operations by A: Monro'. 390 pp.
M. 8.16 - 'Lectures on Bandages by A: Monro'. 284 pp.
M. 8.27-28 - 'History of Anatomy by A: Monro'. 400 and 391 pp.
M. 8.29-30 - 'Lectures on Physiology by A: Monro'. 368 and 346 pp.
M. 8.45 - 'Lectures on the Muscles by A: Monro'. 301 pp.
These twelve vols. are part of the Duncan Collection of seventy vols. purchased in 1772 from John Murray, Bookseller, London.³⁷ All are uniform in binding, elaborate engraved t.p., generous rubrication, and general layout. At least three hands are discernible. Text on rectos only. The statement (M. 8.28, p.315) that Albinus "Has promised an osteogenia or myology" suggests a date before 1737, but against this must be set a reference (M. 8.30, p.33) to *Medical Essays*, vol. 4. (publ. 1737).
12. EPH M.9.26
'A Treatise of the Cure of Wounds and Tumours.' No date. 431 pp.
Hand changes on p.225 after 4 pp. of 'Tumours'. Contains a substantial section (pp.201-209) which corresponds to material not in EPH M. 8.10-11 but in M. 8.15.
13. EPH M.9.27
No t.p. No date. 135 ff.
Contains: 'Of Wounds' pp.1-96; 'Of fractures & luxations' pp.1-112; 'Of Tumours'

³⁷ See Taylor, *op. cit.*, note 7 above, p. 175.

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- pp.1–26; ‘Angiologia’ pp.1–4 (6 lects.); ‘Neurologia’ pp.1–20 (7 lects.); index, 6 pp.
Binding has been done with much misplacement of text. Hand is identical with that of EPH M.8.35–37, a 3-vol. set of St Clair’s lectures on Boerhaave’s ‘Institutiones’, flyleaf of vol. 1 of which has “Ed^{wd} Lyne’s Book February the 1739/0”. The text of this latter set appears to be verbatim the same as that of EPH M7.60 etc. (see note 25 above).
14. EPH MS Blegborough
‘A few observations upon the Osteology, Neurology & Angiology collected from the Lectures of Alex^r Monro Professor of Anatomy & Surgery in the University of Edinburgh & F.R.S. Scriptum Per Henricum Blegborough Academia Edinensis 1754.’ 180 ff.
Includes also (pp.88–141) ‘The Rickets by Dr. Monro as given to the Medical Society.’
See Taylor, op. cit., note 6 above, pp.84–85.
 15. ES Haswell
‘Mr Monro’s Lectures upon the Human and Comparative Anatomy Physiology or Animal Oeconomy with his Bandages and Chirurgicall Operations for the year 1731/2.’ 610 pp.
Back flyleaf has “Robert Haswell”. Each lecture from 1 November to 29 March is dated but not numbered. The surgical lectures at the end are undated. The total length of the MS and frequent phrases such as “he plainly showed” and “M.M. demonstrated to us” argue a fair amount of compression.
 16. EU Gen. 578D
Comprises:
 - (i) ‘The History of the Rise and Progress of Anatomy by A.M. P.A. & F.R.S.’ No date. 80 pp.
 - (ii) ‘The Physiology or an Account of the Natural Functions of the Human Body taken from the Lectures of Mr Alex^r Monro Prof^r of Anat^y in Edin^g and F.R.S.’ No date. 42 pp.Both texts are in same hand, occasionally glossed in another. Writing is very fine, approx. 500 words per page. Reference (ii, p.29) to a paper by Porterfield in *Medical Essays* vol. 3 (publ. 1735) but not to one by him on the same topic in vol. 4 (publ. 1737) suggests 1736 (cf. EPH M.8. 30).
 17. EU Gen. 577D
‘The History of Anatomy from the earliest Ages down to the present Time by Alex^r Monro P.A. & F.R.S.’ No date. 118 pp.
On p.68 under Lyserus we find, “. . . I writ notes upon Lyserus which at length grew up into a Treatise on that Subject; this I was designed to have published for your uses had not somebody stolen it from me this last summer (1746).” The bracketed date is an integral part of the text and could only apply to the one year without anachronism.
 18. EU Gen. 1986
No t.p. No date. 166 pp.
A text of the History of Anatomy. Internal evidence (pp.119 and 114) dates it after 1733 and from the statement about the publications of Albinus, before 1737. See note 36 above.
 19. EU Dk.5.1
‘The History of Anatomy, Containing a Brief Account of It’s Rise and Progress From the Earliest Age of the World to the present Time wherein mention is made of the several authors who made any considerable Discoveries or Improvements in this Science: and likewise a character given of their Writings together with an Appendix Concerning the use of Anatomy in the several Arts and Sciences: with one Index to the whole Being the Publick Lectures of Mr. Alexander Monro Professor of Anatomy and Fellow of the Royal Society’. No date. 165 ff.

Flyleaf has "Jacob Wickham 1760" in a different hand and ink. The reference to Albinus's edition of Eustachius (p.262) shows text to have been written after 1744. See note 36 above.

20. EU Dk.5.7

No t.p. No date.

Pasted-in flyleaf has "Alex^r Monro Junior Feb: 15, 1753". Text on rectos only, foliated 1–438. Contains: (ff.1–363) Operations of Surgery; (ff.393–429) Of the laques; (ff.393–429) index; remaining ff.blank. Written in juvenile hand of *Secundus*, glossed in his later hand and in that of *Primus*. Given to EU by Maj. Gen. D. C. Monro, who had it from his father, C. J. Monro of Craiglockhart, Palmerston North, N.Z. It must thus have once been part of the Monro collection now in Dunedin.

21. EU Dc.5.129

[Cat. entry] Monro (A) *Secundus* "A description of the rickets etc." Notebook of John Goodsir, senior. c. 1769. 58 ff.

Includes:

(i) 'A description of the Rickets, by Mr. Alex^r Monro Professor of Anatomy in Edinburgh', ff.1–6.

(ii) 'Of Bandages in general and particular bandages', ff.32–50.

This is a composite MS. The only part in Goodsir's hand is f.52. The 6 ff. on the rickets are by Monro *primus* as is the section on bandages in general (f.32^r). The latter is verbatim the same as EPH M8.16. The former is in general the same text as EPH M8.14, pp.261–333, although a little shorter. This suggests for both items a date in the late 1730s.

22. GD 113 V.438

[Cat. entry] "Physiological & Pathological Observations by Dr. Alex Monro 1751 and Clinical lectures by Dr. Rutherford 1749".

Includes :

(i) 'Physiological & Pathological observations by the late Dr. Alex^r Monro 1751'. 158 pp.

(ii) The Physiology. 132 pp.

Inside front board has 'James Hall, M.D. 1796'. Lists of the contents of (i) and (ii) on f.1^{r-v} and f.2^r and the title of (i) on f.4^r are in his hand. The texts are in a quite different hand and ink. The Innes of Stow papers in the Register House, Edinburgh, contain a number of MSS of James Hall written in 1770 and 1771, and including his MD exercise. Presumably he thought it worthwhile as a student to acquire copies of the two Monro treatises dating from twenty years before. (i) is in fact an almost verbatim copy of the *Commentary on his Osteology* (DU:M M163). See Taylor, op. cit., note 6 above, pp.84–85.

23. LS 42.a.40

No t.p. No date.

This is clearly Monro's History of Anatomy. Internal evidence (p.123) suggests 1733. See Russell, op. cit., note 3 above, p.166, who comments too on a number of other transcripts of these lectures. He relates them to Monro's own MS of the History of Anatomy DU:M M166, but see my discussion of that item in Taylor, op. cit., note 6 above.

24. LS 129^A.a.5

'A Treatise of Wounds & Tumours. By Alex^r Monro Professor of Anatomy in the University of Edinburgh & F.R.S.' No date. 245 & 237 pp. + indexes.

Cat. entry says written probably about 1750. Contains no references later than 1720.

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25. LS Add. 100 Monro
'An account of the Operations & Surgery taken from the lectures of Alexander Monro, Professor of Anatomy, in the University of Edinburgh & F.R.S.' No date. 314 ff.
Text on rectos only. A reference (p.310) to the *Medical Essays* "vol. 4th of 3rd edⁿ." suggests a date somewhere between 1747, the date of the 3rd ed., and 1752, when the 4th ed. appeared. There is a reference (p.172) to "... another pupil of mine, Dr. John Fothergill . . .", hence no doubt that the lectures are those of *Primus*.
26. LW 934
Includes:
(i) 'A Treatise of Tumors by Alex^r Monro Professor of Anatomy in the University of Edinburgh and F.R.S.' 1736 [Cat. entry] 76 ff.³⁸ Despite the catalogue date, the MS has "ended Sat. Oct 26 1734".
(ii) 'A Tratisse [*sic*] on the operations of chirurgery by Mr Alex^r Munro.' Signed "R. Hamilton 21/11/1734". 59 pp.
Hamilton's name appears in Monro's class-list (EU Dc.5.95) in 1733-4 and 1736-7.
27. LW 3615
Includes:
(i) 'A Treatise of Bandages by Alex^r Monro P.A. & F.R.S.' 56 pp. Flyleaf has "Henry Miller Surgeon" and "finis Henry Miller 1742".
(ii) 'Comparative Anatomy, Prolegomena.' No date. 102 pp.+17 pp. index. Signed "John Craufurd scripsit". Hand is same in both texts. Craufurd is listed in EU Dc.5.95 in 1734-5-6-7. Miller, who was a student in 1735-6, presumably acquired the notes a little later.
28. LW 4217
Includes:
'Monro's Treatise on Wounds in general.' pp.317-435.
This is one of four vols, (4214-4217), listed in Moorat's catalogue under Joshua Rigg.³⁹ All have his book-plate and the hand and layout are the same in all. MS 4214 contains Gregory's clinical lectures dated 1773, and 4215 comprises the lectures of Monro *Secundus*. Rigg must have copied 4217, which also contains Rutherford's clinical lectures dated 1752. The 'Treatise on Wounds' is without question by *Primus*.
29. MAC GD 1/2
'The History of Anatomy by Alex^r Monro P.A. & F.R.S. 1747.' 304 pp.
This MS is verbatim the same as EU Gen. 577D and includes (p.175) Monro's statement (see item 17) about the theft of his notes on Lyserus in exactly the same words. The statement is absent from DNLM 84011. It is also absent from the account of Lyserus in DNLM 135955, an MS very similar to EU Gen. 577D.

³⁸ Items 26, 27, and 28 are described in S. A. J. Moorat, *Catalogue of Western manuscripts on medicine and science in the Wellcome Historical Medical Library. II. MSS written after 1650 A.D.*, 2 vols., A-M and N-Z, London, Wellcome Institute of the History of Medicine, 1973, vol. 1: pp.25 and 742, vol. 2: p. 906. Moorat also describes (3616-7) under Monro *primus* two MSS written by Sir Charles Blagden in 1765-6. The latter consists of scrappy notes on comparative anatomy in a notebook of postcard size; the former is without any question notes from the lectures of Monro *secundus*.

³⁹ *Ibid.*, vol. 2, p.906. The entry reads: "4214-4217. Rigg (Joshua). Notes taken while a student at Edinburgh University of lectures by John Rutherford, William Cullen, John Gregory and Alexander Monro [1733-1817]." There is no attribution to Monro *primus*.

30. MSL No. 27
Lectures on Materia Medica, Anatomy etc. No date. 254 ff.⁴⁰
Includes:
(i) 2. Monro's Lectures on the History of Anatomy. ff.134–171.
(ii) 3. Monro's Lectures on Comparative Anatomy. ff.176–246.
(iii) 4. Monro's Lectures on Caries of Bones (brief notes only). ff.247–254.
31. MSL No. 33
Lectures of Alexander Monro (*primus*). 149 ff.
Includes:
(i) 1. Lectures on Wounds. ff.1–74.
(ii) 2. Lectures on Tumours. ff.76–148.
Flyleaf carries the name Jas. Nasmyth and the date "1735". Nasmyth is said not to be the writer but a later owner who graduated in 1783. However, the name appears in the class-list for 1737 (EU Dc. 5.95).
32. MSL No. 39
Lectures of Alexander Monro (*primus*). 144 ff.
Contains:
(i) 1. Lectures on Comparative Anatomy . . . "written at Edinburgh in the year 1735 by W. C." ff.1–102.
(ii) 2. Lectures on bandaging . . . "Finis March 20. 1735". ff.106–130.
(iii) 3. Lectures on Digestion. No date. ff.132–144.
The vol. carries book-plates of Wm. Cuming and J. C. Lettsom.
33. MSL No. 70
Commentaries on Monro's Osteology. No date. 197 ff.
Said to have been written after 1750, with no indication of identity.
See discussion in Taylor, op. cit., note 6, pp. 84–85.
34. MSL No. 74
Lectures on Medicine, Surgery etc. 303 ff.
Includes:
(i) 3. Lectures on Surgery. ff.84–85. "Finis April 8 1732".
(ii) 4. Lectures on Bandages. ff.96–112.
(iii) 5. Lectures on Tumours. ff.113–147.
(iv) 7. Lectures on Physiology. ff.172–227.
(v) 11. Lectures on Comparative Anatomy (brief notes only).
A composite volume, said to have been written between 1731 and 1733. The Monro components on surgery, bandages, and physiology all carry dates consistent with the supposition that they are part of one course. All are in the same hand; those on tumours are mostly in a totally different hand and have no dates.
35. MSL No. 82A
Lectures by Alexander Monro (*primus*). 145 ff.
Contains:
Monro's Lectures on Wounds.
The vol. carries the book-plate of Sam. Holland and has ". . . Feb^y 12th 1740 S. H."
36. MSL No. 82B
Lectures by Alexander Monro (*primus*). 161 ff.

⁴⁰ Items 30–37 inclusive have been fully described by Warren R. Dawson, *Manuscripta medica. A descriptive catalogue of the MSS in the Library of the Medical Society of London*, London, John Bale, Sons & Davidson, 1932. My descriptions are based on Dawson and abbreviated. The collection is now in the Wellcome Institute for the History of Medicine.

⁴¹ Hirsch, op. cit., note 18 above, p. 147.

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Contains:

- (i) 1. Lectures of Medical History.
- (ii) 2. Lectures on the Use of Anatomy.
- (iii) 3. Lectures on the Division of Anatomy.

This vol. also carries the book-plate of Sam. Holland and all three sections have his signature and the respective dates 20 November, 18 and 19 December, 1739.

37. MSL No. 106

Lectures by Alexander Monro (*primus*). 149 ff.

Contains:

Lectures on Tumours.

Writing known to be that of S. Holland, c. 1740.

38. PPC 10a–89

'Praelectiones Anatomicae Alexander Monro P. A. et F.R.S. ex ejus ore Captae In Academia Edenburgensis.' 70 ff.

T.p. has in different hand and ink the date 1752 and "The Gift of Doctor John Morgan to the College of Physicians of Philadelphia 1788". At top of page "1762" has been pencilled in. Attributed by Hirsch⁴¹ to Monro *secundus* but the material is clearly that of *Primus*. The first part of this MS (17 ff.) is a highly compressed history of anatomy. The remainder, very much in note form, is clearly related to Monro's *Commentary on the Osteology*. See Taylor, op. cit., note 6 above, p. 85.

39. PPC 10a–137

'A Course of Publick Lectures in Anatomy by Alexander Monro P. A. in the College of Edinburgh—Taken from him during the time of Lecturing by John Redman student of Physic and Surgery in the same College. In proprium usum A.D. 1746. Copied from his original MSS by B. Duffield 1769.' 33 pp.

Said to correspond with the first 35 pp. of PPC 10d–148 below.

40. PP 10d–148

'The history of anatomy from the earliest Ages of the world down to the present time.' No date. 166 pp.

According to Hirsch, item is a photocopy presented to College of Physicians by owner of original. Material is said to correspond very closely with 10a–137 i.e. with DNLM 84011. In fact, the first page, headed 'The Prolegomena', all that I have seen, does not differ by one syllable from EU Gen. 1986, a degree of correspondence equalled only by that of MAC GD1/2 to EU Gen. 577D.

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