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An Otological Examination of a Surgeon in 1811, depicted by George Cruikshank

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Abstract:

The famous Cruikshank caricature entitled "*The Examination of a Young Surgeon*" published in 1811 not only ridicules the manner in which the examinations of surgeons were conducted at the Royal College of Surgeons in London but also tests the examinee's knowledge of the ear. By that time otology was not a very satisfying and successful part of surgery. Furthermore, two examiners with contemporary hearing aids are depicted. Is this perhaps the first depicted 'otological' examination of a young surgeon? This paper attempts to identify the persona dramatis and to elucidate in detail the significance of this satirical print.

Introduction:

The first edition of an engraving by the English etcher, caricaturist, and illustrator George Cruikshank, entitled "*Examination at Golgatha; or, The College of Skulls*" appeared early in 1811. The second edition with the title altered to better known "*The Examination, of a Young Surgeon*" was used as an illustration to volume ii, No 10 of "*The Scourge*" in 1811 (plate 4, p. 263) by Mr James, 5 Newgate Street on October 1st 1811. From the start Cruikshank responded to the challenge with all the required gusto and vulgarity needed by an eighteenth century cartoonist [1].

The Artist:

George Cruikshank (1792-1878) was a Scot whose father Isaac settled in London as a fine satirical artist in his own right. Young George, whose brother and sister all showed a talent for drawing, published his first etching at the age of twelve. At the age of nineteen Cruikshank became the resident caricaturist of "*The Scourge*" or "*Monthly Expositor of Imposture and Folly*" which had first been published in January by the Jones family when Cruikshank joined them in June of that year. He had a prolific output and during his early years when Britain was at war with France he never tired of inventing new ways to belittle the emperor Napoleon, later turning his talents to the Prince Regent's Court. He enjoyed the support of radical print sellers and publications such as "*The Scourge*" (1811-1816). It was during this time that he published the *Examination of a Young Surgeon*. He had a successful second career as a book illustrator after George IV paid him £1,000.00 "*not to caricature his Majesty in any immoral situation*"; such was the power of Cruikshank's savage pen. He was probably at his best when he targeted the social, political and medical life in London. With this talent in illustrating books and magazines he gave himself to preaching in pictures, not only on tobacco and temperance but on ventilation and gambling. He abhorred the social mores of the day and enjoyed laughing at the pretensions of the culture, fashion and society.

The Engraving:

"*The Examination, of a Young Surgeon*" *(Fig. 1)* ridicules the manner in which the examinations of surgeons were conducted at the Royal College of Surgeons in London [2, 3]. The new Royal College had only recently been established by Charter on 22nd March 1800 [4]. Previously the surgeons had been incorporated as a Company in 1745 and had been run more by the powerful Court of Examiners than the supposed governing body: the Court of Assistants. Yet the Company had no social or charitable activities and teaching of anatomy had virtually ceased. This led to a rise in a growing number of private anatomy schools working outside the aegis of the Company. The most popular of these was the

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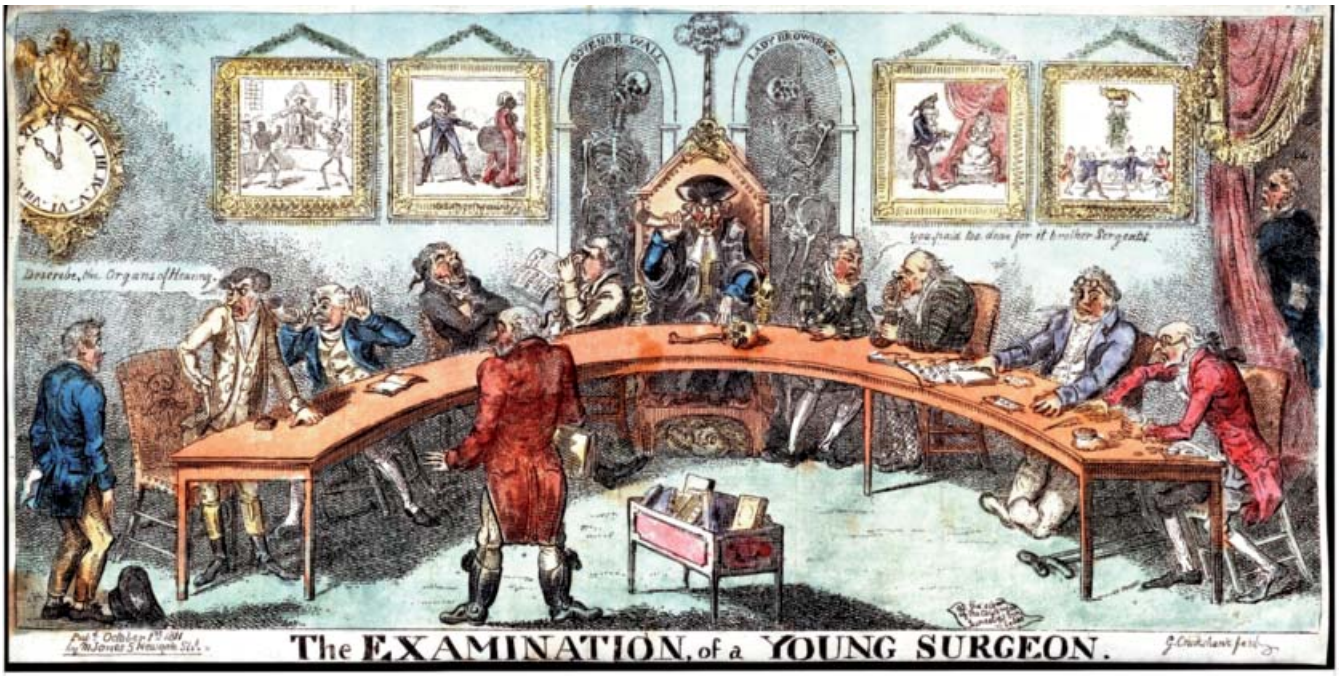

Fig. 1: The Examination, of a Young Surgeon, 532 x 271 mm

Windmill Street School run by the Hunter brothers, William and John. Although John sat on the virtually powerless Court of Assistants his later work and collection had the greatest influence on the Company and directly led to the foundation of the Royal College. However the Court of Examiners still held the power in the new College and it was not until a new Charter was granted in 1822 that the term Master and Wardens was replaced by President and Vice-Presidents and the power base returned to them. The trials and tribulations of the transition from the old to the new, the machinations and arguments provided a rich ground for the young Cruikshank who had prepared this engraving to mock the contemporary education and examinations of surgeons at the College.

The Company of Surgeons had its hall in the Old Bailey, where skeletons were mounted in the niches, hence Cruikshank's deliberate reference to the supposed 'learning and superiority' of the Surgeons. These skeletons are also depicted in the engraving "*The Reward of Cruelty*" by William Hogarth (1697-1764) in 1751 and on an engraving by George Dance the Younger (1741-1825): "*A murderer in the Surgeons*' Hall in the Old Bailey at London" [5]. In January 1797, the Company moved from the hall at the Old Bailey to the house at 41 Lincoln's Inn Fields [4]. The paper in the right foreground on the engraving informs us that the examination of the young surgeon is taking place in this new hall of the College. The Court of Examiners consisted of ten senior surgeons, one being the Master.

Eight members of the Court of Examiners sit on the outer side of a semi-circular table, four on each side of the nearly toothless senile Master *(Figure 2a)* with a huge hump nose who wears glasses and strenuously listens through an ear-trumpet which is directed towards the extreme right side of the room where the trembling examinee is standing. Wearing a gown, bands, and hat, he sits in a raised arm-chair, the arms of which end in two skulls. On the table before him are a skull and bone. Under the chair are some money-bags, one with the inscription *£50,* another inscribed *FOR SHIRT*. The gable of the chair is decorated with a skull. Skulls denoted the passage of time and the "*stock in trade*" of the surgeon. From the chair's back projects a striped pole supporting a skull

Fig. 2a

which served as a wig-block, an emblem of the old connection between surgeons and barbers.

As to the iconographic background, Mary Dorothy George from the British Museum [6] left us a knowledgeable description: Behind the Master's chair are two niches or alcoves in each of which a skeleton is suspended by the neck from a rope; one (left) is Governor Wall, the other Elizabeth Brownrigg, both were hanged for murder and thus their skeletons were for sale to the Company of Surgeons. These skeletons are symmetrically flanked by four pictures: {1} a prize-fight between a black pugilist and a skeleton at which the Master of the College presides, standing before his chair. {2} Sartjee, '*The Hottentot Venus*', stands in profile to the right while '*Nobody*', a man whose legs are jointed to his shoulder points with amusement at her posterior. {3} A young woman without arms and legs, placed on a bergère, is inspected by an ugly man, who points at her. {4} A brazen cow (or golden cash calf) surrounded by dancing surgeons refers to the Royal Jennerian Institute - Cruikshank used the same emblem in "*The Cow-Pox Tragedy*" in 1812. On the extreme left of the wall is an ornate clock, showing that the time is eleven o'clock. It is stopped by a grinning figure of Time holding an hour-glass. On the extreme right, a man leaves the room looking over his shoulder with shocked distress, and exclaiming *Oh! In his pocket is a paper: A Peter on the Gravel* [6].

Of the skeletons Elizabeth Brownrigg (1720-1767) lived and worked in London as a servant marrying a house painter, James Brownrigg in 1747. The marriage produced sixteen children. Moving to the Fleet Street area she practised midwifery for the poor in the parish of St Dunstan's in the West. The family income was further supplemented by taking in girl apprentices from the parish workhouse for a sum of £5.0 per child. Sadly two of these girls were subjected to a punishing regime of work and a catalogue of beatings, near drowning, humiliation and imprisonment. Eventually one of them died from her injuries. Elizabeth was found guilty of gross mal treatment and hanged, after which her body was displayed in the surgeon's hall at the Old Bailey in 1767 [7].

Joseph Wall (1737-1802) was an army officer in the French-British war in Africa, where he acted a governor in Senegambia from 1778 - 1782. He had a difficult and unhappy relationship with the lieutenant-governor of the Gambia which resulted in his false imprisonment. On 10 July 1782, shortly before his departure from Africa, a deputation of the African Crops asked him for a settlement on their short allowance. Without holding a court martial he ordered their leader, Sergeant Benjamin Armstrong to be arrested on a charge of mutiny. Armstrong and the other received 800 lashes with a knotted rope by black slaves, contrary to army regulations. They died of their wounds several days later. Although he escaped arrest, married and lived in France and Italy for many years financial hardship and the need to claim his wife's inheritance in Ireland meant he had to surrender himself for trial to clear his name before the trustees would allow his application for money to be sanctioned. He was arrested and sent for trial in 1802. Following his execution his body was formally dissected and the skeleton held by the Company of Surgeons in their Hall [8]. His portrait by Rowlandson is held in the National Portrait Gallery, London.

More is now known about the Hottentot Venus [9], Saartjie Baartman, born in South Africa in 1789. She was smuggled into England in 1810 and exhibited in London and afterwards in Paris, where she died at the early age of 26. Orphaned and unmarried Saartjie had worked as a nursemaid in Cape Town. A physician known to the family for which she worked spotted her potential commercial value as a scientific curiosity in England. In an African context her physique was unremarkable but in Piccadilly where Bullock Museum was the most fashionable place of amusement in London. Her smugglers knew she would cause a sensation. Put on show dressed only in transparent material "*so that the enormous size of her posterior parts are visible as if the said female were naked*" for six, later twelve hours a day, prodded, jeered and expected to sing and dance, exhaustion and desperation soon led to her early death. Her body was only recently reburied in South Africa in 2002 after a demand by Nelson Mandela to President Mitterrand. However in 1810 in Georgian England 'bottoms were big'. From high to low culture of

all forms, Britain was a nation obsessed by buttocks, bums, posteriors, derrieres and every possible metaphor, joke or pun that could be squeezed from this fundamental cultural obsession. Politically the '*Broad Bottom Government*' alluded to the coalition parliament of the day.

Figure 2b

Figure 2c

We will now examine and try to determine the names of the surgeons around the table.

The young surgeon faces a squinting examiner *(Figure 2b)* with a duck' bill nose who has risen from his chair and commands: '*Describe, the Organs of Hearing*'. Next to him sits an old man *(Figure 2c)* with a beginning rhinophym who has turned his ear-trumpet towards the examinee with his right hand and holds his left hand behind his left ear to improve his ability to listen. The next examiner on the left side is a sleepy man yawning dreadfully with closed eyes and folded arms. On the Master's right we see a surgeon sitting in profile and turning his back on the Master. While holding his huge nose he reads a book: *Question upon Wind – I Suppose a man was to. What…you.*

Figure Everard Home (1756-1832)

On the Master's left two Scottish Sergeant-Surgeons wearing tartan, are facing each other and talking about a bad bargain. While the left one *(Figure of Everard Home)* says: 'you paid too dear for it brother Sergeant', the other Scot *(Figure 2d)* takes snuff from a bag.

The next examiner *(Figure 2e)* with spectacles on his forehead and a hypoplastic saddle nose has bandaged legs. Is he suffering from gout? There is an ink-pot in front of him on the table and a pen in his mouth. His right hand keeps a booklet open which partly covers a sheet of paper on which is written *The Cow Pox Chronicle*. His neighbour *(Figure 2f)* is a thin old man who is just getting up from his chair. His small eyes behind the glasses, his hook nose and pointed chin check his greedy fingers which count the coins put in piles on the table. In the middle of the foreground is a box containing books. Left to the box stands a man *(Figure 2g)* with a marked rhinophyma holding a large volume in his hand and looking towards the puzzled examinee. In the foreground to the right

Figure 2d

there is a paper: *at the sign of the Cow's Head Lincoln Inn Fields*.

Who are these examiners? In the examination book from January to September 1811 we know that Sir Everard Home, the Govenor, was present as was Sir Charles Blicke, the Master, Sir Isaac Earle, Mr Chandler, Mr Forster, Mr Keate and Sir William Blizzard. Sir Charles Blicke (1745-1815) was a surgeon at St Bartholmew's hospital where he succeeded Sir Percival Pott. He was Master of the new college in 1803, for which he was knighted and again in 1810, then aged sixty five. His only published work was '*An essay on the bilious yellow fever of Jamaica, collected from the manuscript of a late surgeon*', for which he advocated treatment by bleeding, purging, warm baths, fresh air and acid drinks. The moneybags under his chair may allude to his richness. Later generous founding donations were given by him for the college library [4]. Although the cartoon was published in 1811 we do not know exactly when Cruikshank made the drawing but Mr David Dundas did not sit as Master until August 1811.

(Figure 2e)

(Figure 2f)

At the time of the examination Sir Everard Home is forty eight. Was it due to Home's special interest in the anatomy of the ear that the examinee was asked to describe the organ of hearing or was it because the Master and one examiner suffered from hearing loss and had to use ear-trumpets? Sir Everard Home (1763-1832), surgeon to St George's Hospital and brother-in-law of John Hunter, was one of the first to describe radial fibres in the tympanic membrane in 1800 [10]. Cruikshank also depicted ear-trumpets in the lithograph "*William the Conqueror or The Game Cock of Guildhall*" (1817) and in the engraving "*A curious Junto of slandering Elves or Listeners seldom hear good of themselves*" (1817). Or is Home one of those depicted as one of Scottish Sergeant-Surgeons to the King together with Mr David Dundas? Dundas was Master in 1804, 1811 and again in 1819. He was an apothecary in practice in Richmond and a member of the Company of Surgeons in 1777 becoming Sergeant-Surgeon to George III whose influence aided him to become a member of the Court of Examiners from 1800-1826. He was created a baronet in 1814.

(Figure 2g)

Possibly the surgeon on the left of the Scottish sergeants is Henry Cline (1750-1827) who was a staunch supporter of Jenner and vaccination and one of those involved in setting up the Royal Jennerian Institute in 1803. This collapsed in 1808 and was re-established in 1812 with the College's support. Cline bought some land at Bound's Green in Essex where he could indulge in his passion for agriculture which took up much time and money. He became an examiner in 1810 and the following year resigned his appointments at St Thomas's. He became Master of the college in 1815 and President in 1821.

One of the other surgeons was Sir James Earle (1755-1817) who was a surgeon at St Bartholomew's Hospital for thirty one years where he met and married the daughter of Sir Percival Pott. He was surgeon Extraordinary to George III in 1786 and was celebrated for his operating skills in lithotomy and introduced an improvement in the treatment of hydrocele. He published Practical Observations on the Operation for the Stone in 1793. Thomas Keate (1745-1821)

was a surgeon at St George's Hospital and in 1798 surgeon-general to the army. An excellent surgeon he was the first to tie the subclavian artery for aneurysm but was unpunctual and negligent in his hospital duties. He was Master of the College in 1802, 1809 and 1818 and was also Inspector of the National Cowpox Establishment – perhaps it is he and not Cline with the bandaged legs? Thompson Forster (d 1830) a Guy's surgeon had been on the Court of Assistants, later the Council, from 1800-1827. George Chandler (d 1823) a member of the Surgeons' Company from 1769 was on the staff of St Thomas's Hospital and was reputed to be a kind examiner. He was a short bald man with a grey beard who does not appear as one of the examining board in Cruikshank's picture.

Finally we come to Sir William Blizzard (1743-1835) who together with Dr Maclaurn founded the London Hospital School of Medicine in 1785. He also started the Samaritan Society for patients in the hospital who needed '*relief*' on leaving the hospital'. He was surgeon to the London Hospital for forty years and an examiner at the College for forty six years finally retiring when he was ninety two years old. Tall, imposing and a stickler for exact formalities in dress and procedure it is possible he is the tall standing figure in the front of the picture.

Although ten examinees appear in Cruikshank's depiction there are only eight listed in the examination book so it is possible that he was not lampooning any of them in particular?

It is notable however that each of the examiners was well advanced in years and thus the engraving, which forms part of a genre of satirical prints which poked fun at surgeons' professional pretensions and were critiques of the newly emerging qualified 'surgeon', was pressing for reforms in this field. He was not the first to do so as William Hogarth (1696-1764) notably showed in "*The Reward of Cruelty*" (1751) that dissection, teaching and examination were a necessary part of the young surgeons' training and were an easy target for the caricaturists.

When the young Cruikshank had etched this cartoon, otology was not a very satisfying and successful field of medicine. As in most European countries British otology at this time was undertaken partly by surgeons 'with interest' and partly by unqualified practitioners or 'quacks' [11]. The macroscopic anatomy of the ear was clearly known at the turn of the 19th century. The following text gives a good idea about it. At the turn of the 19th century the Scottish anatomist Andrew Fyfe the Elder (1754 – 1824) gave an excellent overview of the anatomy of the ear at that time in his *Compendium of the Anatomy of the Human Body*[12], "*copied from the most celebrated authors*" . He described the three external auricular muscles, the "*attolens aurem, or superior auris*", the "*anterior auris*", and the "*retrahentes auris or posterior auris*". "*The external ear comprehends the auricle, or ear, properly so called, and the meatus auditorius externus [external auditory] […] The internal ear comprehends the tympanum [or the drum of the ear, i.e. the tympanic cavity], labyrinth, and certain passages leading into these.*" The tympanic cavity contained four ossicles, the malleus, the incus, the stapes, and the orbicular bone. Fyfe described the "*promontory*", the "*Eustachian tube*", "*the cells of the mastoid process, which open into the upper and back part of the tympanum*", the round and oval windows and the chorda tympani. He mentioned three internal muscles, the "*tensor tympani*", the "*laxator tympani*", and the "*stapedius*". The labyrinth "*is formed of the vestibule, cochlea, and semicircular canals, together with the canalis Fallopii [Fallopian canal] and meatus auditorius internus [internal auditory canal]*". He detailed many parts of the labyrinth, the "*semi-oval*" cavity, the "*hemispherical*" cavity, the "*sulciform*" cavity, the three semicircular canals – "*the superior or vertical, the posterior or oblique, and the exterior or horizontal*" –, the "*ampullae or elliptic cavities*", the "*modiolus*", the "*infundibulum*", the "*scala tympani*", the "*scala vestibuli*", the "*lamina spiralis*", the "*aquaeductus cochleae*", and the "*aquaeductus vestibuli*". "*Beside the periosteum, the vestibule, cochlea, and semicircular canals, contain a pulpy membrane, upon which the portio mollis [i.e. the auditory nerve] is irregularly dispersed […] The cavity of the vestibule contains no air, but is constantly filled with a watery fluid […] The aqueous fluid fills the vestibule and scalae of the cochlea, and likewise surrounds the membranous semicircular canals.*"[13]

Hearing aids were well known around the beginning of the 19th century. The ear trumpet of the examiner *(Figure 2b)* next to the examinee seems to listen with a ram's horn aid. This type of hearing aid made of natural horn was popular during the 18th and early 19th century. In addition, this man is cupping the hand behind his left ear, a method which was already described by Galen. The Master's hearing aid looks more elegant and seems to be made of metal. Mechanical hearing aids made from metal or ivory can be found in the 18th century. At the turn of the 19th century the firm of Frederic Charl Rein & Son of London published the first catalogue of hearing aids (Weir/Mudry p. 60). Thus Cruikshank's depiction of the ear trumpets was up to date.

Ear surgery was poor around 1800. While the Eustachian tube catheterization was introduced by a postmaster at Versailles, Edmé-Gilles Guyot in 1774, the Scottish military-surgeon, Archibald Cleland (1700-1771) demonstrated the technique with new instruments in 1744 to perform the catherization through the nose. Surgery of the infected mastoid started with the surgeon Jean Louis Petit (1674-1750) in 1736, but did not progress until the middle of the 19th century. The articicial perforation of the tympanic membrane as a treatment for deafness was published by Sir Astley Paston Cooper (1768-1841), of London, in 1800. (Most of these details are extracted from the book of Weir/Mudry 2013). In the second half of the 19th century otology separated from surgery and amalgamated with laryngology and rhinology to the new speciality otorhinolaryngology in several European countries, including England.

A medical historian could be tempted to conclude from this cartoon that around the beginning of the 19th century otology was a part of surgery and surgeons had to pass an examination organized by a professional guild. This guild would seem to comprise of mostly elder surgeons who suffered from eye problems (glasses), hearing-loss, obesity and gout. They would also appear to have been well paid for their surgical skills. However, Cruikshank was merely parodying these pretensions in a hypothetical examination.

George Cruikshank became one of the great Victorian illustrators and cartoonists. A sort of grotesque humour which is a feature of Cruikshank's art is already visible in "*The Examination, of a Young Surgeon*", the work of a senior teenager, which nevertheless creates that dreadful atmosphere of an examination, perhaps of the first 'otological' examination ever so depicted.

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