# THE BOOK OF THE OLD EDINBURGH CLUB

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### THOMAS AND JOHN DONALDSON AND THE EDINBURGH MEDICAL CLASS CARDS

A. D. C. SIMPSON

I N 1785 JOHN GUEST, a medical student at Edinburgh University, enrolled for the anatomy and surgery class of Alexander Monro *secundus* (1733–1817), the second of a dynasty of three generations of gifted Edinburgh anatomists. In return for the fee Guest paid for the course, he received a 'class ticket' or 'class card', numbered and signed by the professor, which acted as a receipt for payment and which gave him access to the classroom (fig.1).<sup>1</sup>



Fig. 1. Class card, engraved by Thomas Donaldson, for the anatomy and surgery course of Alexander Monro *secundus*, 1785. (*Courtesy of Edinburgh University Library, Special Collections.*)

Because these cards had to be retained carefully throughout the course, a number have survived to the present day; indeed, occasionally cards are found in sets which are complete enough to establish the full range of courses taken during the three or four years of a student's studies.

The practice of issuing cards of this form in Edinburgh seems to have begun in the mid eighteenth century and it certainly continued into the twentieth century. In general they are fairly restrained pieces of engraving and typography, but some of the early examples, particularly those connected with the medical school, are strikingly illustrated and contain historical clues to the university politics of the day.

Monro secundus's card, with its dramatic image of a male figure dissected to show the muscles, is perhaps the best known of the Edinburgh class cards. It is somehow symbolic of the confident success of the Edinburgh medical school, which was then growing rapidly in its international reputation and was drawing students from all over the world to study under Monro and his equally revered medical colleagues, such as Joseph Black and William Cullen. The plate is inscribed 'Thos. Donaldson sculpt.', and Donaldson was an accomplished artist and engraver who illustrated some of Monro's published works. It is John Guest's particular card that is normally reproduced - it was, for example, the main motif for the Royal Scottish Museum's 1976 exhibition 'Edinburgh & Medicine', held to mark the 250th anniversary of the foundation of the medical school.<sup>2</sup>

The dissected figure on Monro's card is copied from one of the most influential anatomical treatises of the Renaissance, *De Humani Corporis Fabrica*, written by Andreas Vesalius (1514–1564), professor of anatomy and surgery at Padua between 1537 and 1544. The first of several editions was printed in Basle and published in Venice in 1543. It is profusely illustrated with woodcuts of great artistic merit as well as scientific quality, which have been attributed to the artist Jan Stevan van Kalkar and which include the well known series of Vesalius 'muscle men' and articulated skeletons. Vesalius also published an Epitome, a smaller version which was later to become more popular, the plates of which Martin Kemp has described as 'brilliantly condensed' from those of the Fabrica.<sup>3</sup> These two works formed the basis for a number of other illustrated anatomical works - Giorgio Vasari, for example, referred in 1568 to the plates published by the Spanish anatomist Juan de Valverdi. A notable subsequent edition of the Fabrica, revised by Hermann Boerhaave and Bernhard Siegfried Albinus, professors of medicine and anatomy respectively at Leiden University, was published in 1725. The popularity of the images was freshly reinforced for Monro's time by the 1743 publication of an edition of the plates engraved by John Tinny (1706–1761).

The figure on John Guest's card is not entirely as van Kalkar had drawn it (fig. 2). Beyond the reversal of the image, the muscle-man on the card is seen to be carrying a glass jar containing a foetus, presumably from Monro's extensive collection of anatomical teaching specimens. However, the jar does not sit well within the composition of the plate and the quality of its engraving is comparatively poor. In fact the jar is a later addition, and there is an earlier state in which it is not yet present and which follows the Vesalius plate more directly.<sup>4</sup>

The addition of the specimen jar was almost certainly prompted by the appointment in 1783, as professor of midwifery, of Alexander Hamilton, formerly Deacon of the Incorporation of Surgeons and now with a newly acquired MD from St Andrews University. The change to the card can be seen as representing Monro's assertion that the study of juvenile anatomy was part of the protected domain of his instruction.<sup>5</sup> There is no doubt that the quality of the engraving of jar, and indeed the draped curtain which helps balance the image, does not match that of Donaldson's original card — perhaps it had to be done in great haste, or perhaps Donaldson was not available?

The feature of the card that has aroused most interest is the small octagonal building in the background. This is the purpose-built anatomy theatre constructed for Monro *secundus* in 1764, when his previous classroom in the old Library building (seen to the left of the new theatre) could



Fig. 2. 'Muscle-man' by van Kalkar, from Andreas Vesalius's *De Humani Corporis Fabrica*, 1543. (*Courtesy of the Royal College of Physicians of Edinburgh.*)

no longer accommodate the number of students attending his course. The class card was first published in 1965 by David Horn in his discussion of the building of the new theatre.<sup>6</sup> It was more recently reproduced by Andrew Fraser in the same context.<sup>7</sup>

The anatomy course was a compulsory part of the medical curriculum at Edinburgh. Its increasing success, with an annual attendance reaching a peak of 436 students in 1783 — and the need to protect the valuable source of personal income represented by student fees — ensured that Monro *secundus* was well aware of the benefits of self-promotion and at the same time made him diligent in resisting encroachment by others. The evolution of the John Guest class card provides a vignette of some of these aspirations and fears.

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It is not known precisely when such decorative printed class cards were first introduced at Edinburgh, but they presumably replaced letterpress and manuscript receipts for individual class fees that must go back to at least the early eighteenth century. University salaries were often small, but could be augmented by class fees, which were paid directly to the professor. In some instances, as when the Town Council as Patrons of the university, were pressed to appoint the first professors of medicine in 1685, no salary was allowed, and the posts apparently lapsed.8 Similarly, when the four professors of medicine were appointed in 1726 to constitute the first medical faculty, enabling the university to award medical degrees, again they had no salaries. They were therefore largely dependent on the fees that their students paid, although they also operated a commercial pharmaceutical enterprise.9 For those courses that were compulsory for graduation, further support came from a share of graduation fees.

It is normally reckoned that this fee structure was a significant feature in Edinburgh University's success, because there was a strong incentive to develop effective and engaging teaching skills and to attract wider (paying) audiences. The work could be lucrative enough to support additional teaching sanctioned by the Council; and so also encouraged external, or 'extra-mural', courses offered by enterprising outsiders.

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William Dean, an otherwise unknown young medical student, attended the university's medical school for three sessions in the late 1760s. In some ways he is representative of many students drawn to study at Edinburgh: he did not require to go to the trouble and

expense of graduation, and we have no information about where or even whether he entered medical practice, which might have been in a country district in Britain, or in the colonies or in military service. The university's matriculation books list him as registering in his first year for Monro's classes in anatomy and surgery and for lectures in the practice of medicine and materia medica, and Monro's class-list records him as an English student, from Cumberland.<sup>10</sup> His listed classes for year two were a second course in anatomy and surgery, the theory of medicine, chemistry, a second course of midwifery and clinical lectures at the Infirmary. In his third year he was booked to attend further clinical lectures, a third midwifery course and natural philosophy (or physics).

Dean's Edinburgh class cards, which comprise perhaps the earliest and most complete set known, were presented to the Medical School in 1976.<sup>11</sup> With the exception of the second course of anatomy and surgery, for which the card is most unfortunately missing, the remainder flesh out the details of his syllabus:

1768–69	Anatomy and Surgery: Alexander Monro <i>secundus</i> Practice of Medicine: John Gregory Materia Medica: Francis Home
1769–70	Anatomy and Surgery 2: Alexander Monro <i>secundus</i> Institutes of Medicine: John Gregory Chemistry: Joseph Black Midwifery 1 & 2: Thomas Young
	Clinical Lectures at the Infirmary
1770–71	Midwifery 3: Thomas Young Natural Philosophy: James Russell Clinical Lectures at the Infirmary.

Additional cards show that in his first year Dean also attended the anatomical demonstrations of Monro's dissector, John Innes, and there is an undated manuscript card for a newly offered course in surgery by the extra-mural lecturer James Rae. (The remaining cards gave access to the university library or were receipts for smaller fees.)

Session 1768–69 was the first in which materia medica, under the newly appointed Francis Home, was separated from botany. There is, however, no indication that Dean also attended the classes of John Hope, who had originally taught the combined botany and materia medica courses but who had successfully arranged the separation of these courses

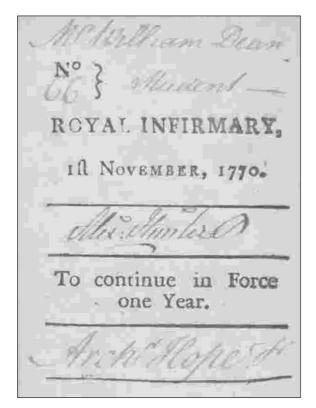


Fig. 3. Student's admission ticket for the Royal Infirmary, 1770. (*EUL, Special Collections.*)

in 1768 and his transfer to a new Regius chair of medicine and botany.

Another way in which teaching responsibilities could be shared is revealed in Dean's cards, which show that both the practice and the institutes (or theory) of medicine were taught by John Gregory. These were two distinct courses, the former of which had previously been taught from 1726 by John Rutherford. However, when Robert Whytt was appointed in 1747 to take over instruction in the institutes of medicine (from another 1726 appointee, Andrew St Clair), Rutherford was developing his interests in clinical instruction, and so Whytt was persuaded to deputise for Rutherford and teach the practice of medicine class also. When Whytt died in 1766, he was replaced as professor of the institutes of medicine by William Cullen. Rutherford, now devoting his time to clinical lectures, resigned from his nominal professorship of the practice of medicine, which was awarded to John Gregory. But,

to complicate things still further, from 1769 until Gregory's death in 1773, Gregory and Cullen alternated their teaching of the two subjects: hence Dean was taught in successive years by Gregory; but had he begun in the following year, he would have been taught by Cullen. After 1773, Cullen transferred to the chair of the practice of medicine.

Students and surgeon apprentices had been able to attend the Infirmary from its opening in 1729. From session 1742–43 the Managers of the Infirmary controlled their number by the issue of tickets, which cost two guineas for students (but were free for deserving poor students) and one guinea for apprentices (fig. 3). This was an important source of income for the Infirmary and by 1767 it represented a quarter of the annual revenue.

During the session 1747–48 student instruction in the Infirmary was put on a more formal basis when John Rutherford, one of the university professors of medicine, was permitted to give regular clinical lectures. The arrangement was financially beneficial to the hospital and in 1750 a small ward was allocated to Rutherford to accommodate suitable patients for his clinical instruction. By 1757 the number of clinical beds had been doubled and the four professors of medicine had begun a regular joint course of instruction, which was to become an integral part of the Edinburgh syllabus. (In this venture, they were joined by the professor of anatomy, Alexander Monro primus, who had now been elected to the College of Physicians and had left the Incorporation of Surgeons, and was therefore qualified to act as a physician to the hospital: in due course he was succeeded in this by his son, Monro secundus.) The course lasted five months, with each of the professors teaching in turn during his period of attendance as one of the physicians-inordinary at the hospital. The tickets issued for the course, attended in two sessions by Dean, therefore only specified that they were for 'Clinical Lectures', without any need to provide the names of the lecturers (fig. 4). By William Dean's time, the university charge for attendance at a qualifying course of clinical lectures was three guineas.

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Surgery was included in Alexander Monro secundus's course; but unlike his father, who had

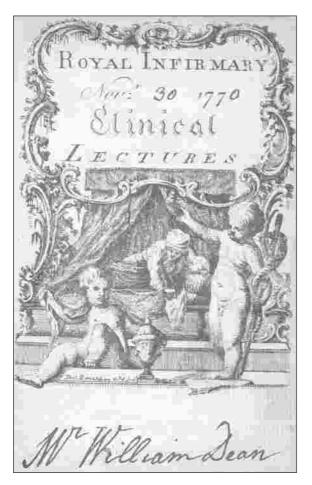


Fig. 4. Card for clinical lectures at the Royal Infirmary, 1770. (EUL, Special Collections.)

begun as a surgeon and whose students had included a significant number of apprentice surgeons, the son had never been an operating surgeon, and he has been characterised as being able to teach only 'the Rudiments of the Art' of surgery.<sup>12</sup> This was bound to create tensions with the surgeons after Monro *primus* resigned from Incorporation of Surgeons in 1756, and a protracted dispute did indeed develop between the surgeons and the university over the rights to teach surgery, eventually leading to the establishment of a number of surgical chairs in the university. The first moves in this battle were already apparent in the late 1760s.

James Rae, whose surgery lectures William Dean attended, had entered the Incorporation of Surgeons,

rising to become Deacon in 1764. In 1766 he was one of four surgeons appointed as salaried surgeons-inordinary by the Managers of the Infirmary, replacing the arrangement whereby all the surgeons had access to the hospital. At about the same time he began to lecture on surgery in Surgeons' Hall, which was adjacent to the Infirmary; and in 1769, with the support of the Incorporation and the Managers, he began clinical lectures on surgical cases in the Infirmary. Rae's lectures were popular and successful, and the Incorporation was soon promoting them as necessary for medical students, with the clear implication that Monro secundus's course was deficient.<sup>13</sup> But worse was to come — in 1776 Rae asked the Incorporation to petition the Crown for the establishment of a Regius chair in surgery, and the Incorporation found that Monro's commission of appointment, issued by the Town Council as Patrons of the university, did not exclude the creation of such a chair. Monro's urgency to protect his teaching (and financial) monopoly prompted some deft lobbying and led to a new lifetime commission from the Town as 'Professor of Medicine and particularly of Anatomy and Surgery in this University', awarded in 1777.14 This was certainly not the end of the matter, but it does illuminate how Monro 'worked the system' to guard against encroachment by others.

Monro seems already to have been reacting defensively by the time that William Dean first enrolled in 1768: Monro's class was clearly described in the matriculation book as of 'anatomy and surgery', whereas Dean's engraved class card for this course (fig. 5), depicting one of Vesalius's standing skeletons leaning on a plinth (fig. 6), is still only engraved 'ANATOMY' on the plinth. (This may suggest that this design dates from some time before Rae's lectures began in 1766.) After 1777, and armed with his new commission, Monro ensured that the replacement card was unambiguously inscribed for 'ANATOMY and SURGERY'.

William Dean's attendance was at Rae's popular 'Complete Course of Lectures on Surgery' at Surgeons' Hall (tentatively in session 1768–69), but his undated manuscript card (fig. 7), signed by Rae and with the security of an impressed seal, appears to be the only card surviving from any of Rae's courses. James Rae's lectures were taken over in 1786 by

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Fig. 5. Card for Alexander Monro's lectures on anatomy (and surgery), 1768. (EUL, Special Collections.)

James Russell, son of the professor James Russell who had taught Dean natural philosophy and destined to be the first occupant of the new Regius chair of clinical surgery that was finally created in 1803.<sup>15</sup>

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Perhaps the most striking card in this collection is the card for 'private demonstrations' in anatomy (fig. 8), which reproduces (again in reverse) the well known engraved portrait of Andreas Vesalius from his *De Humani Corporis Fabrica* (fig. 9). The card is dated 1768 on the reverse and signed by John Innes, who was employed by Alexander Monro *primus* as his dissector in 1755. By this time so many students were taking anatomy that two classes had to be held each day, and without Innes Monro could not manage the

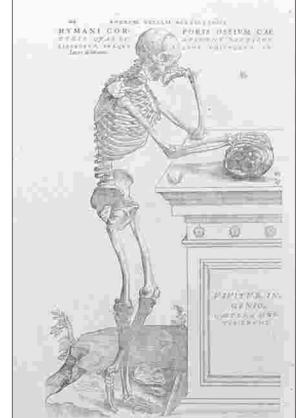


Fig. 6. Articulated skeleton by van Kalkar, from Andreas Vesalius's *De Humani Corporis Fabrica*, 1543. (*RCPE.*)

work, nor would students have adequate opportunity to study the anatomical specimens, which were housed in the same room. Monro's son had already been elected conjoint professor of anatomy with his father (amended to anatomy and medicine in 1757), but it was not until 1758 that he returned from further studies in London. Paris. Berlin and Leiden to take over lecturing from his father. Ultimately, in 1764, Monro secundus persuaded the Town Council to finance the building of a larger and better-lit anatomy theatre (shown on John Guest's class card), but he complained earlier that year that 'the Students have of late years been admitted in the evening after the ordinary hours of Lecture, to examine many of the parts at their own leisure, and he has obliged his Dissector to attend them', and these presumably were the sanctioned 'private demonstrations' for

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Ampleal Course of Lochures on Survery el Surgeons Hai mr William Tean

Fig. 7. Card for James Rae's lectures on surgery, at Surgeons' Hall, c. 1768. (EUL, Special Collections.)

which William Dean held a card.<sup>16</sup> The Council's response was to allow Innes to augment his salary by appointing him janitor to the university.

As 'Janitor and Macer' (or 'Upper Janitor and Macer' by 1775), Innes carried the university mace on ceremonial occasions. He was also to act with the under-janitor (who in earlier years had been referred to as the janitor's servant) to keep 'the College gates at all times' and to 'take care that no idle youth enter'.<sup>17</sup> They were 'to use all their endeavours to prevent such disorder or abuse of any part of the fabricks, and to admonish the contravieners'. The students were required to pay the janitor 'his fees for the year according to justice & constant custome' or risk being prevented from attending classes, and in Dean's time this was two shillings and six pence per student, for which a printed receipt card was issued. Two of William Dean's three annual cards survive (fig. 10).



Fig. 8. Card for John Innes's 'private demonstrations' in anatomy, 1768. (*EUL, Special Collections.*)

William Stewart was made under-janitor in 1766, and he was responsible for collecting additional fees at certain lecture rooms, which were probably passed on to the professor for the running of the class — in the same way, for example, as a later professor of chemistry (Thomas Charles Hope) made a levy for heating the classroom and providing chemicals.18 Dean's receipt cards are for fees of two shillings collected by Stewart at the anatomy theatre in 1768 and 1769 (fig. 11), but of only one shilling collected at the natural philosophy class in 1770. There is some indication that Stewart, like Innes, may also have been employed by Monro secundus, because Dean's cards for both Monro's anatomy course and Innes's additional demonstrations are endorsed on the reverse 'WS', together with the two guinea fee on the Monro card. No other class card of Dean's is similarly endorsed.

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Fig. 9. The Padua anatomist Andreas Vesalius, by van Kalkar, from Vesalius's *De Humani Corporis Fabrica*, 1543. (*RCPE*.)

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Most of the engraved cards held by William Dean were elegant specimens of typography, enclosed in more or less elaborate borders, and printed in black ink. By contrast, the cards for Monro's anatomy course and Innes's demonstrations carried detailed illustrations based on the well known Vesalius anatomical illustrations, as did Monro's later anatomy and surgery card, underlining the importance of illustration in Monro's thinking. All three cards were printed in colour; and from later examples, and from Monro's records, we can tell that the colours were changed each year.<sup>19</sup> It is probable therefore that the missing Dean card for Monro's second anatomy and surgery course was merely produced in a different colour to distinguish it from the ticket for that year's first course.

John Guest's anatomy and surgery card carries Thomas Donaldson's engraved signature, 'Thos.



Fig. 10. Receipt from John Innes for student fees due to him as Janitor and Macer, 1769. (EUL, Special Collections.)

Donaldson sculpt.'; whereas Dean's earlier anatomy card is engraved 'JD Sct', and it will be argued below that this was the work of Thomas's relative, the better known artist John Donaldson. The Innes card with its portrait of Vesalius is unsigned but it too can presumably be ascribed to one of the Donaldsons possibly John. Certainly the background curtain, which is present in the original, is handled in a similar manner to the curtains which have been added to the other illustrations. It is tempting also to attribute to the same hand the card used by Monro's employee Innes in his capacity as janitor - it shows a crossed key and mace on an apparently identical plinth to that on the anatomy card, and under a similarly draped curtain. Again, it is produced in different colours.

In a slightly different category is Dean's 1770 card for the clinical lectures at the Infirmary (see

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Fig. 11. Receipt from William Stewart for student fees due for the anatomy class, 1768. (*EUL, Special Collections.*)

fig. 4). The simple engraved card of the previous year had been replaced by a much more elaborate card with an etched design, depicting a turbaned figure reclining on a draped bed, set in a rococo frame of foliage with two attendant putti. The engraving style is much lighter, but this time it is certainly Thomas Donaldson's work — it carries a thinly engraved inscription 'Thos. Donaldson det. & Scult.' There is another card that is clearly related to this both in design and execution, for William Cullen's practice of medicine course, and again introduced in or shortly after 1770 (it bears the incomplete printed date '177 '). The course was not attended by Dean, but a card survives from another student who attended in 1775 (fig. 12).20 The text is enclosed in an asymmetrical floral border set on a plinth, and a putto indicates a compass rose and points to

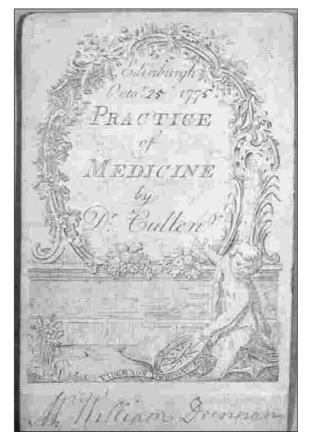


Fig. 12. Card for William Cullen's lectures on the practice of medicine, 1775. (EUL, Special Collections.)

Cullen's name. The typography on the label on the compass ('FIDEM NON DEROGAT ERROR') is very similar to that on Innes's card, and there is again a faint inscription 'Thos. Donaldson delint. & Scut.'

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There was a strong and long-standing connection between Monro *secundus* and Thomas Donaldson, who was an accomplished Edinburgh-trained draughtsman and a highly competent engraver. It was Donaldson who illustrated the work for which Monro was best known — his *Observations on the Structure and Functions of the Nervous System*, published in Edinburgh and London in 1783. Of the plates of Monro's dissections drawn and engraved by Donaldson, possibly the most striking is the finely

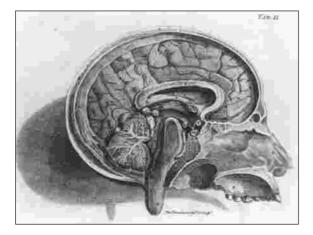


Fig. 13. Engraved plate by Thomas Donaldson after his own drawing of a dissection by Alexander Monro, from Monro's *Observations on the Structure and Function of the Nervous System*, 1783. (EUL, Special Collections.)

etched and expressive aquatint which shows a section of the brain, indicating the structure which became known as the 'foramen of Monro', signed 'Thos. Donaldson Delt. et Sculpt.' (fig. 13).

Donaldson was a pupil of the London-born artist and engraver Richard Cooper who settled in Edinburgh about 1725. Joe Rock has recently described how Cooper collaborated with Alexander Monro *primus* from before 1728, drawing and engraving anatomical preparations, including those published in the *Medical Essays and Observations* of the medical society founded by Monro in 1731 (the precursor of the Philosophical Society, which was in turn the forerunner of the Royal Society of Edinburgh).<sup>21</sup>

Rock links this patronage with Cooper's establishment of a drawing academy and school of engraving (with himself as drawing master) under the auspices of a society called the Edinburgh School of St Luke, whose members could assign places in the academy to worthy pupils (or indeed their own children). The academy met in the university from 1731; and since Cooper and a number of his pupils were clearly involved in an extended programme of illustrating Munro's dissections for publication, the inference is that Monro was teaching anatomy to artists.<sup>22</sup>

Cooper worked for Monro *primus* in the 1740s on the illustrations for a proposed reduced version of the notable anatomical work *Tabulae Sceleti et*  *Musculorum Corporis Humani* of the eighteenth century Leiden anatomist B. S. Albinus. Cooper's drawing academy, which had run into difficulties in the 1740s, was revived by the Select Society, of which Monro *primus* was a founder, through an off-shoot called the Edinburgh Society for the Encouragement of Arts, Science, Manufactures and Commerce, with Monro on its governing board.

By 1754, Cooper was teaching at the Infirmary (of which Monro was a Manager) and it was there from 1756 that Cooper's pupils (and those of other teachers) exhibited their work in the open exhibitions run by the Edinburgh Society. Amongst the first premiums, awarded in January 1756, was one to Thomas Donaldson of Edinburgh for a 'drawing of fruit, foliages or flowers, by boys or girls under sixteen years of age'; in the following year he also won a prize (one of only two awarded in 1757) in the landscape drawing category, but by now he was competing as an under-eighteen.<sup>23</sup> This suggests that Thomas Donaldson was born in or after 1739, making him a near contemporary of Monro *secundus*.

Very little is known about Thomas Donaldson's life. Standard accounts give no information about his birth or early life, but his business was presumably financially precarious, because a Thomas Donaldson limner (or artist) and engraver was admitted to the Holyrood debtors' sanctuary in April 1773, and again in April 1780.<sup>24</sup> His marriage is usually given as that of Thomas Donaldson, engraver, to Mary Haig, a farmer's daughter from Lasswade, in the Tron parish of Edinburgh in January 1773; but another possibility must be that of Thomas Donaldson, 'limner in the Canongate', who married Ann Clark, daughter of William Clark, gardener in the Abbey of Holyroodhouse, in January 1763.<sup>25</sup>

We are on slightly more secure ground with John Donaldson, who similarly attended Cooper's drawing academy, and for whom Joe Rock has established a number of definite links with Cooper.<sup>26</sup> He won prizes awarded by the Edinburgh Society for the years 1756, 1757 and 1758, all in a category for drawings of sculpture, and restricted to boys under 20 years of age. At his first attempt, in 1756, the single prize for sculpture had been awarded to Cooper's son, also Richard, but Donaldson's entry won him an additional prize for its merit, and second and third prizes were offered in subsequent years.<sup>27</sup>

To be eligible in three successive years suggests that he was nearly 20 on the final occasion.

John Donaldson moved to London in 1759 or 1760, staying initially in the Cooper household in Westminster, and exhibiting (apparently at Richard Cooper senior's introduction) at the London Society for the Encouragement of Arts and later at the seceding Society of Artists.<sup>28</sup> From the mid 1760s he exhibited mainly miniatures and this seems to have become his principal market. The signed examples that survive tend to be marked merely 'J D', as is the Monro class card.29 His skill in miniature painting led to the decoration of highly prized figurative vases at the Chelsea factory in London and later at the Worcester Porcelain Company, established in 1751 by Dr John Wall.30 Three historical paintings in enamel won substantial premiums from the Society of Arts in 1764 and 1768, and one of these, depicting Hero and Leander, was purchased by David Stewart Erskine, 11th Earl of Buchan, set in a gold box and presented to Marischal College, Aberdeen, in 1769.31 Buchan had previously purchased a number of engravings after Dürer and Hollar made by Donaldson when he was still in Edinburgh, and Buchan also contributed to a surviving manuscript obituary of Donaldson which expands on David Gibson's account in the Gentleman's Magazine for 1801.32

John Donaldson made an attempt to return to Edinburgh in 1786 when he applied unsuccessfully for the vacant position of drawing master to the government-funded Trustees' Academy (which took on the functions of Cooper's drawing academy), but soon became diverted by speculative thought and poetry, and his increasing eccentricity and intemperate views lost him his paying clientele.<sup>33</sup> He died in poverty in Islington in 1801.

He was described in his obituary by Gibson as having been born in Edinburgh, 'as far as I can ascertain' in 1737, the son of a glover 'in narrow circumstances', and dying in October 1801 in his 64th year.<sup>34</sup> However, as a young man, John Donaldson had won the 1758 prize of the Edinburgh Society and the age restriction for this implies that he must have been born some time after about March 1738, which would indeed have made him 63 or under at his death. William Tapp conducted careful searches but was unable to find an appropriate Edinburgh glover in the burgess or birth records with a son born at this time, so perhaps the father was not free to trade within Edinburgh or he may indeed not then have been working as a glover. He identified a possible candidate as John Donaldson, servant to Archibald Hamilton (d. 1774) of Dalzeil, Lanarkshire, and married to Mary Thomson, whose son John was born in Edinburgh on 4 April 1739, at a time when John senior was detained 'West at Dalziell'.<sup>35</sup> Such a date fits the age limit for the prize and would make this Donaldson just a year younger than Gibson's estimate of his age at death.

However, the Edinburgh Society awarded prizes to two other Donaldsons in the same period -Thomas, who it has already been mentioned won premiums for 1755, 1756 and 1758, and Peter, who gained one for 1757.36 All these awards were age limited, and we can deduce that Thomas must have been born some time after December 1739, and Peter after December 1740. Although only Thomas is known to have contributed illustrations to anatomical works published by Alexander Monro secundus, both must be supposed to have been pupils of Richard Cooper.<sup>37</sup> To find three highly competent artists associated in this way with ages separated by about a year, strongly suggests they were related. The link between the early Monro anatomy card by 'JD' (see fig. 5) and the slightly later anatomy and surgery card signed by Thomas Donaldson (see fig. 1), may strengthen this assumption, and may also indicate that the earlier Monro card was prepared by John Donaldson before his departure for London in 1759 or 1760 — perhaps marking Monro secundus's assumption of teaching in 1758.

William Tapp proposed that the parents of John Donaldson, the artist, were John Donaldson senior and Mary Thomson, but no Thomas was found in the registers with these parents. Instead, the recurring tradition that John's father had been a poor Edinburgh glover suggests that Thomas's birth is the one recorded in 1741 to Patrick Donaldson, 'Burgess Glover in Edinburgh, residenter in Portsburgh', and his wife Margaret Murray.<sup>38</sup> It is conceivable that the correct entry for John's birth should have been to Patrick and Margaret, but that this had similarly been missed (their marriage is not recorded either), or perhaps the two families were related and John was brought up outside Edinburgh by Patrick and Margaret because it was not possible to raise him at Dalziel. Older children in both families have been found, but no Edinburgh-born Peter has been located.

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The engraved and etched medical class cards represented in William Dean's set are Thomas Donaldson's earliest signed work that has been recorded, and in 1771 two plates he engraved for Monro were published in the revived Essays and Observations, Physical and Literary, as Cooper and other pupils of his had done earlier.<sup>39</sup> An etched plate of a dissection was prepared by him for a 1770 Monro pamphlet which refuted the priority claim of a former pupil, William Hewson.40 In 1776 Donaldson copied and engraved from Albinus's anatomy eight standing figures (front and rear views) in progressive stages of dissection: these were published for Monro's dissector John Innes by the Edinburgh bookseller Elliot, apparently to accompany a description of the muscles published by Innes in the same year.<sup>41</sup> These figures were in the same pose as in Albinus's original work and therefore differed from the adjusted and combined versions, described by Joe Rock, which Richard Cooper had developed for Monro in the 1740s and which were eventually published by Andrew Fyfe in 1800.42

Thomas Donaldson's principal work came to fruition in the 1780s in a series of accomplished engravings, taken from his own drawings of Monro's dissections, to illustrate the volumes for which Alexander Monro secundus was most celebrated ---his Observations on the Structure and Functions of the Nervous System (1783), The Structure and Physiology of Fishes explained and compared with those of Man and other Animals (1785), and Description of all the Bursae Mucosae of the Human Body (1788). Donaldson's prints, which Rock has described as having a soft, expressive quality, combined etching, engraving and aquatint techniques within individual plates: they show innovative technical flair at a period when some of these processes were not well understood, and they represent the outcome of what must have been an extended and close association between Donaldson and Monro.43

Monro *secundus* had a pioneering interest in the lymphatic vessels, and he was one of the first to describe both the origin of these in the tissue spaces and the operation of a whole system of these vessels throughout the body to absorb and redistribute fluids. His father used mercury injections of dissections to make the lymphatic vessels visible to his students and a few of these are still extant.<sup>44</sup> The son wrote a key paper on lymphatics while studying in Berlin in 1757. He was later involved in strongly worded disputes extending well into the 1770s over priority in describing the origin and function of the lymphatic system in man and other animals, opposing the claims of his father's former pupil, the London anatomist William Hunter, and of his own pupil William Hewson.<sup>45</sup>

In 1788 Monro undertook, with the assistance of his dissector Andrew Fyfe, the demanding task of injecting the majority of the lymphatic vessels of the limbs and trunk of a specially dissected male body, which was then dried for continuing use as part of his teaching collection. This mummified cadaver survives in the anatomy department of the University of Edinburgh, where it has more recently been examined and described by professors Matthew Kaufman and Jonathan Best.<sup>46</sup> However, perhaps the most remarkable aspect of this project is that a life-sized engraving of the dissection was made and a single copy, printed from three large engraved copper plates, survives in the same collection and has also been illustrated and discussed by Kaufman.

The detailed drawings on which the engraving was based were almost certainly made by Andrew Fyfe, who was himself noted as a competent artist and engraver, but the large engraving has been confidently attributed by Rock on the basis of his style to Thomas Donaldson.<sup>47</sup> This remarkable image was praised by the surgeon John Bell in 1794:<sup>48</sup>

Perhaps the history of this grand figure might go in the following terms. The ingenious Mr. [William] Cruikshank, with the design of explaining all that he or Dr. Hunter had injected, of the lymphatic system, in one consistent view, took a delicate and elegant drawing of the human body, and laid his lymphatics upon it [in a publication of 1786] ... but he could not foresee that the idea thus first suggested was to receive, in passing through a greater mind, a grander form. — The expedient was tried again, and the second anatomist [Monro *secundus*] resolving to outdo at one stroke all his rivals, and knowing of no surer way than this, had an engraving made of a most gigantic size! ... A figure of full six feet in height ... has turned out to be a drawing of such singular beauty, that ... it positively cannot be excelled.

The engraving presents detail that preserved more fugitive features of the mummified cadaver, and it must have been a valuable and impressive teaching aid. Bell clearly saw it as an emphatic statement of Monro's ownership of the exposition of the lymphatic system, and this was perhaps justification enough for Monro of the effort and expense of producing it.

It is possible that Monro may at some stage have contemplated publishing this very large engraving in a work on the human lymphatic system that was not completed, but in the event it was a much smaller copy, attributed to Fyfe, that subsequently appeared (together with four other engravings signed by Donaldson) in the lymphatics section of Andrew Fyfe's three volume Compendium of the Anatomy of the Human Body of 1800. The surviving large Donaldson image bears the engraved number (87A), which is the same number as on the reduced plate in Fyfe's work. However, Joe Rock believes that the number on the life-sized plate is not in Donaldson's hand, and has more likely been added by Fyfe. Perhaps, therefore, Fyfe did intend to include this item, suitably folded up, in his Compendium, but decided in the end to substitute a reduced copy; alternatively, the number may represent no more than a reference to the account in the final published work.49

Andrew Fyfe's *Compendium* proved to be a successful textbook that ran to many editions. This and his *Views of the Bones*, both of which appeared in 1800, included several plates engraved by Thomas

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Donaldson, but as Rock has pointed out, Fyfe assembled his illustrations in a chaotic and cavalier way — re-using existing but serviceable old plates and sometimes cutting them down to fit the required format.50 It is therefore not certain that Donaldson was still active at this date. Similarly, Monro's late volume, Three Treatises on the Brain, Eye, and the Ear, of 1797, contains only one plate drawn and engraved by Donaldson but, unusually, this is dated as 1778: the remainder are by Fyfe, working with other engravers. Hence the life-sized engraving of Monro's mercury-injected dissection, which must date from 1788 or later, may come near the end of Donaldson's active working life — although four plates attributed to him in the 1797 published MD thesis of Alexander Monro tertius must be presumed to be after 1795 (unless they represent images from earlier work by tertius's more talented father).51

Alexander Monro *secundus* appears to have monopolised Donaldson's time and skills, to the extent that only one non-medical work by him has been recorded — a separately published etching of about 1775 titled 'View of the New-Bridge of Edinburgh, with the adjacent buildings of the old and new town from the west'.<sup>52</sup> A somewhat inferior version of this, re-engraved by Daniel Lizars, was included in Hugo Arnot's *History of Edinburgh* (in the 1788, second edition). Although Thomas Donaldson played a not-insignificant part in consolidating Monro's reputation, it is the more mundane Vesalius class cards that may provide his most enduring images, encapsulating as they do the aspirations and success of the ambitious Edinburgh Monros.

#### NOTES AND REFERENCES

I am grateful to the Special Collections Department of Edinburgh University Library and the Royal College of Physicians of Edinburgh for permission to reproduce illustrations and to the Librarian of Edinburgh University and the Registrar General of Scotland for permission to quote from records in their care. Dr Joe Rock and Dr Andrew Fraser have given valuable advice and encouragement, and I must also thank Dr Michael Barfoot, Dr Tristram Clarke, Neil Curtis, Stevan Kerr, Dr Stephen Lloyd, Dr Alison Morrison-Low and Helen Smailes for their help.

1 Edinburgh University Library (EUL), Special Collections, MS Da.

- 2 R. G. W. Anderson and A. D. C. Simpson, *Edinburgh & Medicine: A Commemorative Catalogue* (Edinburgh 1976).
- 3 Martin Kemp, 'A Drawing for the *Fabrica*; and some thoughts upon the Vesalius muscle-men', *Medical History*, 14 (1976), pp. 277–288, see p. 277 n.1.
- 4 An example was seen by National Museum of Scotland staff in 1996. Another, of 1780, in private hands in London, is illustrated in *Bulletin of the Scientific Instrument Society*, No. 7, 1985.
- 5 A. D. C. Simpson, 'James Hamilton's 'Lying-in' Hospital at Park House and the Status of Midwifery Instruction in the Edinburgh Medical School', *Book of the Old Edinburgh Club*

(BOEC), New Series, 3 (1994), pp. 131-141.

- 6 D. B. Horn, 'The Anatomy Classrooms in the present Old College, 1725–1880', University of Edinburgh Journal, 22 (1965–66), pp. 65–71.
- 7 Andrew G. Fraser, *The Building of Old College: Adam, Playfair & the University of Edinburgh* (Edinburgh 1989), p. 44.
- 8 A. D. C. Simpson, 'Sir Robert Sibbald the Founder of the College', in R. Passmore (ed.), *Proceedings of the Royal College of Physicians of Edinburgh Tercentenary Congress* 1981 (Edinburgh 1982), pp. 59–91, see pp. 72–75 and n.38.
- 9 Rosalie Stott, 'The Battle for Students: Medical Teaching in Edinburgh in the first Half of the Eighteenth Century', in A. H. B. Masson and A. D. C. Simpson (eds), Edinburgh's Infirmary: a Symposium (Edinburgh 1979), pp. 3–9; R. G. W. Anderson, The Playfair Collection and the Teaching of Chemistry at the University of Edinburgh 1713–1858 (Edinburgh 1978), pp. 5–10.
- 10 EUL, Special Collections, University of Edinburgh Matriculation Books; MS Da. 50, vol. 1, anatomy class lists, 1720–1774.
- 11 The Dean cards are in EUL, Special Collections, MS Da. The acquisition of the cards is briefly described in [A. D. C. Simpson], 'The Classes of 1768–1771', University of Edinburgh Bulletin, 13, No. 5, December 1976.
- 12 R. E. Wright-St Clair, *Doctors Monro: A Medical Saga* (London 1964), p. 85, quoting Alexander Hamilton, Deacon of the Incorporation of Surgeons in 1777.
- 13 Ibid., p. 82.
- 14 David C. Simpson, 'The Chairs of Surgery at Edinburgh, 1777–1831', Journal of the Royal College of Surgeons of Edinburgh, 22 (1977), pp. 91–102.
- 15 Ibid., pp. 94-96.
- 16 Wright-St Clair, Doctors Monro, p. 79.
- 17 Alexander Morgan (ed.), University of Edinburgh: Charters, Statutes and Acts of the Town Council and the Senatus 1583–1858 (Edinburgh 1937), pp. 225, 233–234.
- 18 Evidence Oral and Documentary taken by ... the Commissioners ... for visiting the Universities of Scotland, Volume 1, University of Edinburgh (London 1837), p. 284.
- 19 The card colour was noted by Monro at the beginning of each year's class list from 1771 in the first volume of annual lists, and the colour is tabulated for the period 1784–1803 in the fly leaf of the second volume: EUL, Special Collections, MSS Da.50, vols 1 and 2.
- 20 EUL, Special Collections, MS Dc.4.95.10, card issued to William Drennan.
- 21 This brief account of Cooper's academy is drawn from Joe Rock, 'An Important Anatomical Publication Rediscovered', *The Book Collector*, 69 (2000), pp. 27–60, see pp. 43–47; and *idem*, 'Richard Cooper Senior (*c*.1696–1764) and his Properties in Edinburgh', *BOEC*, NS 6 (2005), pp. 11–23, see p. 12. Rock has subsequently noted, however, that there is no specific reference in the Infirmary Managers' minutes to drawing instruction: personal communication.
- 22 No prominent pupils of Cooper's have been found in the lists of the anatomy classes (EUL, Special Collections, MS Da.50, vol. 1, 1720–1774), in which the Monros recorded the names

of students and surgeon apprentices, their registration numbers and the fees paid, including occasional defaulters and a number of 'gratis' students. Sometimes the reason for providing free tuition was given: e.g. one student was marked simply as 'poor' (1743), another had been 'asked by Dr. M[onro] Jr' (1762), and a third was the son of James Scott 'Chymist', who operated the pharmaceutical laboratory established by the founding medical professors (1762–63). The arrangement for any of Cooper's pupils may have been informal or they may have been admitted gratis but not included in the list of students. On occasion, the annual total for gratis students exceeds the number of gratis students individually noted. However, see note 43 about the attendance of the artist and engraver George Cameron.

- 23 For the announcement of prize categories, and the award of premiums, see *Scots Magazine*, Mar. 1755 (p. 129), Jan. 1756 (p. 48), Feb. 1756 (p. 107), Jan. 1757 (p. 50). For a further prize (for 1758) see *ibid.*, Apr. 1758 (p. 213), Apr. 1759 (p. 214).
- 24 National Archives of Scotland (NAS), RH 2/8/17/3/3, [copy] 'Register of Protections of Sanctuary of Holyroodhouse', vol. 3 (1770–1789), nos 53 and 260. Noted also in W. T. Johnston, *Dictionary of Scottish Artists: Engravers* (Livingston 2000), and Scottish Book Trade Index www.nls.uk/catalogues/resources/stbi. For accounts of Thomas see Robert Brydall, *Art in Scotland* (Edinburgh & London 1889), p. 141; G. H. Bushnell, *Scottish Engravers* (Oxford 1949), p. 15; and Johnston, *Scottish Artists*.
- 25 See F. J. Grant (ed.), Register of Marriages for the City of Edinburgh, 1751-1800 (Edinburgh 1922), p. 202; idem, Parish of Holyroodhouse or Canongate: Register of Marriages, 1564-1800 (Edinburgh 1915), p. 142. The marriage to Mary Haig is noted in Bushnell, Scottish Engravers, p. 15. Joe Rock has identified the Court of Session document (NAS, CS.110/224) which summarises the initial actions of Donaldson's creditors following his sequestration in 1773. This notes a payment to him of 3000 merks from his wife in about February 1773: if this was a dowry then his wife was presumably Mary Haig, but it remains possible that this was a second marriage. The account also lists a disputed debt of 1768 to a London tailor in Covent Garden, and from the description of this it appears that Thomas Donaldson was in London at the time. William Tapp claims that Thomas was staying at Vine Street, Piccadilly, in 1767: W. H. Tapp, 'John Donaldson, Enamellor, Miniaturist and Ceramic Artist', in Apollo Magazine, part I, 36 (1942), pp. 39-42, 55; part II, 36 (1942), pp. 150-153; part III, 37 (1943), pp. 4-7, 22; see part I, p. 41. No reference has been found to a possible second sequestration in 1780.
- 26 In particular, Rock refers to an album of John Donaldson's work, interspersed by works by Cooper and other pupils in the Cooper/Baines family collection: Rock, 'Anatomical Publication', p. 46. The volume was compiled and annotated by Margaret Euleria Baines, Cooper's great-granddaughter: Rock, 'Richard Cooper', p. 19. John Donaldson's portrait of Cooper is reproduced by Rock in 'The 'A' Marked Porcelain: Further Evidence for the Scottish Option', *Transactions of the English Ceramic Circle*, 17, part 1 (1999), p. 76, fig. 3.

- 27 For John Donaldson's prizes, see *Scots Magazine*, Feb. 1756 (p. 107), Jan. 1757 (pp. 50–51), Mar. 1757 (p.161), Jan. 1758 (p. 44), Apr. 1758 (p. 213), Apr. 1759 (p. 214).
- 28 The most complete account of John Donaldson is Tapp, 'John Donaldson'. More recently discussed in: Daphne Foskett, *Dictionary of British Miniature Painters*, 2 vols (London 1972), I, p. 249, II, pl. 89; Duncan Macmillan, 'John Donaldson' in *Oxford Dictionary of National Biography*, 60 vols (Oxford 2004), vol. 16, pp. 510–511.
- 29 The National Galleries of Scotland (NGS) has a miniature of an unidentified lady in a white dress with blue ribbons, with her hair tied with a similar ribbon, which is signed with the initials 'JD' and the date 1787: NGS, Inv. no. PG 2545. Reproduced by Tapp (when it was in the possession of Kenneth Sanderson of Edinburgh, who bequeathed it to NGS in 1943) and also by Foskett: Tapp, 'John Donaldson', part II, p. 150; Foskett, Miniature Painters, II, pl. 89; illustrated and described in Stephen Lloyd, Portrait Miniatures from the National Galleries of Scotland: Exhibition Catalogue (Edinburgh 2004), p. 86. The considerable number of small portrait sketches by John Donaldson in the Cooper/Baines album (see note 26 above) are invariably signed with a similar cursive 'JD', indicating that this was his normal form of signature for small works. I am grateful to Joe Rock for showing me photographs of this album, which is in private hands. For a similar signature by Thomas Donaldson see note 39.
- 30 William Tapp illustrates a group of three large baluster-shaped two-handled vases, decorated with panels framed with intricate rococo gilding, each with figure subjects after Boucher (the birth of Bacchus; Leda and the swan; Europa and the bull), which were then in the Samuel Scott collection, but now (from the Dyson Perrins collection) in the Worcester Porcelain Museum (Inv. 1126); and each is signed 'JD' and dated to 1768-69: Tapp, 'John Donaldson', part III, p. 4; Worcester Porcelain Museum on-line catalogue: www.worcesterporcelainmuseum.org. Also illustrated by Tapp are two hexagonal section vases in the Chinese style from the Frank Lloyd Collection. These were donated to the British Museum in 1922 and have an accepted attribution to Donaldson: Tapp, 'John Donaldson', part III, p. 6; R. L. Hobson, 'The Frank Lloyd Collection at the British Museum', Burlington Magazine, 40 (1922), p. 90. Hobson also cites Samuel Redgrave, Dictionary of Artists of the English School (London 1868), for the attribution to Donaldson of Chelsea vases in the Garnier Collection at the British Museum. Macmillan, however, questions Donaldson's involvement in porcelain decoration.
- 31 Macmillan, 'John Donaldson'; Tapp, 'John Donaldson', part II, p. 151. The highly ornate oval box carries an unsigned miniature of Buchan (provisionally attributed by Dr Stephen Lloyd to John Bogle: personal communication) on its hinged lid and the enamel, depicting Hero and Leander (from the account by the poet Musaeus), is fixed inside the lid; inscribed on the base 'To the Marischal University of ABERDEEN from David Stuart Earl of Buchan As a Mark of his regard Dec: 12 1769': Inv. no. ABDUA 17835. The donation is described in the obituary account by the Earl of Buchan, and others, in

EUL, Special Collections, MS La.IV.26, 'John Donaldson, painter in Miniature and in Enamel', ff. 18–20, where Buchan is also said to have had one or both of the other enamel paintings by Donaldson.

- 32 After it had been noted that Donaldson was well known in Edinburgh at the age of 12 or 13 for his miniature portrait sketches, a portion added in Buchan's hand notes that the young Donaldson 'was introduced by Sir Alexander Dick of Prestonfield to the family of Buchan then resided [sic] at Sir James Steuart's at Goodtrees and he assisted Lord Cardross in drawing after his own manner, who contracted a regard for the eccentric artist which continued for life': ibid. Sir James Steuart of Coltness, near Lanark, and Goodtrees (later known as Moredun), near Edinburgh, was the son of a former Solicitor General and Ann, daughter of Sir Hew Dalrymple. He joined the Jacobite cause and had to remain in exile in Europe until his return in 1763. Buchan's father, Henry David Erskine, 10th Earl of Buchan, had married Sir James's sister Agnes Steuart in 1739, and lived at Goodtrees in Sir James's absence. His son, David Steuart Erskine (11th Earl of Buchan after his father's death in 1767) was brought up at Goodtrees and was about three years younger than Donaldson. After the early death in 1747 of his elder brother David Erskine, who was styled as Lord Cardross (the 10th Earl was also 5th Lord Cardross), this title was passed to David Steuart Erskine. It is clear therefore that Donaldson was giving instruction in drawing to the future earl, who is known to have become a competent artist. It also indicates why Buchan's memorandum (complete by late 1804: annotation in ibid.) on Donaldson's life should be treated with respect.
- 33 Donaldson's application is noted in John Mason, 'The Edinburgh School of Design', BOEC, 27 (1949), pp. 67-96, see p. 72. Tapp records that for the year 1786 Donaldson was absent from the rate books for his London address, and a letter of 1787 to the Earl of Buchan recounts that Donaldson had borrowed pictures from their purchasers 'to aid him in his applications for Mr Runcimans office', but then attempted to re-sell them: Tapp, 'John Donaldson', part III, p. 4; letter of W. Ross to Buchan, Edinburgh, 25 October 1787, EUL Special Collections, MS La.IV.26, 'John Donaldson', ff. 23-25. Donaldson's philosophical and poetic works (all 'printed for the author') are: The Elements of Beauty; also Reflections on the Harmony of Sensibility and Reason (Edinburgh and London 1780); Principles of Taste, or the Elements of Beauty. Second Edition, much improved; to which is annexed a Short Analysis of the Human Mind (Edinburgh 1786); Poems, by J. Donaldson, author of the Elements of Beauty (Edinburgh 1784, 2nd edn London 1786). An anonymous pamphlet attributed to Donaldson by Edwards, entitled Critical Observations and Remarks upon the Public Building of London, has not been traced: Edward Edwards, Anecdotes of Painters (London 1808).
- 34 Obituary by D[avid] G[ibson], *Gentleman's Magazine*, 71 part 2 (November 1801), p. 1056.
- 35 Tapp's search of the kirk registers of Edinburgh's three divisions (St Cuthberts, Canongate and Edinburgh) found no other suitable candidate: Tapp, 'John Donaldson', part I, p. 39. The birth is recorded in St Cuthbert's parish, which included

the suburbs outside Edinburgh's boundary walls: General Register Office for Scotland (GROS), Old Parochial Registers (OPR) 685/2. The pair were married in 1726 at Cramond: GROS, OPR 679/00. Tapp's suggestion is not implausible because Hamilton is likely to have known Cooper, and might therefore have been in a position to place John in his academy — he married Marion, daughter of Sir Hew Dalrymple of North Berwick, Lord President of Session, in 1732, the year in which Cooper's engraved portrait of Sir Hew was published: J. B. Burke, *Genealogical and Heraldic Dictionary of the Landed Gentry of Great Britain* (London 1862), p. 632. A copy of the engraving is in NGS, Inv. no. SP IV 215.1.

- 36 For Peter Donaldson's prize, see *Scots Magazine*, Mar. 1757 (p. 161), Jan. 1758 (p. 44).
- 37 No work by Peter Donaldson has been located.
- 38 Confusingly, the missing entry has been added in the margin at two different dates - 1 March 1741 and 15 August 1741 one of which must be in error: GROS, OPR 685/2. Joe Rock has now kindly traced a number of siblings of this Thomas, and of the John Donaldson identified by Tapp, in the FamilySearch web-site of the Genealogical Society of Utah's International Genealogical Index (IGI). Some of this information is from separate genealogical data submitted to IGI, not necessarily from the registers. John Donaldson and Mary Thomson's marriage in 1726 at Cramond, outside Edinburgh, is in the registers, as is John's birth in 1739. Rock has now identified two daughters and two further sons (one of whom, an earlier John, must have died young), born between 1727 and 1734, in Cramond and later in St Cuthbert's parish, Edinburgh. The marriage of Patrick Donaldson and Margaret Murray is untraced, but their son Thomas was born in 1741. Rock has now identified four daughters and another son, born between 1721 and 1734, in Canongate, then Edinburgh (city), and finally in St Cuthbert's parish. These additional relationships cannot at present be verified.
- 39 These plates were noted by Willie Johnston: Johnston, Scottish Artists. Monro was the editor of this particular volume (Wright-St Clair, Doctors Monro, p. 89) and published papers by himself, but also a paper on arterial aneurysms by his brother Donald, who was a physician at St George's Hospital in London. Aneurysms dissected from a patient in 1759 were sent to Alexander Monro for comment, and the resulting paper by Donald was read in 1760. The published version, which may originally have appeared in part form sometime afterwards, was illustrated by a large folding plate engraved by Donaldson (after drawings done in London by 'Mr Lens', perhaps a son of the miniature painter Bernard Lens III), which may be his earliest published work. Unlike all his later signed plates, but in an echo of John Donaldson's practice, it is signed merely with his initials - 'T.D Sc.': Essays and Observations, Physical and Literary, read before the Philosophical Society in Edinburgh, 3 (1771), opposite p. 195.
- 40 Alexander Monro II, A State of Facts concerning the First Proposal of performing the Paracentesis of the Thorax ... (Edinburgh 1770).
- 41 John Innes, Eight Anatomical Tables of the Human Body, containing the principal parts of the skeletons and muscles represented in the large tables of Albinus (Edinburgh 1776);

and *idem, A Short Description of the Human Muscles, chiefly as they appear on Dissection* (Edinburgh 1776). A second edition of the latter 'improved by A Monro' appeared in 1778.

- 42 Andrew Fyfe, Views of the Bones, Muscles, Viscera and Organs of the Senses (Edinburgh 1800); see Rock, 'Anatomical Publication'.
- 43 Rock, 'Anatomical Publication', p. 46; text (by Rock) describing an engraving by Donaldson (in the National Museums of Scotland, Lib 122) of a female skate, from Monro's *The Structure and Physiology of Fishes* (Edinburgh 1785): from the Scran /Resources for Learning in Scotland web-site, www.rls.org.uk. Although Donaldson drew and engraved the majority of plates, some were drawn or engraved by others Fyfe drew a number, with some of these engraved by Donaldson, and drawings by Donaldson were engraved by both George Cameron and John Beugo. Cameron attended Monro's anatomy class in 1746–48: personal communication from Joe Rock.
- 44 A mercury lymph injection of a portion of a shark's intestine from the Monro collection is displayed in the National Museums of Scotland (Inv NH.1981.057.666/10).
- 45 The disputes are described by Wright-St Clair, *Doctors Monro*, pp. 89–91; and M. H. Kaufman and J. J. K. Best, 'Monro secundus and 18th Century Lymphangiography', *Proceedings of the Royal College of Physicians of Edinburgh*, 26 (1996), pp. 75–90.
- 46 Kaufman and Best, 'Lymphangiography'; M. H. Kaufman, 'Observations on Some of the Plates used to illustrate the Lymphatics Section of Andrew Fyfe's *Compendium of the Anatomy of the Human Body*, published in 1800', *Clinical Anatomy*, 12 (1999), pp. 27–34.
- 47 Rock, 'Anatomical Publication', pp. 31, 47.
- 48 J. Bell, Engravings explaining the Anatomy of the Bones, Muscles, and Joints (Edinburgh 1794), quoted by Kaufman, 'Observations on some of the Plates', pp. 28–29, 33, citing a personal communication from Rock.
- 49 Also discussed in Kaufman , 'Observations on some of the Plates', pp. 30–32.
- 50 Rock, 'Anatomical Publication', pp. 31–33. Rock assigns three of the unsigned plates in Fyfe's *Views of the Bones* to Donaldson's engraving, based on style.
- 51 Foskett follows Basil Long, British Miniaturists (London 1929), in a possible link between Thomas Donaldson of Edinburgh and the London artist Thomas Donaldson who exhibited at the Royal Academy in 1795: Foskett, Miniature Painters (note 28), I, p. 249. However, Tapp has identified the latter as the miniature painter Thomas Levenstein Donaldson, son of the London architect James Donaldson: Tapp, 'John Donaldson', part I, p. 42. Monro tertius's thesis is Disputatio medica inauguralis de dysphagia (Edinburgh 1797). Two plates are signed by Donaldson, and Rock attributes another two to him on style: personal communication.
- 52 R. Butchart, Prints & Drawings of Edinburgh (Edinburgh 1955), p. 18; idem, The Edinburgh Scene: Catalogue of Prints and Drawings in the Edinburgh Room, Central Public Library (Edinburgh, 1951), p. 62; and noted in Johnston, Scottish Artists.