

## Sylvester O'Halloran's influence on medicine in eighteenth-century Ireland

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**ABSTRACT.** *Sylvester O'Halloran was a prominent surgeon in late eighteenth-century Limerick. He wrote extensively on medicine, history and antiquarianism. His contribution to medicine included a series of monographs on eye disease, limb amputation and head injury. Of these many publications only his work on head injury was of clinical significance. His proposals to standardise the training and assessment of surgeons in Ireland were reflected in the procedures of the County Infirmaries Board and likely inspired the curriculum of the newly founded Royal College of Surgeons in 1784. This article reflects on O'Halloran's medical career, suggesting that his impact on practice was modest but his proposals on surgical education contributed to the professionalisation of surgery in Ireland in the eighteenth century.*

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Sylvester O'Halloran (1728–1807) was a prominent Irish surgeon of the late eighteenth century. In 1749, at the age of twenty-one, having studied in Dublin, London and Paris, he began to practise in his native Limerick. In 1752 he visited London, Oxford and Paris to study midwifery, which he added to his professional repertoire on his return to Limerick a year later.<sup>1</sup> He helped establish a hospital in the city in 1759 and later became surgeon to the Limerick County Infirmary.<sup>2</sup> O'Halloran sought to improve on contemporary medical practice and published tracts on cataract, limb amputation and trepanation. He also wrote a *Treatise on the air* and advocated a better system of training for surgeons in Ireland.<sup>3</sup> In 1763 O'Halloran joined the controversy that followed the publication

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<sup>1</sup> J. B. Lyons states that 'there is a well-established tradition that he studied at Leyden but no objective evidence'. In his journal O'Halloran does not mention studying at Leyden. See J. B. Lyons, 'Sylvester O'Halloran (1728–1807)' in *Irish Journal of Medical Science*, xxxviii (1963), pp 217–88; D. B. O'Halloran, *O'Halloran family history, 1595–1989* (Albany, 1989), pp 12–19. This is a typed manuscript in the possession of the O'Halloran family that includes a section entitled 'a copy of a journal kept by my grandfather Sylvester O'Halloran taken from an old manuscript book'. I would like to thank Carmel O'Halloran who is a direct descendant of Sylvester O'Halloran for this information.

<sup>2</sup> O'Halloran, *O'Halloran family history*, p.12

<sup>3</sup> Silvester O'Halloran, *A new treatise on the glaucoma or cataract* (Dublin, 1750); idem, *A critical analysis of the new operation for a cataract* (Dublin, 1755); idem, 'A critical and anatomical examination of the parts immediately interested in the operation for a cataract; with an attempt to render the operation itself whether by depression or extraction, more

of the *Poems of Ossian* by the Scottish writer James MacPherson.<sup>4</sup> Two letters to the *Dublin Magazine* marked the beginning of an engagement that resulted in the publication of four substantial monographs on Irish history.<sup>5</sup> Throughout his life he kept up a brisk correspondence with individuals, journals and societies on a variety of topics.<sup>6</sup>

The Irish medical marketplace in 1749 was hierarchical, comprising physicians, surgeons and apothecaries described respectively as ‘a learned profession, a skilled craft and trade’.<sup>7</sup> Having attended university, physicians possessed degrees in medicine and were well-versed in Latin. By contrast, surgeons and apothecaries learned their practical day-to-day skills by apprenticeship and were not awarded diplomas on completion of their training.<sup>8</sup> The number of medical practitioners in Limerick in 1749 is unknown, but twenty years later there were ten physicians and seven

certain and successful’ in *Transactions of the Royal Irish Academy*, ii (1788), pp 121–41; idem, *A concise and impartial account of the advantages arising to the public from the general use of a new method of amputation* (Dublin, 1763); idem, *A complete treatise on gangrene and sphacelus with a new method of amputation* (London, 1765); idem, ‘An attempt to determine with precision such injuries of the head as necessarily require the operation of the trephine’ in *Transactions of the Royal Irish Academy*, iv (1790–92), pp 151–69; idem, *A new treatise on the different disorders arising from external injuries of the head illustrated by eighty-five selected from above fifteen hundred practical cases* (Dublin and London, 1793); idem, ‘A new philosophical and medical treatise on the air, by Mr O’Halloran of Limerick’ (R.I.A., MS 24 K 9). ‘Silvester O’Halloran’ was the preferred spelling of his name in his medical publications.

<sup>4</sup> James MacPherson, *Fragments of ancient poetry collected in the Highlands of Scotland and translated from the Gallic or Erse language* (Edinburgh, 1760); idem, *Fingal, an ancient epic poem* (London, 1761); idem, *Temora, an epic poem* (London, 1763); Clare O’Halloran, *Golden ages and barbarous nations: antiquarian debate and cultural politics in Ireland, c.1750–1800* (Cork, 2004), p. 99.

<sup>5</sup> Miso-Dolos [Silvester O’Halloran], ‘The poems of Ossine, the son of Fionne Mac Comhal, reclaimed: by a Milesian’ in *Dublin Magazine* (Jan. 1763), pp 21–2; Silvester O’Halloran, ‘A letter to Mr MacPherson, occasioned by his dissertation on the poems of Temora. By a Milesian’ in *Dublin Magazine* (Aug. 1763), p. 21; idem, *Insula sacra: or, the general utilities arising from some permanent foundation, for the preservation of our antient annals demonstrated, and the means pointed out* (Dublin, 1770); idem, *An introduction to the study of the history and antiquities of Ireland* (Dublin and London, 1772); idem, *Ierne defended: or, a candid refutation of such passages in the Rev. Dr. Leland’s, and the Rev. Dr. Whittaker’s works, as seem to affect the authenticity and validity of antient Irish history. In a letter to the Antiquarian Society* (Dublin, 1774); idem, *A general history of Ireland* (1778); idem, *An introduction to and a history of Ireland* (Dublin, 1803).

<sup>6</sup> For example, see Silvester O’Halloran, ‘Of Daviel’s method of couching a cataract’, 1753 (The Royal Society, L&P/2/400) (<https://catalogues.royalsociety.org/CalmView/Record.aspx?src=CalmView.Catalog&id=L%26P%2f2%2f400&pos=1>) (8 Jan. 2021); idem, ‘A Rorg-Catha, or martial ode, sung at the battle of Cnucha by Fergus, Son of Finn, and addressed to Goll, the son of Morna; with a literal translation and notes’ in *Transactions of the Royal Irish Academy*, ii (1788), pp 7–17; idem, ‘An attempt to ascertain with some degree of precision the question relative to vacuum and plenum’ in *Anthologia Hibernica*, iii (1794), pp 251–5.

<sup>7</sup> Laurence M. Geary, *Medicine and charity in Ireland, 1718–1851* (Dublin, 2004), p. 123.

<sup>8</sup> Susan Mullaney, ‘The evolution of the medical professions in eighteenth-century Dublin’ in John Cunningham (ed.), *Early modern Ireland and the world of medicine* (Manchester, 2019), pp 232–52.

surgeons, of whom three practised midwifery, and seven apothecaries.<sup>9</sup> Only the better off would have had recourse to professional care while everyone else made do with self-remedies, proprietary medicines, folk cures and treatment by knowledgeable local people.<sup>10</sup> There were few hospitals in Ireland in 1749 and none in Limerick. Apart from the Royal Hospital of King Charles II at Kilmainham in Dublin for invalided soldiers, there were a number of small voluntary hospitals in Dublin and Cork. In these doctors provided their services *gratis* and governors provided funding; the numbers treated were very small.<sup>11</sup> Limerick in 1749 was a small walled city with a population of approximately 40,000 ruled by a corporation controlled by a minority Protestant elite.<sup>12</sup> Richard Pococke (1704–65) described it as 'a very dirty disagreeable place' where many died from disease due to the 'unwholesome air and water'.<sup>13</sup> John Ferrar claimed that the strong encircling walls were responsible for the poor quality of the air and the inhabitants rejoiced to see their destruction in 1760 knowing that 'healthiness and advance in improvement' would ensue thereafter.<sup>14</sup> O'Halloran did not subscribe to the miasma theory of disease. Citing the Great Frost Famine of 1740–41, he contended that it was the destruction of the potato crop and the resulting dysentery and fever that killed people, not the condition of the air.<sup>15</sup>

While no definitive biography of O'Halloran exists, he has interested several historians.<sup>16</sup> In 1848 the surgeon Sir William Wilde provided a comprehensive overview of his life and works,<sup>17</sup> while another Dublin surgeon-anatomist, E. D. Mapother, noted his influence in establishing the Royal College of Surgeons in Ireland in 1784.<sup>18</sup> Sir Charles Cameron remarked on O'Halloran's skill as an oculist and others compared him with other prominent Irish doctors.<sup>19</sup> In several publications

<sup>9</sup> John Ferrar, *The Limerick directory* (Limerick, 1769), pp 38–9.

<sup>10</sup> James Kelly, 'Domestic medication and medical care in late early modern Ireland' in James Kelly and Fiona Clark (eds), *Ireland and medicine in the seventeenth and eighteenth centuries* (Farnham, 2010), pp 109–35; idem, 'Health for sale: mountebanks, doctors, printers and the supply of medication in eighteenth-century Ireland' in *Proceedings of the Royal Irish Academy*, 108C (2008), pp 75–113; Geary, *Medicine & charity*, p. 5; Tony Farnar, *Patients, potions and physicians: a social history of medicine in Ireland* (Dublin, 2004), pp 64–5.

<sup>11</sup> James Kelly, 'The emergence of scientific and institutional medical practice in Ireland, 1650–1800' in Elizabeth Malcolm and Greta Jones (eds), *Medicine, disease and the state in Ireland 1650–1940* (Cork, 1999), pp 21–39; Pierce A. Grace, 'Patronage and health care in eighteenth-century Irish county infirmaries' in *I.H.S.*, xli, no. 159 (2017), pp 1–21.

<sup>12</sup> Matthew Potter, *The government and people of Limerick* (Limerick, 2006), pp 186–8.

<sup>13</sup> G. T. Stokes, *Pococke's tour in Ireland in 1752* (Dublin, 1891), pp 113–14.

<sup>14</sup> John Ferrar, *The history of Limerick, ecclesiastical, civil and military, from the earliest records to the year 1787* (Limerick, 1788), pp 82–99.

<sup>15</sup> Quoted in William Wilde, 'Illustrious physicians and surgeons in Ireland, no. vi: Sylvester O'Halloran' in *Dublin Quarterly Journal Medical Science*, vi (1848), pp 223–50.

<sup>16</sup> For a review of the recent historiography of Irish medicine, see Grace, 'Patronage and health care', pp 1–21. For a list of publications relating to Sylvester O'Halloran, see [www.limerickcity.ie/Library/LocalStudies/LocalStudiesFiles/O/OHalloranSylvester](http://www.limerickcity.ie/Library/LocalStudies/LocalStudiesFiles/O/OHalloranSylvester) (2 Jan. 2021).

<sup>17</sup> Wilde, 'Illustrious physicians and surgeons', pp 223–50.

<sup>18</sup> E. D. Mapother, 'Lessons from the lives of Irish surgeons in 1873' in *Dublin Journal of Medical Science*, lvi (1873), pp 430–48.

<sup>19</sup> C. A. Cameron, *History of the Royal College of Surgeons in Ireland* (Dublin, 1886), pp 30–2; Richard Hayes, 'Some notable Limerick doctors' in *North Munster Antiquarian*

the Dublin neurologist and medical historian J. B. Lyons analysed O'Halloran's life, works and letters.<sup>20</sup> More recently, both Clare O'Halloran and Clare Lyons have discussed O'Halloran's antiquarian and historical publications, while Clare Lyons and Toby Barnard have discovered more of his letters.<sup>21</sup> Sylvester O'Halloran published numerous books and pamphlets during his life, but only his medical writings will be considered in this paper. Reflecting his clinical practice he published three works on eye disease, two on limb amputation and two regarding the management of head injury. Focusing on his medical publications and activities, the aim of this article is to analyse the influence this thoughtful and industrious Irish provincial surgeon had on eighteenth-century medical practice and to assess his contributions to the evolving professionalisation of surgery in Ireland during the late eighteenth century.

## I

O'Halloran's first publications related to the eye, specifically the treatment of cataract. In the mid eighteenth century the standard operation for cataract was 'couching' (from *coucher*, to lay down), whereby the crystalline lens in the eye was dislocated out of the line of vision either by the application of blunt force to the eyeball or the insertion of a sharp instrument into the eye. The displaced lens remained within the eye. Thus, light would pass again to the retina, but without spectacles sight would not be much improved.<sup>22</sup> Published in 1750,

*Journal*, i (1938), pp 113–23; William Doolin, 'Dublin's Surgeon-Anatomists' in *Annals of the Royal College of Surgeons of England*, xxx (1951), pp 1–22; W. A. L. MacGowan 'The Royal College of Surgeons in Ireland' in *Annals of the Royal College of Surgeons of England*, xlii (1973), pp 102–112; W. P. Hederman, 'Sons of Thomond' in *Journal of the Irish Colleges of Physicians and Surgeons*, xv (1986), pp 97–9.

<sup>20</sup> J. B. Lyons, 'Irish contributions to the study of head injury in the 18<sup>th</sup> century' in *Irish Journal of Medical Science*, xxxiv (1959), pp 400–12; idem, 'A tract on premature interment: attributed to Sylvester O'Halloran' in *Journal of the Irish Medical Association*, xlviii (1961), pp 76–8; idem, 'The letters of Sylvester O'Halloran' in *North Munster Antiquarian Journal*, viii (1961), pp 168–81, and *ibid.*, ix (1962/3), pp 25–50; idem, 'Sylvester O'Halloran (1728–1807)', pp 217–32, 279–88; idem, 'Sylvester O'Halloran's "Treatise on the air"' in *Irish Medical Journal*, lxx (1983), pp 37–9; idem, *Brief lives of Irish doctors, 1600–1965* (Dublin, 1978), pp 47–9; idem, 'Sylvester O'Halloran, 1728–1807' in *Eighteenth-Century Ireland / Iris an dá chultúr*, iv (1989), pp 65–74.

<sup>21</sup> O'Halloran, *Golden ages and barbarous nations*, pp 97–124; Claire E. Lyons, 'An imperial harbinger: Sylvester O'Halloran's *General History* (1778)' in *I.H.S.*, xxxix, no. 155 (2015), pp 357–77; eadem, 'Playing Catholic against Protestant: British intervention in Catholic relief in Ireland 1778' in *Eighteenth-Century Ireland / Iris on dá chultúr*, xxviii (2013), pp 116–35; eadem, 'A rediscovered letter of Sylvester O'Halloran to Dr De Salis, 1 February 1777' in *Journal of the Galway Archaeological and Historical Society*, lix (2007), pp 46–58; eadem, 'Sylvester O'Halloran (1728–1807): three unpublished letters' in *North Munster Antiquarian Journal*, xlix (2009), pp 33–43; Toby Barnard, 'The wider cultures of eighteenth-century Irish doctors' in Kelly and Clark (eds), *Ireland and medicine*, pp 183–95.

<sup>22</sup> A cataract is an opacification of the crystalline lens of the eye which blocks light from reaching the retina leading to loss of vision. From the centre outwards the lens has three distinct parts: nucleus, cortex, and capsule. Most cataracts are in the nucleus. Modern treatments remove and replace the diseased lens with an intraocular prosthetic lens: Adnan A. Nizami and Arun C. Gulani, 'Cataract', available at StatPearls, ([www.ncbi.nlm.nih.gov/books/](http://www.ncbi.nlm.nih.gov/books/)

O'Halloran's *A new treatise on the glaucoma or cataract* is a wordy dissertation on many topics relating to the eye. He provided a summary of seventeen 'discoveries made by the author'.<sup>23</sup> His conclusions were based on wide reading of the medical literature, as well as anatomical dissections and vivisection experiments on live dogs.<sup>24</sup> One of his principal conclusions was to confirm that the opacity in a cataract is located in the lens, a fact discovered by French surgeons in the early 1700s.<sup>25</sup>

O'Halloran also discussed glaucoma, now known to be a group of diseases characterised by an accumulation of aqueous humour in the eye that leads to high intraocular pressure, damage to the optic nerve and blindness.<sup>26</sup> Eighteenth-century oculists observed that while cataracts produced a white or yellowish opacity in the eye, glaucoma was associated with a 'glaucous' (light blue, grey or green) pupil.<sup>27</sup> O'Halloran observed: 'tho all agree to the existence of a glaucoma, or incurable cataract, yet they are far from agreeing to its seat.'<sup>28</sup> He concluded incorrectly that cataract and glaucoma were one and the same disease.<sup>29</sup> Other deductions were that there are no connections between the ciliary body and the lens, and that 'there is not any circulation of the humours in the eye': both of these were wrong.<sup>30</sup> To improve the couching operation he proposed 'by force of arguments' that if some method could be devised to 'take away' the capsule of the lens as well as the opacity in the lens 'we should see pretty nigh as well after the operation as if no such disorder had ever happened'.<sup>31</sup> He seems to have been unaware of the pioneering work on lens extraction for cataract published by Jaques Daviel (1696–1762) in Paris in 1748, but his idea almost anticipated Samuel Sharp's (1709–78) and George de la Faye's (1699–1781) influential 'intracapsular' operations in which the lens and capsule were extracted from the eye.<sup>32</sup>

NBK539699) (30 Jan. 2021); Geetha Davis, 'The evolution of cataract surgery' in *Missouri Medicine*, cxiii (2016), pp 58–62.

<sup>23</sup> O'Halloran, *A new treatise*, pp three unnumbered pages after the preface.

<sup>24</sup> *Ibid.*, p. 55.

<sup>25</sup> *Ibid.*, first unnumbered page after the preface. Antoine Maître-Jan, *Traité des maladies de l'oeil et des remedes propres pour leur guerison* (Paris, 1707); Michel Brisseau, *Traité de la cataracte et du glaucoma* (Paris, 1709). D. B. Weiner, 'An eighteenth-century battle for priority: Jacques Daviel (1693–1762) and extraction of cataracts' in *Journal of the History of Medicine and Allied Sciences*, xli (1986), pp 129–55.

<sup>26</sup> Robert N. Weinreb, Tin Aung and Felipe A. Medeiros, 'The pathophysiology and treatment of glaucoma: a review' in *Journal of the American Medical Association*, cccxi, no. 18 (2014), pp 1901–11.

<sup>27</sup> C. T. Leffler, S. G. Schwartz, T. M. Hadi, Ali Salman and Vivek Vasuki, 'The early history of glaucoma: the glaucous eye (800 BC to 1050 AD)' in *Clinical Ophthalmology*, ix (2015), pp 207–15; Laurence Heister, *Medical chirurgial and anatomical cases and observations*, trans. George Wirgman (London, 1755), p. 582.

<sup>28</sup> O'Halloran, *A new treatise*, p. 15; Christopher Leffler and Stephen Schwartz, 'Glaucoma during the Enlightenment and early modern periods (1700–1849)' in C. T. Leffler (ed.), *The history of glaucoma* (Amsterdam, 2020), pp 153–205.

<sup>29</sup> O'Halloran, *A new treatise*, p. 27.

<sup>30</sup> *Ibid.*, pp 60, 98.

<sup>31</sup> *Ibid.*, pp 43, 52.

<sup>32</sup> In 1748 Jacques Daviel reported a series of cases where he extracted the lens from the eye, and in 1753 Samuel Sharp and George de la Faye separately described similar procedures to remove both the lens and the capsule: Jacques Daviel, 'Lettre de M. Daviel' in *Mercure de France*, ii (1748), pp 198–218; Samuel Sharp, 'A description of a new method of opening the cornea, in order to extract the crystalline humour' in *Philosophical*

On 8 April 1747 Jacques Daviel revolutionised cataract surgery by removing the lens containing a cataract from the eye of a Parisienne wigmaker, M. Garion, through a large incision in the cornea.<sup>33</sup> He described and illustrated his operation in letters to *Mercure de France* in 1748 and to the *Académie Royale de Chirurgie* in 1753, claiming that of 206 procedures ‘182 have succeeded’.<sup>34</sup> In two letters to the Royal Society in London in 1752 Dr Thomas Hope provided the first eye-witness descriptions of Daviel’s operation in English.<sup>35</sup> It is likely that O’Halloran became aware of the procedure from these letters, which sparked a debate at the Royal Society. ‘At the instigation of a couple of learned friends’, O’Halloran contributed to the debate quoting extensively from his own work.<sup>36</sup> In passing, he disparaged the eminent English surgeon William Cheselden (1688–1752), saying that he ‘knew very little of the structure of the eye, not to mention that his figures of the eyes are very erroneous’.<sup>37</sup> What the members of the Royal Society thought of the young Irish surgeon’s opinions is unknown, but he himself stated that he ‘had the satisfaction to find them well received’.<sup>38</sup> In April 1753 Samuel Sharp, from Guy’s Hospital, informed the Royal Society of his new cataract operation. Having incised the cornea transversely with a sharp knife, he removed the lens and capsule by pressing on the eyeball. Later he used the point of a knife to extract the lens cleanly and provided details of eleven cases.<sup>39</sup> Concurrently in France, George de la Faye described a very similar operation.<sup>40</sup> These various operations became the standard treatments for cataract for the next two hundred years.<sup>41</sup>

*Transactions*, xxxviii (1753), pp 161–3; Samuel Sharp ‘A second account of the new method of opening the cornea, for taking away the cataract’ in *Philosophical Transactions*, xxxviii (1753), pp 322–31; George de la Faye, ‘Pour servir à perfectionner la nouvelle methode de faire l’operation de la cataracte’ in *Mémoires de l’Académie Royale de Chirurgie*, ii (1753), pp 563–77.

<sup>33</sup> The lens had occasionally been extracted from eyes previously. In 1707 and 1708, respectively, Charles St Yves and Jean Louis Petit had each extracted a lens through an incision in the cornea when it accidentally dislocated into the anterior chamber during couching. In 1745 Daviel had removed broken lens fragments from the anterior chamber of a patient’s eye with a good outcome: A. A. Hubbell, ‘Jacques Daviel and the beginnings of the modern operation of extraction of cataract’ in *Journal of the American Medical Association*, xxvi (1902), p. 15; Weiner, ‘An eighteenth-century battle’, pp 129–55.

<sup>34</sup> Daviel, ‘Lettre de M. Daviel’, pp 198–218; Jacques Daviel, ‘Sur une nouvelle methode de guérir la cataracte par l’extraction du cristallin’ in *Mémoires de l’Académie Royale de Chirurgie*, ii (1753), pp 337–54; Weiner, ‘An eighteenth-century battle’, pp 129–55.

<sup>35</sup> Thomas Hope, ‘Extracts of two letters of Thomas Hope, M.D. to John Clephane, M.D.F.R.S. concerning Monsieur Daviel’s method of couching a cataract’ in *Philosophical Transactions*, xlvii (1751), pp 530–33.

<sup>36</sup> In *A critical analysis*, he states that ‘the following essay is the consequence of a paper read before the Royal Society in the winter of 1752’: O’Halloran *A critical analysis*, ‘Dedication’, p. 1. (The ‘Dedication’ is not paginated. I have numbered the pages of the ‘Dedication’ pp 1–6); O’Halloran, *A critical analysis*, pp ii–iii; idem, ‘Of Daviel’s method of couching a cataract’.

<sup>37</sup> *Ibid.*, p. 2; O’Halloran, *A critical analysis*, ‘Dedication’, p. 3.

<sup>38</sup> *Ibid.*, pp ii–iii.

<sup>39</sup> Sharp, ‘A description of a new method’, pp 161–3; Sharp, ‘A second account of the new method’, pp 322–31.

<sup>40</sup> de la Faye, ‘Pour servir à perfectionner la nouvelle methode’, pp 563–77.

<sup>41</sup> Prior to 1967 there were two ways to extract a cataract from the eye. Extracapsular cataract extraction (Daviel’s operation), removed the lens from its capsule which was retained within the eye. Intra-capsular cataract extraction (Sharp and de la Faye’s operation) involved removing

Stimulated by Daviel's work, O'Halloran began a series of experiments culminating in the publication of his second book, *A critical analysis of the new operation for a cataract*, in 1755. O'Halloran declared that although Daviel's operation had many advantages 'it is not without its faults, nor to be attempted indiscriminately in all cases'.<sup>42</sup> Unacquainted with Daviel's published accounts in French, he stated that Daviel had 'never favoured the publick with a particular detail of his method'. He dismissed Dr Hope's very clear, accurate and concise description of the procedure to the Royal Society as being 'from a spectator only'. O'Halloran began to practise Daviel's operation on sheep's heads and live dogs before attempting it in a patient.<sup>43</sup> He noted that the discomfort of opening the cornea was insignificant but 'people err greatly who imagine it to be attended with no pain'.<sup>44</sup> He was dismissive of the operation saying that it had not met with great success in either London or Dublin. This was also his own experience, but he gave no details. Having discussed various instruments that might be used for the operation, he offered a theoretical improvement suggesting that the lens be approached through the sclera and not the cornea, but 'for want of time' he had not tried it or performed any experiments.<sup>45</sup> In 1757 he informed the Dublin Medico-Philosophical Society by letter that he had successfully performed Daviel's operation.<sup>46</sup>

O'Halloran's final reflections on cataract came years later in 1788 in a paper to the newly formed Royal Irish Academy. He revisited the anatomy of the eye and discussed the methods for cataract extraction including those of Daviel, Sharp and de la Faye. His conclusion 'from sound practice' was: 'never was operation less entitled to public estimation.' He offered his own novel technique of incising the 'sclerotica' with a special pointed double-edged knife that he had designed. By gentle pressure on the eye 'the cataract will instantly slip out' the advantage being 'very little if any opacity' on the cornea'. While he gave no details of individual cases or numbers treated, O'Halloran must be acknowledged for designing and procuring instruments to facilitate a reduction in the incidence of corneal opacity. However, his ideas were not adopted by his contemporaries.<sup>47</sup>

## II

The second medical topic that interested Sylvester O'Halloran was limb amputation, which he discussed in two publications in 1763 and 1765.<sup>48</sup> Limb

the lens within its intact capsule. While the latter is easier to perform the visual results of the former were better with fewer complications. Both techniques were superseded by phacoemulsification introduced by Charles Kelmann in 1967: Davis, 'The evolution of cataract surgery', pp 58–62; N. S. Jaffe, 'History of cataract surgery' in *Ophthalmology*; ciii (1966), pp S5–S16.

<sup>42</sup> O'Halloran *A critical analysis*, 'Dedication', p. 3.

<sup>43</sup> *Ibid.*, pp 21–4.

<sup>44</sup> *Ibid.*, p. 30.

<sup>45</sup> *Ibid.*, p. 38.

<sup>46</sup> The minutes of the Medico-Philosophical Society for 5 May 1757 record that 'Dr Nat. Barry read part of a letter from Sylvester O'Halloran ... giving an account of his couching a cataract by the new method of Daviel with success': R.C.P.I., MS MPS/1 (<https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2018/01/Medico-Philosophical-Society.pdf>) (29 Nov. 2021); Wilde, 'Illustrious physicians and surgeons', p. 235, note a.

<sup>47</sup> O'Halloran, 'A critical and anatomical examination of the parts', pp 121–41.

<sup>48</sup> O'Halloran, *A concise and impartial account*; O'Halloran, *A complete treatise*.

amputation in the eighteenth century was a grim affair with speed being of the essence. The two major complications were secondary haemorrhage from ligature failure and poor wound healing from infection.<sup>49</sup> Earlier surgeons divided the skin, muscle, and bone at the same level — the ‘one-stage circular cut’ — but problems with wound healing induced later surgeons to cut the skin and muscle at a lower level than the bone — the ‘two stage circular cut’.<sup>50</sup> From the 1670s some surgeons fashioned a flap of skin and muscle to cover the end of the bone to allow for better wound healing.<sup>51</sup> As long as an infection or a haemorrhage did not ensue the wound healed well ‘by first intention’; if an infection occurred the wound would open and slowly heal ‘by second intention’ with scarring over the end of the stump. O’Halloran argued that immediate closure of the flap would always end in disaster and advocated delayed closure of the wound at about ten days; ‘inflammation and suppuration are absolutely necessary to bring on a reunion of divided parts’.<sup>52</sup> He got his novel idea following a mastectomy when he packed the open wound with lint and flour, and kept it open until the ninth day after the operation; ‘to the surprise of all her acquaintance, she was cured’.<sup>53</sup> This then was his ‘new method’ — separation of the flap from the bone for several days until the infection had occurred and subsided.

In the short monograph *A concise and impartial account*, he presented two cases of amputation by his new method. Francis Kennelly had a below-knee amputation on 27 November 1761 for chronic disease of the bones around the ankle. A haemorrhage on the fifth postoperative day was easily controlled by the application of *Lycoperdon*, a puff-ball fungus with known coagulant properties.<sup>54</sup> The wound was closed on day twelve and by day fourteen the stump was covered ‘by a cushion of flesh and skin ... and the sore reduced to a superficial one’. Alice Blachall, aged fifteen, had her leg amputated on 23 July 1762. The flap and stump were not united until day twelve but did not fuse properly until day twenty-eight; she was discharged ‘completely cured’.<sup>55</sup> He had four of his medical colleagues attest to the success of the two operations. They concluded: ‘we are persuaded that, were this method more universally known and practised, it would be rendering to the community and to mankind, a most essential service.’ To clinch the evidence, the mayor and sheriffs of Limerick City examined Kennelly and declared that he could now walk on his stump, as could Alice Blachall. Alice died in hospital five months later from smallpox. In the presence of witnesses, including two regimental

<sup>49</sup> In the eighteenth century the waxed wool, linen and silk sutures that were used to secure the blood vessels were not sterile; the suture material easily disintegrated predisposing to a haemorrhage from the artery: John Kirkup, *A history of limb amputation* (London, 2007), p. 69.

<sup>50</sup> Konstantinos Markatos, Marianna Karamanou, Theodosios Saranteas and A. F. Mavrogenis, ‘Hallmarks of amputation surgery’ in *International Orthopaedics*, xliii (2019), pp 493–9.

<sup>51</sup> Samuel Cooper, *A dictionary of practical surgery* (2 vols, New York, 1836), i, 53–5; Kirkup, *A history of limb amputation*, p. 64.

<sup>52</sup> O’Halloran, *A complete treatise*, p. 261

<sup>53</sup> *Ibid.*, pp 216–19.

<sup>54</sup> *Lycoperdon*: ‘by age it ... dries internally into a fine, light, brownish dust, which is used by the common people to stop haemorrhages.’ See J. S. Forsyth, *The new London medical and surgical dictionary* (London, 1826), p. 454.

<sup>55</sup> O’Halloran, *A concise and impartial account*, pp 11–12; O’Halloran, *A complete treatise*, p. 241.

surgeons, O'Halloran dissected her leg and found that her amputation wound had healed and the flap adhered strongly to the bones.<sup>56</sup>

In the larger work entitled *A complete treatise on gangrene and sphacelus*, O'Halloran defined gangrene as severe tissue damage or 'tendency to mortification which often gives way to remedies', while 'sphacelus' equated to the modern concept of gangrene, that is dead tissue that 'can only be remedied by amputation'.<sup>57</sup> 'Flux of humours to the part' and inflammation of the blood caused 'internal gangrene' while frost, gunshot wounds and compound fractures caused 'external gangrene'.<sup>58</sup> O'Halloran cautioned against immediate amputation in the latter.<sup>59</sup> Having reviewed the history of amputation he described his method for amputation in the thigh, leg and arm. He presented fifty-eight case histories, a mixture of patients who had a wide range of problems including infections, tumours, fractures, and various wounds. Of these, twelve died while thirteen underwent an amputation. In only three of his patients did he use his new method and two were the patients he had already described in his earlier publication; the third had an arm amputated with a good outcome.<sup>60</sup> However, in 1793 in a letter to Edmund Burke he stated that he had performed fourteen amputations in Limerick using his new method. The operation was not taken up by others. In an open letter to the surgeons of Dublin in January 1772 he complained: 'the surprise will be that so important a discovery should be so long overlooked ... why will you not adopt it?'<sup>61</sup> It is likely that they did not think his new method was a particularly good idea. In 1782 Edward Alanson, surgeon to the Liverpool Infirmary, commenting on O'Halloran's method, defended primary closure of the wound:

a more extensive union takes place, where the surface of an amputated limb is immediately brought into contact ... instead of dressing the flap and stump as separate sores ... a considerable part of the wound united by the first intention.<sup>62</sup>

Alanson provided data. Of forty-six patients who had a traditional two-stage circular cut amputation ten died, eighteen had a haemorrhage and most developed 'suppuration'.<sup>63</sup> In contrast, thirty-six patients who had primary closure of the wound using a flap, all survived, and none had a haemorrhage or serious infection.<sup>64</sup> In modern surgery primary closure with a flap is the standard technique for major limb amputation.<sup>65</sup> Nonetheless, despite his colleagues' reluctance to

<sup>56</sup> O'Halloran, *A concise and impartial account*, pp 12–15.

<sup>57</sup> O'Halloran, *A complete treatise*, p. 13.

<sup>58</sup> *Ibid.*, pp 2–5.

<sup>59</sup> *Ibid.*, pp 6–7.

<sup>60</sup> *Ibid.*, p. 224.

<sup>61</sup> Lyons, 'The letters of Sylvester O'Halloran', ix, pp 25–50.

<sup>62</sup> Edward Alanson, *Practical observations on amputation, and the after treatment, to which is added, an account of the amputation above the ankle with a flap: the whole illustrated by cases* (London, 1782), p. 113.

<sup>63</sup> *Ibid.*, pp xiii–xiv.

<sup>64</sup> *Ibid.*, pp xv–xvi.

<sup>65</sup> D. G. Smith, 'General principles of amputation surgery' in J. I. Krajchich, M. S. Pinzur, L. T. C. Benjamin and K. Potter (eds), *Atlas of amputations & limb deficiencies, 4th edition* (Ebook [VST ePub3] Rosemount, 2018), (<https://orthop.washington.edu/patient-care/limb-loss/general-principles-of-amputation-surgery.html>) (8 Nov. 2020).

endorse his method, O'Halloran felt that he was entitled to a 'national reward' for devising this amputation which 'in any country of Europe... would not be unnoticed!' and repeated this view in letters to Edmund Burke seeking, unsuccessfully, a civil-list pension in recognition of his work in 1793.<sup>66</sup>

### III

The third medical subject that Sylvester O'Halloran dealt with was the management of traumatic brain injury, a problem he encountered frequently. In the early 1790s he published a short paper, 'An attempt to determine with precision such injuries of the head as necessarily require the operation of the trephine'.<sup>67</sup> In this he presented twelve case histories to support his proposition that many head injuries did not require trephination. Subsequently, in 1793, he published *A new treatise on the different disorders arising from external injuries of the head illustrated by eighty-five selected from above fifteen hundred practical cases*, where he expanded on his earlier ideas.<sup>68</sup> The understanding of head injury changed little from classical times to the early eighteenth century when it was still believed that symptoms arose from injury to the bone and meninges rather than the brain.<sup>69</sup> The Dublin surgeon, William Dease (1752–98), wrote of earlier authors: 'the symptoms which we annex to concussions of the brain, they in general attributed to the injury the bone received.'<sup>70</sup> Henri-Francois Le Dran (1685–1770) was the first to correctly identify the brain as the source of post-traumatic head injury problems.<sup>71</sup> O'Halloran agreed but, harkening back to classical humoral medicine, he believed that the animal and vital spirits were situated in the brain stem, which he described as 'the primary seat of the soul'.<sup>72</sup> In his view, disruption of this area caused post-traumatic symptoms but because of its deep position within the skull it was not amenable to trephination.<sup>73</sup>

From prehistoric times making a hole in the skull was a frequent treatment for head injury, 'madness' and epilepsy.<sup>74</sup> In the eighteenth century opening the skull using a trepan or trephine facilitated the lifting of depressed fractures and removing blood clots or other debris from the surface of the brain.<sup>75</sup> However,

<sup>66</sup> Lyons, 'The letters of Sylvester O'Halloran', ix, pp 25–50; Lyons, 'Sylvester O'Halloran (1728–1807): three unpublished letters', pp 33–43.

<sup>67</sup> O'Halloran, 'An attempt to determine with precision', pp 151–69.

<sup>68</sup> O'Halloran, *A new treatise on the different disorders*.

<sup>69</sup> J. C. Ganz, 'Head injuries in the 18<sup>th</sup> century: the management of the damaged brain' in *Neurosurgery*, lxxiii (2013), pp 167–76.

<sup>70</sup> William Dease, *Observations on wounds of the head* (London, 1776), p. xii.

<sup>71</sup> H. F. Le Dran, *Observations in surgery containing one hundred and fifteen different cases with particular remarks on each for the improvement of young students*, trans. J. S. Surgeon (London, 1739), p. 74

<sup>72</sup> O'Halloran, *A new treatise on the different disorders*, p. 114.

<sup>73</sup> *Ibid.*, pp 117–19.

<sup>74</sup> M. A. Faria, 'Violence, mental illness, and the brain – a brief history of psychosurgery: part 1 – from trephination to lobotomy' in *Surgical Neurology International*, iv (2013), p. 49.

<sup>75</sup> A *trepan* was an instrument like a carpenter's brace to which a circular saw was attached. Rotation of the brace produced a circular motion of the saw removing a disc of bone from the skull. A *trephine* was a simpler instrument comprising a circular saw with a T-shaped handle; it displaced the trepan towards the end of the eighteenth century. See C. J. S. Thompson,

because of high mortality rates, often from infection, there was considerable debate whether trepanation should be undertaken at all. The English surgeon Percivall Pott (1713–88) was an ardent advocate of early trepanation in all skull fractures, while Jean-Louis Petit (1674–1750) adopted the more conservative approach favoured in France.<sup>76</sup> O'Halloran was firmly in the conservative camp: 'I consider the operation of the trepan as very cruel, a painful and a dangerous one; nor to be attempted without the clearest evidences of its necessity.'<sup>77</sup> He based his conclusions on numerous cases he had treated personally, citing whiskey-fuelled faction fighting as the cause of the many head injuries seen in Ireland at the time. Not without justification, he considered himself to be 'a master' in the management of head trauma.<sup>78</sup> In his initial paper O'Halloran succinctly summarised the indications for and against trepanation after head trauma. He concluded that many fractured skulls and those presenting with concussion — 'immediate stupor and insensibility' — did not require trepanation.<sup>79</sup> Depressed fractures or the presence of matter on the surface of the brain 'absolutely require its application' as did apparently slight fractures that developed bad symptoms a fortnight or so after the injury. O'Halloran's conclusions anticipated modern neurosurgery where only a minority of head injuries require craniotomy and for very specific indications. O'Halloran's second publication expanded on the earlier work adding sections on the pathology of head injury, the nature of concussion, hydrocephalus and the formation of matter on the brain. He restated his warnings against the indiscriminate use of the trephine, asking 'Is an operation of this consequence, infinitely more severe and violent than the cause that gave rise to it, to be wantonly or capriciously attempted?'<sup>80</sup> His reply was an emphatic 'no'.

How O'Halloran recorded the details of his cases is unknown. He may have kept a case or fee book or documented only certain cases that interested him. Presumably, details of patients admitted to the Limerick County Infirmary would have been recorded but only nineteen of the eighty-five patients described were treated there, the others in private houses. Twenty-nine of his patients died, a mortality rate of 34 per cent, which compared favourably with other known eighteenth-century mortality rates.<sup>81</sup> O'Halloran's books also open a window on life in eighteenth-century Ireland. He treated patients from all levels of society. All but eight of his head injury patients were male and eight were children. The youngest was fifteen-months-old — a child with hydrocephalus, which he correctly deduced proceeds 'from some defect in the organization of the parts as yet unknown, or from the secretions not being properly conducted'.<sup>82</sup> Forty-three people had been victims of assault, twenty-two were thrown from or kicked by horses, while eleven fell from a height. Although he wrote of 'the frequent abuse of spirituous liquors'

*Museum of the Royal College of Surgeons of England: guide to the surgical instruments and objects in the historical series* (London, 1929), pp 36–40.

<sup>76</sup> J. M. González-Darder, 'Trepanation during the eighteenth century: to trepan or not to trepan' in idem, *Trepanation, trephining and craniotomy: history and stories* (Cham, 2019), pp 219–64.

<sup>77</sup> O'Halloran, *A new treatise on the different disorders*, p. 32.

<sup>78</sup> Ibid., pp 3–4.

<sup>79</sup> O'Halloran, 'An attempt to determine with precision', pp 151–69.

<sup>80</sup> O'Halloran, *A new treatise on the different disorders*, pp 188–205.

<sup>81</sup> J. C. Ganz, 'Analysis of eighteenth-century neurosurgical series' in *Acta Neurochir*, clix (2017), pp 605–13.

<sup>82</sup> O'Halloran, *A new treatise on the different disorders*, p. 93.

as the cause of ‘bloody conflicts’ at ‘fairs, patrons and hurling matches’, he recorded alcohol as a contributing factor to head injury in only ten of his patients.<sup>83</sup> Following their head injuries most of the patients had been attended immediately by a friend or another medical professional. Bloodletting, blistering and a variety of herbal concoctions were administered and then ‘an express’ was sent to summon O’Halloran. On arrival and in consultation with any doctors present he would explore the head wound and decide whether trepanation was indicated or not. Occasionally he was dissuaded from operating in case the patient’s death ‘might be charged to the operation, not to the injury’.<sup>84</sup> Overall, he trepanned thirty-one patients, mostly for depressed fractures of the skull, of whom twenty-one recovered. With the consent of the relatives, he frequently performed post-mortem examinations on those that died to determine the nature of the fatal head injury.

#### IV

O’Halloran played a pivotal role in developing surgical care in Limerick and in professionalising surgery in Ireland. In 1759, concerned at the lack of a hospital in Limerick, O’Halloran and another surgeon, Giles Vandeleur, rented three small houses which ‘they threw into one and opened four beds’.<sup>85</sup> After a year the hospital charity failed due to the death of Vandeleur and lack of support, but O’Halloran and others revived it with a benefit play in early 1761. As subscriptions increased more beds were opened and a project begun to build a new hospital. On 19 March 1765 Edmond Sexton Pery, M.P. for Limerick City, donated a piece of ground in the old St Francis’s Abbey outside the city walls for a hospital at a peppercorn rent in perpetuity. The site contained the shell of a building which ‘was rebuilt and is now capable of receiving upwards of forty beds’. In its first twenty years the hospital received £10,375 18s. 6½d. in subscriptions and treated 5,003 in-patients and 54,148 outpatients, of whom 29,428 were cured.<sup>86</sup> As the hospital was in the county, the governors, including O’Halloran, resolved in 1766 that it be designated the County of Limerick Infirmary pursuant to the recently enacted County Infirmary Act (1766). John Martin and John Barret were appointed as physicians and ‘Messrs. O’Halloran, Mahony and Knight ... attending surgeons in yearly rotation’.<sup>87</sup> As a county infirmary the hospital received funding from parliament and the Limerick county grand jury, thus securing its future.<sup>88</sup>

O’Halloran would be associated with the hospital for the rest of his life. *The Medical Review* of 1775 noted:

In Limerick O’Halloran resides  
 And o’er the County Hospital presides  
 Excels in Surgery and healing Arts  
 With flowing Pen displays uncommon parts.<sup>89</sup>

<sup>83</sup> *Ibid.*, p. 4.

<sup>84</sup> *Ibid.*, p. 232.

<sup>85</sup> O’Halloran, *O’Halloran family history*, p.13.

<sup>86</sup> Ferrar, *The history of Limerick*, pp 218–21.

<sup>87</sup> *Dublin Journal*, 7 Oct. 1766, p. 2; Ferrar, *The history of Limerick*, pp 219–20.

<sup>88</sup> Grace, ‘Patronage and health care’, pp 1–21.

<sup>89</sup> John Gilborne, *Medical Review* (Dublin, 1775), p. 47.

In 1778 the hospital was criticised in an Irish House of Commons report for being 'very dirty... all confusion, no regulation... full of smoke', but ten years later John Howard was pleasantly surprised to find it 'thoroughly repaired, white-washed and furnished with new bedding'.<sup>90</sup> These changes he ascribed to the efforts of Lady Hartstonge and a new matron rather than O'Halloran. However, O'Halloran was remembered in Limerick as 'a man of wonderful ability... turning out every day very responsibly to visit his patients'.<sup>91</sup>

As the new hospital was getting off the ground O'Halloran turned his attention to the training of surgeons in Ireland. Having observed the highly structured system of training in France compared to the lax apprenticeship approach in Ireland, he published *Proposals for the advancement of surgery in Ireland* as an appendix to *A complete treatise*.<sup>92</sup> In France prospective surgeons had to possess a master of arts degree from a university, go through 'a painful course of studies' and pass 'a severe course of examinations' conducted by the 'first men of the profession' under the auspices of the Académie Royale de Chirurgie. Candidates were required to be proficient in anatomy and surgery, and the performance of 'all the operations of surgery on a body'. In contrast in Ireland 'the most ignorant impostor had as much right to trade in human flesh as the first surgeon'.<sup>93</sup> O'Halloran proposed the establishment of a system similar to that in France, effectively the creation of an Irish college of surgeons. He recommended that a suitable 'edifice' be built for surgeons in Dublin, that three professorships in anatomy, surgery and midwifery be created, that a series of lectures and examinations be established free of fee to the candidate, and that only surgeons listed in an annual register be allowed practise surgery.<sup>94</sup>

While no corroborating evidence exists, O'Halloran certainly believed that his *Proposals* influenced the Irish parliament in 1766 in their creation of the County Infirmaries Board as part of the County Infirmaries Act.<sup>95</sup> In his journal he wrote: 'In 1765 published my "Treatise on Gangrene" the appendix to which gave rise to the Infirmary Act, the most useful in its way'.<sup>96</sup> In March 1766, a month before the infirmary bill was presented to parliament O'Halloran received from his friend and one of the sponsors of the bill, Dr Charles Lucas, a 'very long and polite letter to bestow many encomiums on my work'.<sup>97</sup> While the contents of the letter are unknown it is likely that Lucas was aware of his friend's proposals for regulating surgery and incorporated some of the ideas into the bill. The County Infirmary Board was not a college, but a panel of assessors that examined in anatomy and surgery all surgeons being appointed to the new county infirmaries, including O'Halloran.<sup>98</sup> It marked the beginning of an identifiable

<sup>90</sup> *Commons' Journal Ire.*, xii, appendix, p. dcccxlvi; John Howard, *An account of the principal lazarettos in Europe with various papers relative to the plague together with further observations on some foreign prisons and hospitals and additional remarks on the present state of those in Great Britain and Ireland* (London, 1791), p. 91.

<sup>91</sup> Wilde, 'Illustrious physicians and surgeons', pp 223–50.

<sup>92</sup> O'Halloran, *A complete treatise*, pp 270–89.

<sup>93</sup> *Ibid.*, pp 272–4.

<sup>94</sup> *Ibid.*, pp 287–9.

<sup>95</sup> 5 Geo. III, c. 20 [Ire.] (7 June 1766); Susan Mullaney, "'A means of restoring the health and preserving the lives of His Majesty's subjects": Ireland's 18<sup>th</sup>-century national hospital system' in *Canadian Bulletin of Medical History*, xxix (2012), pp 232–42.

<sup>96</sup> O'Halloran, *O'Halloran family history*, p. 13.

<sup>97</sup> Lyons, 'The letters of Sylvester O'Halloran', viii, pp 177–8

<sup>98</sup> List of Infirmary Surgeons (RCSI/MS/79); 5 Geo. III, c. 20 [Ire].

surgical profession in Ireland.<sup>99</sup> With an alternative method of professional assessment available, few surgeons now joined the guilds of barber-surgeons whom they regarded as their inferiors.<sup>100</sup> The practising surgeons sought to come together as a group and to dissociate themselves completely from the ‘preposterous and disgraceful union’ with the barbers. In March 1780 the Dublin Society of Surgeons was established which, four years later, was successful in its petition to government to establish a college of surgeons to regulate the profession and put in place a system of training for surgeons.<sup>101</sup> O’Halloran was elected an honorary member of the society in October 1780 and of the Royal College of Surgeons in 1786.<sup>102</sup>

Although the evidence is conjectural, O’Halloran’s proposals seem to have been the blue-print for the educational system put in place by the new college; the similarities between his proposals and the system established are striking.<sup>103</sup> Professors were appointed to give lectures in anatomy, physiology and surgery, and candidates were examined in these and surgical pharmacy. O’Halloran’s suggestion that the candidates should perform ‘all the operations of surgery on a body, with their apparatus and bandaging’ was not taken up, perhaps because of the difficulty in obtaining cadavers or a suitable premises where dissection might be performed.<sup>104</sup> His suggestion that that there be no expense to the candidate was also ignored and fees of ten and twenty guineas were levelled for letters testimonial and membership, respectively. Licences in midwifery could also be awarded (to men) for ten guineas.<sup>105</sup> The surgeons had to wait until 1810 to occupy a ‘suitable edifice’, Surgeons Hall on St Stephen’s Green.<sup>106</sup> The unique proposal that a list of reputable surgeons be maintained was not achieved until 2007, when surgeons were included

<sup>99</sup> For reviews of the professionalisation of medicine in Ireland and the development of the county infirmary system in the eighteenth century, see Kelly, ‘The emergence of scientific and institutional medical practice’, pp 21–39; Toby Barnard, *A new anatomy of Ireland, the Irish protestants, 1649–1770* (New Haven, 2003), p. 140; Farnar, *Patients potions and physicians*; Geary, *Medicine and charity*; Kelly, ‘Domestic medication and medical care’, pp 109–35; Andrew Sneddon, ‘Institutional medicine and state intervention in eighteenth century Ireland’ in Kelly and Clark (eds), *Ireland and medicine*, pp 137–62; Kelly ‘Health for sale’; Andrew Sneddon, ‘State intervention and provincial health care: the county infirmary system in late eighteenth-century Ulster’ in *I.H.S.*, xxxviii, no. 149 (2012), pp 5–21; Grace, ‘Patronage and health care’, pp 1–21.

<sup>100</sup> H. F. Berry, ‘The ancient corporation of barber surgeons, or gild of St Mary Magdalene, Dublin’ in *Journal of the Royal Society of Antiquaries of Ireland*, xxxiii (1903), pp 217–38.

<sup>101</sup> D. H. Widdess, *The Royal College of Surgeons in Ireland 1784–1984* (3rd ed., Dublin, 1984), pp 9–10.

<sup>102</sup> Lyons, ‘The letters of Sylvester O’Halloran’, ix, pp 25–50.

<sup>103</sup> Many medical historians have alluded to the probability that O’Halloran’s proposals were seminal in establishing the educational curriculum of the new college: Wilde, ‘Illustrious physicians and surgeons’; Mapother, ‘Lessons from the lives’, pp 430–48; Doolin, ‘Dublin’s surgeon-anatomists’, pp 1–22; Widdess, *The Royal College of Surgeons*, pp 5–7; Lyons, ‘Sylvester O’Halloran, 1728–1807’, pp 65–74.

<sup>104</sup> In 1788 the secretary of the college, James Henthorn, refused for dissection the body of Frederick Lambert who had been executed, citing the ‘lack of a hall for public dissection’: Cameron, *History of the Royal College of Surgeons*, p. 132; *Freeman’s Journal*, 30 Oct. 1788.

<sup>105</sup> Cameron, *History of the Royal College of Surgeons*, pp 125–6.

<sup>106</sup> Clive Lee and Mary O’Doherty, ‘A history of the Royal College of Surgeons in Ireland’ in Clive Lee (ed.), *Surgeons’ halls: building the Royal College of Surgeons in Ireland 1810–2010* (Dublin, 2011), pp 1–14.

in the specialist division of the register of Irish medical practitioners.<sup>107</sup> The close resemblance between O'Halloran's proposals and the new college curriculum, as well as the honour in which he was held by the Dublin surgeons, makes it very likely that his ideas on education inspired them to adopt a system of training and examination analogous to what he had proposed in 1765.<sup>108</sup>

## V

Sylvester O'Halloran's style of writing was mostly verbose with many digressions from his subject. For example, in *A new treatise* he provides an amusing description of the rituals performed by the famous itinerant oculist, Chevalier John Taylor, prior to couching,<sup>109</sup> while his *Proposals* include an attack on David Hume for his opinions about the Irish nation.<sup>110</sup> He illustrated his later works with case histories but, excepting head injury, many of the cases had little to do with the topic under review. Moreover, the same cases were often recycled in later publications. However, he was capable of brevity. *A concise and impartial account* is a short work of twenty pages that provides specific clinical details of his new amputation method;<sup>111</sup> similarly, the précis of his *Proposals* is a model of brevity.<sup>112</sup> In 'An attempt to determine with precision' he achieved his aim of being 'as clear and concise as possible' with regard to trepanation following head trauma.<sup>113</sup> The audience O'Halloran had in mind for his work is difficult to discern given that his books were highly technical and probably only of interest to a small cadre of practising surgeons. However, he did have an international medical reputation with his work receiving recognition in England and France.<sup>114</sup>

O'Halloran inscribed his monographs to a variety of people. *A new treatise* was dedicated to Dr Richard Mead (1673–1754), 'the Hippocrates of the present age,' who deemed it 'not unworthy of public notice'.<sup>115</sup> Thus encouraged, O'Halloran sent it to Dr Edward Barry (1698–1776), president of the Royal College of Physicians of Ireland, hoping that they would approve his work and 'make the world look with more deference' on his treatise, and presumably also on him.<sup>116</sup> There is no record of the monograph and no mention of O'Halloran in the archives of the Royal College of Physicians, but he recounts that they showed no interest in

<sup>107</sup> Medical Practitioners Act 2007, available at Irish Statute Book ([www.irishstatutebook.ie/2007/en/act/pub/0025/print.html#sec47](http://www.irishstatutebook.ie/2007/en/act/pub/0025/print.html#sec47)) (8 Jan. 2021).

<sup>108</sup> He was the fifth honorary fellow of the R.C.S.I. and the Irish first surgeon outside Dublin to be so honoured: Widdess, *The Royal College of Surgeons*, p. 168.

<sup>109</sup> O'Halloran, *A new treatise*, p. 105.

<sup>110</sup> O'Halloran, *A complete treatise*, pp 285–6.

<sup>111</sup> O'Halloran, *A concise and impartial account*.

<sup>112</sup> O'Halloran, *A complete treatise*, pp 287–9.

<sup>113</sup> O'Halloran, 'An attempt to determine with precision', pp 151–69.

<sup>114</sup> Lyons, 'The letters of Sylvester O'Halloran', ix, pp 25–50.

<sup>115</sup> O'Halloran, *A new treatise*, 'Dedication', pp 5–6. Richard Mead was a fellow of the London College of Physicians and physician to George II: Anita Guerrini, 'Mead, Richard (1673–1754)', *O.D.N.B.* (online ed., <https://doi.org/10.1093/ref:odnb/18467>).

<sup>116</sup> Ailis Quinlan, 'Sir Edward Barry' in *Lives of the Presidents* (R.C.P.I., 2017) (<https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2020/06/34-Sir-Edward-Barry.pdf>) (5 Jan. 2021); O'Halloran, *A new treatise*, 'Dedication', p. 7.

his work and declined to approve it.<sup>117</sup> Their lack of enthusiasm is perhaps not surprising. O'Halloran was a young unknown Catholic surgeon without a medical degree from a small provincial centre who had trained in France.<sup>118</sup> The fellows of the Royal College were all prominent Protestant physicians who would have had little interest in surgical matters or in studying a longwinded surgical text. Prior to the founding of the Irish College of Surgeons in 1784 physicians and surgeons rarely met in consultation and a proposal that they might was ignored by the physicians in 1785.<sup>119</sup> Surprisingly, in 1755 O'Halloran again dedicated his second book, *A critical analysis*, to Dr Barry. As a fellow of the Royal Society, Barry may have facilitated O'Halloran's presentation to the society in 1753. Why Barry changed his attitude is unclear. O'Halloran believed that Barry had allowed his name to appear on the presumption that the book might be useful to the public.<sup>120</sup> Barry was at the height of his career; his expertise was in treating tuberculosis and as a physician he would never perform cataract surgery.<sup>121</sup> He may have appreciated the importance of Daviel's novel operation in extracting rather than couching cataracts and was happy to promote this new treatment through O'Halloran's monograph.

In 1763 O'Halloran dedicated his introductory work on amputation, *A concise and impartial account*, to several people: Ezekiel Nesbit, president of the College of Physicians; the censors and fellows of the college; John Nichols, the surgeon general, and the 'very Respectable Body of Surgeons of said city'.<sup>122</sup> It is understandable that he mentioned surgeons who might adopt his technique but not so obvious as to why he included fellows of the college of physicians, other than the hope of being acknowledged by the medical establishment. Two years later O'Halloran dedicated his substantial 289-page monograph, *A complete treatise on gangrene and sphacelus* to Francis Seymour-Conway (1714–94), lord lieutenant of Ireland, hoping that his influence might have it adopted for 'general use in the military hospitals of this kingdom'.<sup>123</sup> Uniquely, he inscribed fifteen of the nineteen chapters in the book to various individuals: six leading medical men, eight prominent locals from Limerick and Clare, and the Dublin Society. Given his later grumbling that he deserved a 'national reward' for his new amputation technique, it likely that he dedicated the various chapters to those whom he thought might support his application for a state pension.<sup>124</sup> His last major medical treatise on head injuries, published in 1793, was not dedicated to anyone. Having by then attained prominence as a surgeon and historian, he perhaps felt no further need to flatter the establishment.

O'Halloran's theoretical understanding of medicine was rooted in the humoral ideas of classical and medieval medicine.<sup>125</sup> Thus, in relation to gangrene he referred to 'a sharp humour' forming 'which will 'gradually consume muscles,

<sup>117</sup> *Ibid.*, 'Dedication', pp 7–8; R.C.P.I. college journals, 1743–1802 (R.C.P.I., RCPI/2/1), pp 51–5.

<sup>118</sup> In the early 1700s surgeons could only train by apprenticeship. There was no authority in Britain or Ireland that could grant them a diploma to show that they were properly qualified: Roy Porter, 'The patient in England, c.1660–1800' in Andrew Wear (ed.), *Medicine in society* (Cambridge, 1992), pp 91–118.

<sup>119</sup> Cameron, *History of the Royal College of Surgeons*, pp 129–30.

<sup>120</sup> O'Halloran, *A critical analysis*, 'Dedication', p. 5.

<sup>121</sup> Quinlan, 'Sir Edward Barry'.

<sup>122</sup> O'Halloran, *A concise and impartial account*, 'Dedication', p. 1.

<sup>123</sup> O'Halloran, *A complete treatise*, 'Dedication', p. 5.

<sup>124</sup> Lyons, 'The letters of Sylvester O'Halloran', ix, pp 25–50.

<sup>125</sup> Paul Strathern, *Medicine from Hippocrates to gene therapy* (London, 2005), pp 31–6.

ligaments, blood vessels and bones'.<sup>126</sup> The 'fermentation of these humours forms pus', giving rise to the 'laudableness of suppuration'.<sup>127</sup> O'Halloran also believed in the Galenic concept of 'animal and vital spirits' which he located in the brain stem.<sup>128</sup> In contrast, in his practice he was forward thinking: he performed experiments, anatomical dissections and post-mortem examinations to discover the nature of disease and he seemingly kept detailed records of some individual patients treated. His clinical decisions were based on his experience rather than theoretical constructs, thus he advised caution when contemplating limb amputation and was categorical in his view that many head injuries did not require trepanation. So, while his theoretical understanding of medicine was backward-looking, his practice reflected a more modern scientific approach.

O'Halloran's medical publications had minimal impact on contemporary medical practice. His first publication, *A new treatise*, contained nothing new and many of his conclusions were inaccurate. Moreover, although he was in Paris at the time, he was unaware of Daviel's seminal work on cataract which had been published there in 1748. His second monograph published in 1755 offered a critique of Daviel's operation which he concluded was never performed 'with success adequate to expectations'.<sup>129</sup> He did not mention the important works of Sharp and de la Faye published two years earlier. Only in 1788 did he refer to Daviel, Sharp and de la Faye but was of the opinion that his own method of cataract extraction was better. In none of his writings on the eye did he give details of cases he had treated and his novel but technically difficult surgical approach to the lens via the sclera was ignored. However, his writings on the eye represented a significant body of academic work and scholarship, and he was the only one in Ireland to publish anything about the subject at the time. In his two monographs about limb amputation, he described fifty-eight patients but only three of them had undergone amputation by his new method. His belief that wounds always needed to suppurate before healing was seriously flawed and denied the possibility of primary wound closure as his contemporaries showed. Nonetheless, he believed he deserved official recognition and a pension for his innovation. Only his monograph on head injury was clinically important. He was clear that most head injuries other than depressed fractures did not need to be trepanned and his work contributed to the evolving management of head injury in the eighteenth century.<sup>130</sup> Anticipating modern neurosurgical management, his conservative approach to traumatic brain injury avoided painful, unnecessary, and potentially fatal operations for many.<sup>131</sup>

O'Halloran's greatest legacy was his influence on surgical training in Ireland. His *Proposals* were based on his knowledge of contemporary surgical training in France and were far ahead of what was current in Ireland or England at the time. While the evidence is circumstantial, his ideas possibly influenced legislators in 1766 in creating the County Infirmaries Board which was the first examining body for surgeons in Ireland. When the Royal College of Surgeons in Ireland was established in 1784 their curriculum adhered very closely to O'Halloran's

<sup>126</sup> O'Halloran, *A complete treatise*, p. 5.

<sup>127</sup> *Ibid.*, pp 2, 198.

<sup>128</sup> O'Halloran, *A new treatise*, p. 114.

<sup>129</sup> O'Halloran, *A critical analysis*, 'Dedication', p. 3.

<sup>130</sup> Ganz, 'Head injuries in the 18<sup>th</sup> century', pp 167–76.

<sup>131</sup> Ganz, 'Analysis of eighteenth-century neurosurgical series', pp 605–13.

proposals, and both the Society of Surgeons and the new college acknowledged him with honorary membership.

From O'Halloran's writings a strong, self-confident personality emerges, tinged with 'a strong vein of conceit'.<sup>132</sup> Although from a small provincial city he was forthright in giving his opinions in his contributions to learned societies. Of the famous English surgeon John Hunter, he wrote: 'I know him personally ... considering his confined and narrow education, I should expect nothing very remarkable from him.'<sup>133</sup> While he criticised renowned medical contemporaries such as William Cheselden, Pericval Pott and Jacques Daviel, he was easily affronted himself. The lack of engagement of the College of Physicians with his first monograph on cataract bothered him greatly. His belief that he should have a pension for his amputation technique demonstrates a lack of insight as does his incomprehension at the surgical community's indifference to his procedure. In his medical practice he was an excellent clinician whose opinion colleagues regularly deferred to and many correspondents sought his advice about personal medical problems.<sup>134</sup> Once described as 'a bit of a buzz-fuzz',<sup>135</sup> O'Halloran must have seemed an eccentric character as he went about Limerick 'with his cocked hat and ruffles' and gold-headed cane. He was remembered as 'a strange mixture of industry and carelessness' but also of 'wonderful ability'.<sup>136</sup> His vivisection experiments suggest an element of callousness in his character. An unexpected pleasure is the glimpse his publications provide into eighteenth-century Irish social life, which emerges from the details of his patients. Despite his strongly-held views and many learned publications, Sylvester O'Halloran's impact on eighteenth-century medical practice was at best modest, but his ideas on education were pivotal in the evolution of professional surgical training in Ireland.<sup>137</sup>

<sup>132</sup> Lyons, 'Sylvester O'Halloran (1728–1807)', pp 279–88.

<sup>133</sup> Lyons, 'The letters of Sylvester O'Halloran', ix, p. 44.

<sup>134</sup> *Ibid.*, viii, pp 168–81.

<sup>135</sup> Lyons, 'Sylvester O'Halloran (1728–1807)', pp 279–88.

<sup>136</sup> Wilde, 'Illustrious physicians and surgeons'.

<sup>137</sup> I would like to thank Dr John Logan of the Department of History at the University of Limerick for his comments on earlier drafts of this paper.