



**Reflections On Dermatology: Past, Present, and Future**  
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# Scrotal cancer, chimney sweepers and Sir Percival Pott



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**Abstract** The 18th century was linked to a type of skin cancer with a clear professional etiology: scrotal carcinoma in chimney sweeps. Sir Percival Pott had the merit of identifying the disease as a malignant and inexorable process and of describing its natural evolution. In this article, we present some historical aspects of such description, as well as the working environment of the main individuals affected by this cancer, who were children carrying out the work of chimney sweeps.

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## The fog in England

For centuries, the main fuel in England was wood. As this resource became more expensive due to the construction of houses and ships and the consequent deforestation, coal appeared as a more affordable and cheaper alternative. By the middle of the 17th century, coal was the main fuel in England.

Coal was not just used for domestic purposes; industrialization brought about steam engines, ships, and trains, and burning coal eventually meant the arrival of environmental problems for industrialized cities, such as London, Liverpool, and Manchester. Extreme fog was one of the results. At one point in the history of these cities, the fog was so dense that sunlight did not reach the trees, which eventually died. This obviously aggravated the problem of deforestation, which was further worsened by acid rain.

Fog not only inspired painters (J. M. W. Turner [1775–1851] and John Constable [1776–1837], who became famous

for their blurry and misty paintings) and writers (Arthur Conan Doyle [1859–1930] made his detective walk through the dense fogs of London) but also created a backdrop for the most horrific crimes (Jack the Ripper was murdered in the foggy London of 1888). Art historian Hans Neuberger analyzed 6,500 paintings made between 1400 and 1967 in 42 museums; his study reveals that the painters of the 18th and early 19th centuries included clouds that occupied between 50% and 75% of the canvas.

## English chimneys

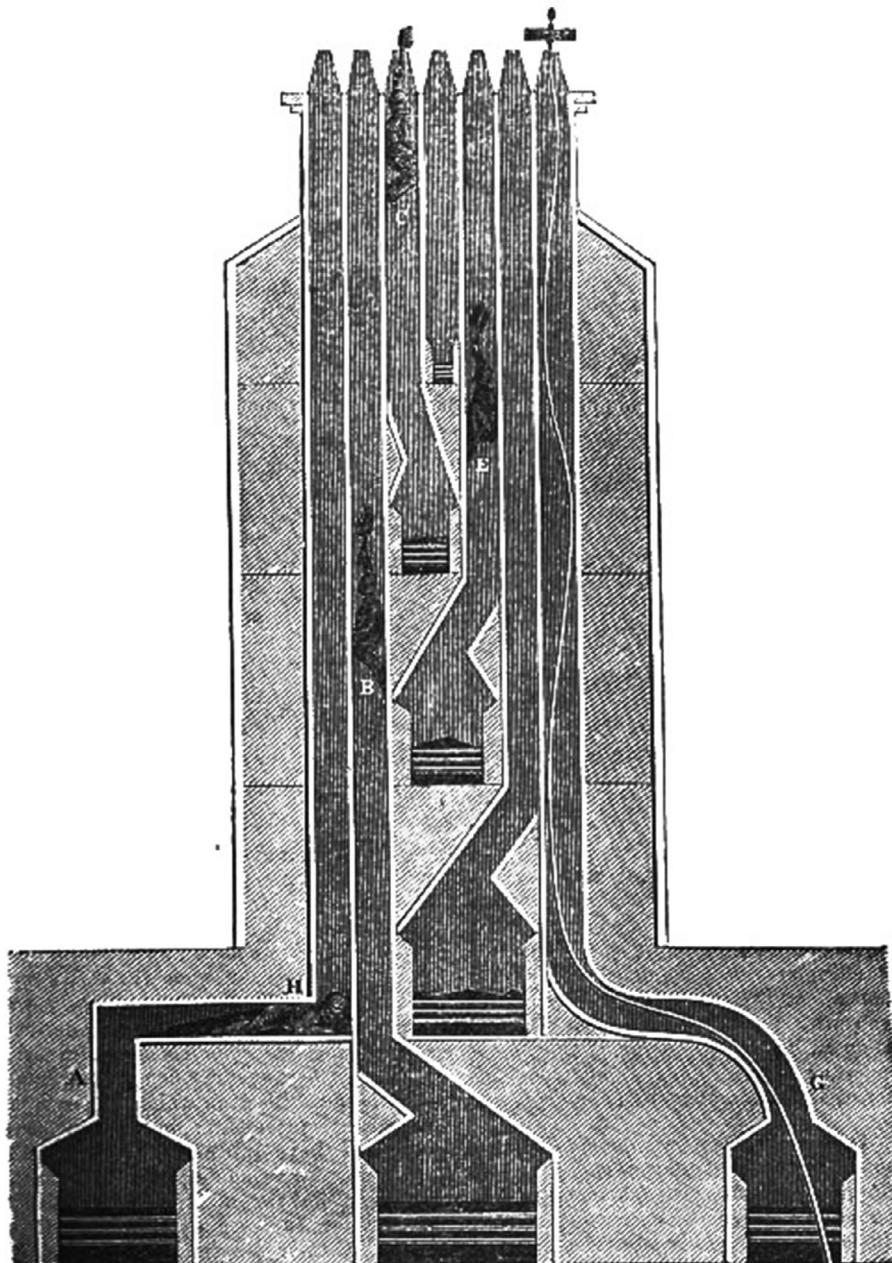
The coal industry primarily impacted the urban English landscape, and the result was obvious: chimneys. The latter populated the skies of the English capital and helped heat private homes, factories, and public buildings. But chimneys were not always straight and wide; they were often tortuous, narrow, and angled (Figure 1). After the great fire of London in September of 1666 (Figure 2), the architecture of the city had to be remodeled. Whereas the bases of most buildings survived the fire, the middle and top parts of the buildings

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THE CONTRAST—MECHANICAL & CHILDREN CHIMNEY-SWEEPING.



**Fig. 1** Several tortuous chimneys. Whereas the one on the right is being cleaned by a flexible device, the others show a child climbing up the flue. The image was made by Joseph Glass in 1834 and published in *Mechanics' Magazine*. Image property of Wikimedia Commons (public domain).

# THE LONDON GAZETTE.

Published by Authority.

From Monday, Septemb 3, to Monday, Septemb 10, 1666.

Whitehall, Sept. 8.

**T**HE ordinary course of this paper having been interrupted by a sad and lamentable accident of Fire lately hapned in the City of London: it hath been thought fit for satisfying the minds of so many of His Majesties good Subjects who must needs be concerned for the Issue of so great an accident, to give this short, but true Accompt of it.

On the second instant, at one of the clock in the Morning, there hapned to break out, a sad in deplorable Fire in *Pudding-lane*, neer *New Fish-street*, which falling out at that hour of the night, and in a quarter of the Town so close built with wooden pitched houses spread itself so far before day, and with such distraction to the inhabitants and Neighbours, that care was not taken for the timely prevent<sup>g</sup> the further diffusion of it, by pulling down houses, as ought to have been; so that this lamentable Fire in a short time became too big to be mastered by any Engines or working near it. It fell out most unhappily too, That a violent Easterly wind fomented it, and kept it burning all that day, and the night following spreading itself up to *Grace-church-street* and downwards from *Cannon-street* to the Water-side, as far as the *Three Cranes* in the *Vintrey*.

The people in all parts about it, distracted by the vastness of it, and their particular care to carry away their Goods, many attempts were made to prevent the spreading of it by pulling down Houses, and making great Intervals, but all in vain, the Fire seizing upon the Timber and Rubbish, and so continuing it set even through those spaces, and raging in a bright flame all Monday and Tuesday, notwithstanding His Majesties own, and His Royal Highness's indefatigable and personal pains to apply all possible remedies to prevent it, calling upon and helping the people with their Guards; and a great number of Nobility and Gentry unwearidly assisting therein, for which they were requited with a thousand blessings from the poor distressed people. By the favour of God the Wind slackened a little on Tuesday night & the Flames meeting with brick buildings at the *Temple*, by little and little it was observed to lose its force on that side, so that on Wednesday morning we began to hope well, and his Royal Highness never despairing or slackening his personal care wrought so well that day, assisted in some parts by the Lords of the Council before and behind it that a stop was put to it at the *Temple*

*Church*, neer *Holborn-bridge*, *Pie-corner*, *Aldersgate*, *Cripplegate*, neer the lower end of *Coleman-street*, at the end of *Basin-hall-street* by the *Postern* at the upper end of *Bishopsgate-street* and *Leadenhall-street*, at the *Standard* in *Cornhill* at the church in *Fenchurch street*, neer *Cloth-workers Hall* in *Mincing-lane*, at the middle of *Mark-lane*, and at the *Tower-dock*.

On Thursday by the blessing of God it was wholly beat down and extinguished. But so as that Evening it unhappily burst out again a fresh at the *Temple*, by the falling of some sparks (as is supposed) upon a Pile of Wooden buildings; but his Royal Highness who watched there that vvhole night in Person, by the great labours and diligence used, and especially by applying Powder to blow up the Houses about it, before day most happily mastered it.

Divers Strangers, Dutch and French were, during the fire, apprehended, upon suspicion that they contributed mischievously to it, who are all imprisoned, and Informations prepared to make a severe inquisition here upon by my Lord Chief Justice *Keeling*, assisted by some of the Lords of the Privy Council; and some principal Members of the City, notwithstanding which suspicion, the manner of the burning all along in a Train, and so blown forwards in all its way by strong Winds, make us conclude the whole was an effect of an unhappy chance, or to speak better, the heavy hand of God upon us for our sins, shewing us the terror of his Judgement in thus raising the Fire, and immediately after his miraculous and never to be acknowledged Mercy, in putting a stop to it when we were in the last despair, and that all attempts for quenching it however industriously pursued seemed insufficient. His Majesty then sat hourly in Council, and ever since hath continued making rounds about the City in all parts of it where the danger and mischief was greatest, till this morning that he hath sent his Grace the Duke of *Albemarle*, whom he hath called for to assist him in this great occasion, to put his happy and successful hand to the finishing this memorable deliverance.

About the *Tower* the seasonable orders given for plucking down the Houses to secure the Magazines of Powder was more especially successful, that part being up the Wind, notwithstanding which it came almost to the very Gates of it. So as by this early provision the general Stores of War lodged in the *Tower* were entirely saved: And we have further this intimate cause to give God thanks, that the Fire did not happen where

Fig. 2 The front page of the *London Gazette* on September 3-10, 1666, containing information about the fire in London. The original can be found on the official page of the *London Gazette* (public domain).

had to be restored. This peculiarity prevented a restructuring of the land. The result was often the construction of tortuous, twisted, or angled chimneys instead of straight ones. Additionally, a housing tax was created in the 17th century related to the number of fireplaces per house. To avoid the new tax, several flues sometimes connected to a single fireplace, therefore forcing angled pipes.<sup>1</sup>

## The "climbing children"

Such structure and shape of the chimneys meant that chimney sweeping was a complex task to be performed by mechanical methods. According to many house and industry owners, mechanical methods did not achieve a reliable clearance of the soot that adhered to the walls. Even if it did, mechanical methods were often not satisfactory enough for insurance companies, which considered them responsible for some accidental fires.

In contrast, the most effective and preferred method by most owners and companies was the use of children. Children could access the narrowest corners of the chimneys and were able to climb them no matter how narrow they were. At the time, it was not illegal for children to work, and it was not considered immoral. In fact, the parliamentary registry of February 12, 1796 established: "Experience had already shown how much could be done by the industry of children, and the advantages of early employing them in such branches of manufacture as they are capable to execute".<sup>1</sup>

As a result, it was not uncommon for chimney sweeps to take one or more children (of both sexes) as "apprentices." George Ruff of Nottingham described this: "A few months ago I made out a list of 14 men here employing between them 21 boys."<sup>1</sup> Children came mostly from the working classes, some of them being illegitimate children of members of the upper classes.<sup>1</sup>

How many children were employees in a city like London? Although the figures offered by the chimney sweeping masters were around 400 or 500 climbing children in London and Westminster, it was deduced from the information obtained by a parliamentary commission in 1817 that the figure was probably higher (around 2,000).<sup>1</sup> Henry Mayhew (1812-1887), author of *London Labour and the London Poor* (1851), offered slightly lower figures for London in 1841: 619 men and 44 women over the age of 20, and 370 apprentices under the age of 20.<sup>1</sup> Such figures contrast with the statements by Lord Shaftesbury in 1854 on "the four thousand wretched children who were at that time engaged in this disgusting and unnecessary employment."<sup>1</sup>

Climbing children "to be," as well as their parents, signed a legal contract with the masters for the children to start working under the master's guardianship. On many occasions, a brass badge identified the child as an apprentice of a particular teacher.<sup>1</sup> A normal day for a child could start at dawn (as early as 4 AM) and included the cleaning of about 20 or 25 chimneys.<sup>1</sup>

The relationship of masters with their apprentices was not idyllic. Mistreatment by masters was common, and it was sometimes even admitted by the abusers (even in front of the courts) as "essential" to the apprentice training.<sup>1</sup> It should nevertheless be noted that sometimes children preferred this abuse to being sent back to the hunger of their families of origin.<sup>1</sup> Sometimes children gave up climbing to drift into the world of crime.<sup>1</sup> Without exception, children were forced to work against their will. It was not uncommon that if a child stopped while climbing or hesitated to continue climbing the chimney, the master would light a fire to force him or her to continue. This resulted in the phrase "to light a fire under someone." If the child fell into the fire, it was not uncommon for the burns to be severe or even lead to death, sometimes after several days of agony.<sup>1</sup>

The training of children involved hardening some parts of their body. For this, the master vigorously rubbed the elbows and knees of the child until they were skinned. This was done with the strongest brine, like the one found in meat stores. If the child cried, he or she was "convinced" by blows or at best with the promise of half a penny. The master insisted on rubbing until a stubborn callus was formed in these areas of the body.<sup>1</sup> Such a skin hardening process could continue for years. The training also involved forcing the child (once his or her knees and elbows were raw and bleeding) to climb up and to go back down the pipe multiple times through the same chimney, for no other purpose than to induce more friction on the elbows and knees.

Beating and whipping (even causing bleeding) was not a rare practice either, nor was exposure to cold on winter nights, with deaths from hypothermia due to insufficiently warm clothing. The newspaper *Bell's Weekly Messenger*, in its May 12, 1816 edition, published the article "Cruelty to a sweep boy," which described the treatment given to John Hewley, a six-year-old boy, who was admitted to London Hospital as a result of the injuries caused by his master. The case was so scandalous that a judicial investigation was requested. The boy suffered a limp, so he could not easily climb the chimneys. His master and the master's wife asserted in front of a witness that the child belonged to them as an apprentice, and therefore they could do with him as they pleased. The boy presented the signs of a severe blow to the head and gangrene in the limb affected by the limp.<sup>1</sup>

Children recruited for the profession were usually between five and 11 years old because children of these ages were the most physically suitable for sliding up and down the chimneys. Some, however, began when they were four years old.<sup>1</sup> As children in their growth period, their bones were often deformed as a result of the unnatural postures they had to adopt.

It was not uncommon for children to die stacked in the chimneys ([Figure 3](#)), from which they had to be taken out by pulling hard, even at the risk of breaking an arm or leg (if the body was still accessible from below), or by breaking the wall to access the fireplace. In the latter case, the recovered



**Fig. 3** The death of two climbing children stuck in a chimney, as illustrated for the frontispiece of the book *England's Climbing Boys* by Dr. George Phillips in 1824. The illustration was made by George Cruickshank (public domain).

children were usually already dead. In *London Labour and the London Poor*, Henry Mayhew interviewed some adult survivors of the profession, who commented: "I never got to say stuck myself, but a many of them did; yes, and were taken out dead. They were smothered for want of air, and the fright, and a stayin' so long in the flue."<sup>1</sup> Rarely, trapped children were recovered alive after being trapped in the fireplace for hours.<sup>1</sup> Children sometimes died from severe pressure on the spinal marrow or by strangulation from their own clothes twisting around their necks.<sup>1</sup>

Masters theoretically had to facilitate the cleaning of children once a week,<sup>1</sup> although Richard Stansfield of Manchester (a survivor) confessed when he was an adult "I have been fifteen months without being washed except by the rain."<sup>1</sup>

Children were not only exposed to soot as a result of sliding down the chimneys; an entire family often shared a single blanket to sleep—the same blanket that the chimney sweeper used to collect soot during the day.<sup>1</sup>

Needless to say, the mortality rate of climbing children was high, not only from accidents but also from cold, starvation, and poor hygiene. Regarding the latter, these children often suffered from a peculiar type of malignant tumor: scrotal carcinoma.

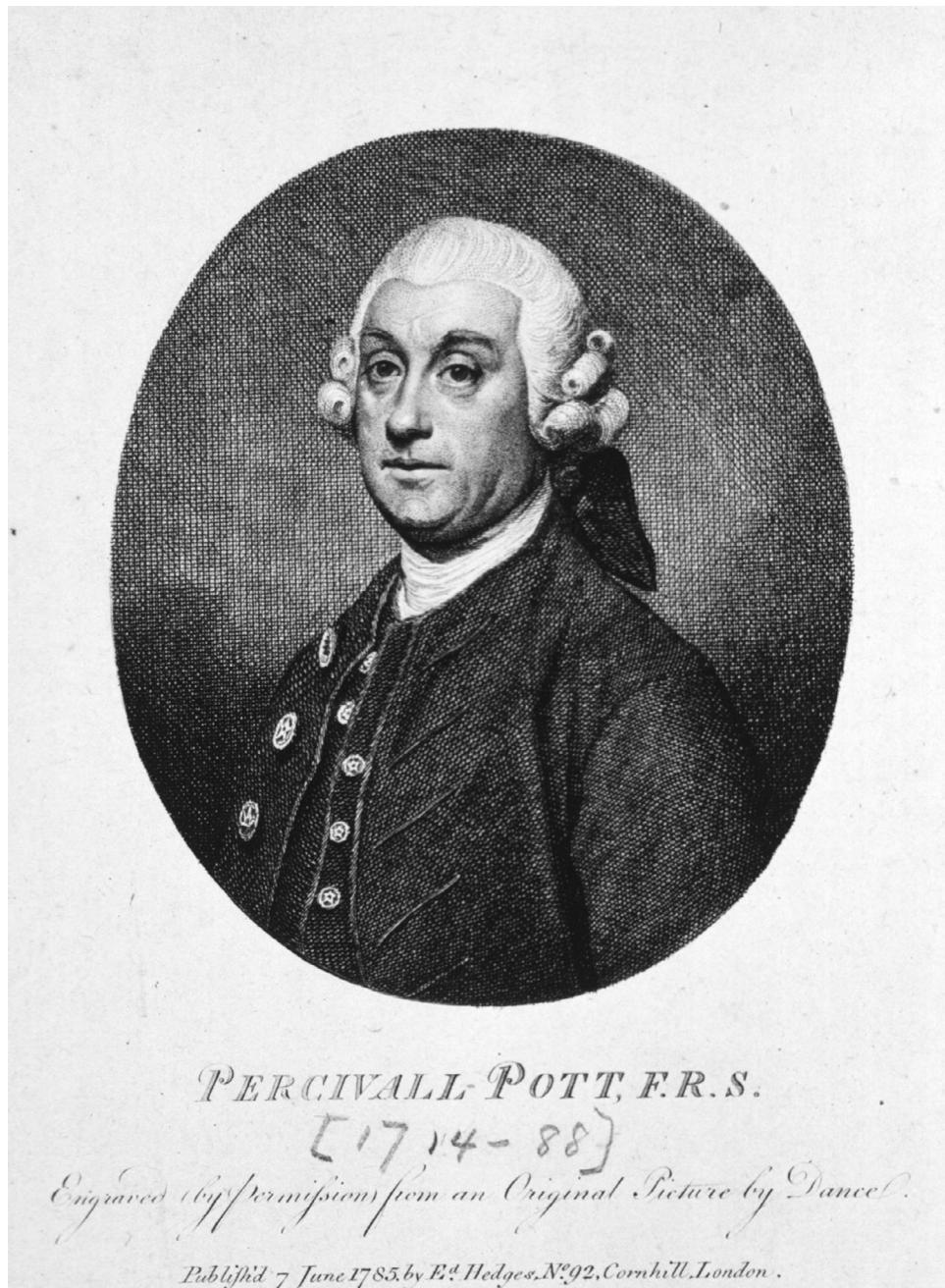
## Sir Percival Pott

Percival Pott (1714-1778) (Figure 4) was born on Threadneedle Street in London, on the present site of the Bank of England. He initially pursued education to become a clergy-

man; however, at the age of 15, he started a seven-year apprenticeship with Edward Nourse (1701-1761), a surgeon at St. Bartholomew's Hospital, becoming his prosector for his lectures. In 1736, Pott was awarded the Grand Diploma by the Court of Examiners of the Barber Surgeons Company, and in 1744–1745, he was appointed as an assistant-surgeon at St. Bartholomew's Hospital (Figure 5), after a previous unsuccessful attempt to obtain a similar post. In 1749, he became full surgeon to the hospital until 1787, when he resigned to be nominated as governor.

In 1756, while riding a horse to visit the Lock Hospital, Pott was thrown by the animal and suffered a compound fracture of the ankle. It is quite probable that this accident and the necessary subsequent rest slowed down his activity and committed him to one of the most prolific careers in writing papers. As a result, several of his observations later became classics and perpetuated his name.

For instance, in his work, *Observations on the nature and consequences of wounds and contusions of the head* (1760), Pott included the first description of what later would be called "Pott's puffy tumor" of the scalp, due to edema accompanying osteomyelitis of the skull. In his work, *Some few general remarks upon fractures and dislocations* (1768), he described what was later known as "Pott's fracture." In his *Remarks on that kind of palsy of the lower limbs, which is frequently found to accompany a curvature of the spine* (1779), he described the pathologic curvature of the spine that would later be known as "Pott's disease," although Pott did not identify its tuberculous-like nature. Pott died in 1788, but he greatly influenced his pupils in the field of surgery.



**Fig. 4** Portrait of Percival Pott from the 18th century. Published by Edward Hedges, London, 1785 (public domain).

### Sir Percival Pott and scrotal carcinoma

Scrotal carcinoma had already been described in the early 18th century; however, there is an older reference (“canker of privities”) in burial records from the 16th century of the Church of England parish St. Botholp Without Aldgate in East London.<sup>2</sup> The parish presented an admixture of the lower economic classes of London, mainly artisans and laborers, during the time of Shakespeare. Contrary to other parishes, this one had a succession of clerks who recorded

vital information about their parishioners, such as parentage, age, occupation, and cause of death. These records were often accompanied by commentaries on the character and mode of life of the individuals. Therefore, such information is highly valuable to understand several social and health-related aspects of those times.

Soot-induced carcinoma of the scrotum is a squamous cell carcinoma. Historically, it was mainly seen in the 18th century due to the negligent exposure to occupational (industrial) and non-occupational (environmental) carcinogens, not



**Fig. 5** The courtyard of St. Bartholomew's Hospital in London by Thomas Hosmer Shepherd, early 19th century (public domain).

only in chimney sweeps but also in workers of distillates of coal, as well as in workers exposed to mineral oil.<sup>3</sup> The common carcinogen in these occupations is polycyclic aromatic hydrocarbons. For instance, creosote, anthracene and naphthalene were distilled from tar from gas works blast furnaces and coke ovens in the 19th century<sup>3</sup>; therefore, scrotal cancer was not exclusive to chimney sweepers.

Scrotal cancer in chimney sweepers seems to have been exclusive to England; no cases were described in continental Europe, in America, or even in Scotland.<sup>4</sup> A detailed historical examination reveals two main factors for this epidemiologic oddity: the long exposure to soot beginning in childhood in England, together with the lack of proper hygiene and clothing protection among these children.

The disease was well known among the chimney sweepers as the “soot-wart” (Figure 6). The latter was often diagnosed as a venereal disease and unsuccessfully treated with mercurials. It was not a rare practice for the chimney sweepers to pare this “wart” themselves with a knife.<sup>5</sup> This procedure was sometimes effective (probably when the lesion was still non-infiltrative), but in most cases, the disease inexorably recurred.

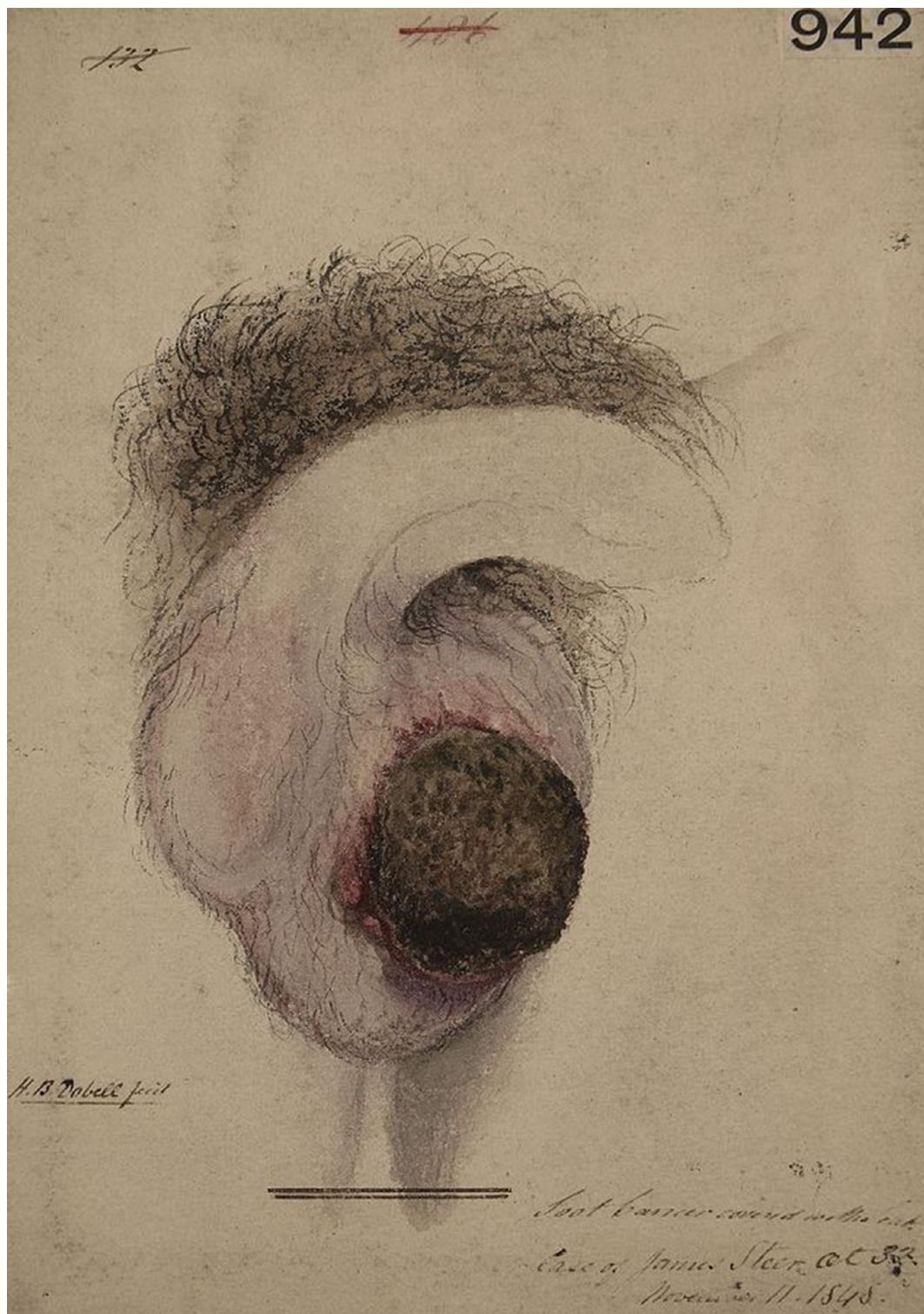
Percival Pott was the first to notice the high prevalence of scrotal malignancy among chimney sweepers: “But there is a disease as peculiar to a certain sort of people (and) which has not at least to my knowledge, been publicly (sic) noticed. I mean the ‘chimney-sweepers’ cancer.”<sup>6</sup> He also identified the typical clinical appearance of the lesion when it first manifested: “It is a disease which always makes its first attack on, and its first appearance in, the inferior part of the

scrotum; where it produces a superficial, painful, ragged, ill-looking sore, with hard and rising edges: the trade call it the soot-wart.”<sup>6</sup>

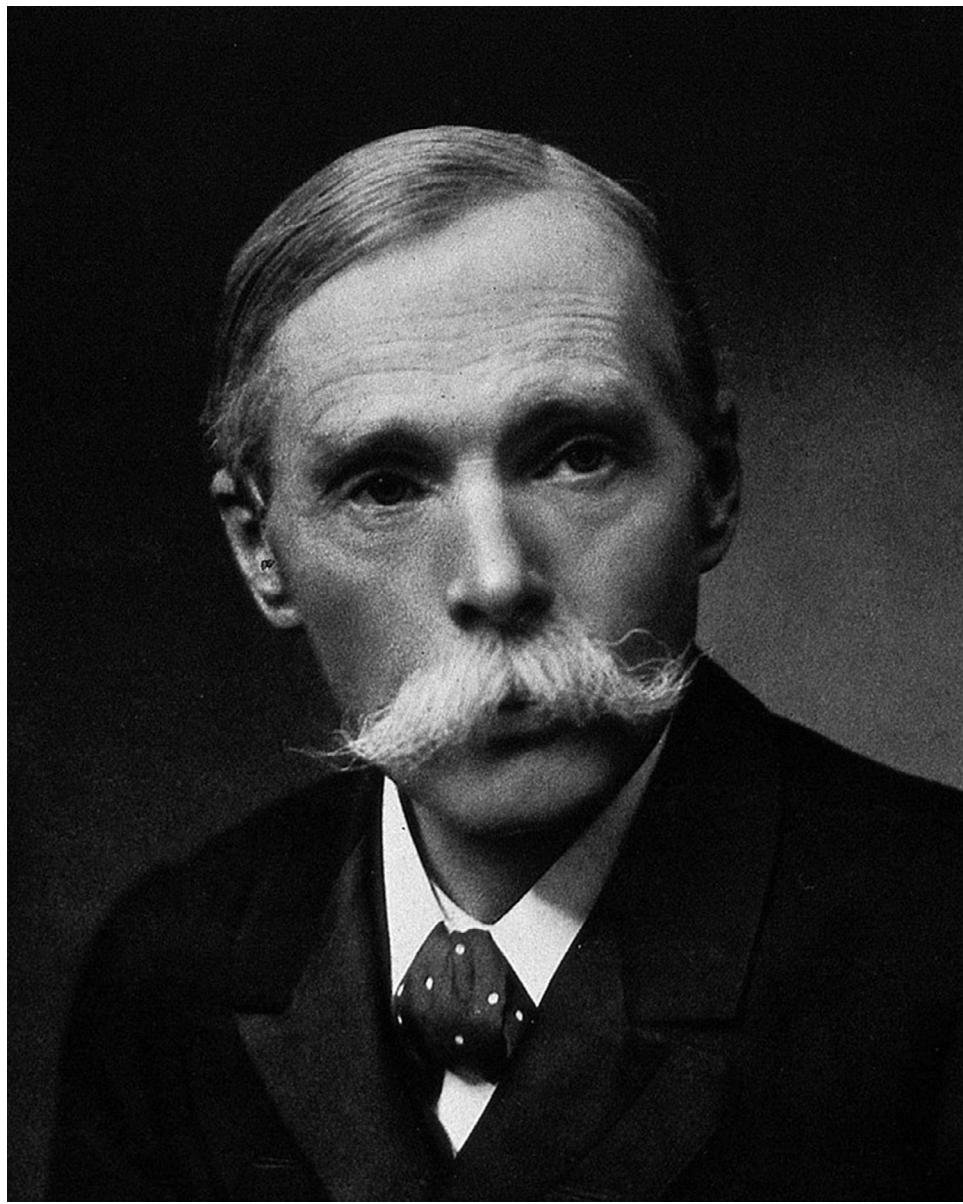
Because children as young as four to five years old were already exposed to soot, the cancer usually presented around or after puberty: “I never saw it under the age of puberty, which is, I suppose, one reason, why it is generally taken, both by patient and surgeon, for venereal, and being treated with mercurials, is thereby soon, and much exasperated.”<sup>6</sup>

He also observed how the progression of the cancer was inexorable: “In no great length of time, it pervades the skin, dartos, and membranes of the scrotum, and seizes the testicle, which it enlarges, hardens, and renders truly and thoroughly distempered.”<sup>6</sup>

Although Pott did not establish a direct relationship between soot and scrotal cancer, his son-in-law, James Earl, did; he mentioned in 1790 that the soot trapped in the scrotal rugae was a feasible cause of the disease.<sup>7</sup> He supported his hypothesis with the case of a gardener who used soot to kill slugs and suffered a similar cancer on his left hand.<sup>7</sup> The occurrence of precursor lesions on areas of the skin other than the scrotum was noted by several authors. Sir James Paget (1814-1889) remarked how numerous these soot warts could be “so thick-set with them that a hundred or more have been counted.”<sup>8</sup> Because the concept of a cumulative effect was not known at the time, the fact that some men who had left the trade of coal years before suffered from scrotal cancer was considered evidence against the carcinogenic nature of soot.<sup>7</sup> In fact, several cases published in the 19th century emphasized that the disease appeared years



**Fig. 6** A watercolor entitled “Chimney sweep’s cancer,” drawn by physician Horace Benge Dobell (1828-1917) while he was a student at St. Bartholomew’s Hospital Medical School. From the Wellcome Collection gallery by the Wellcome Trust, United Kingdom. Reproduced with no changes with permission from Wikimedia Commons.



**Fig. 7** Sir Henry Trentham Butlin (1845-1912). Unknown date and author. Reproduced with no changes with permission from Wikimedia Commons.

after (even over a decade after) the individual had abandoned his professional contact with coal.<sup>9,10</sup> In a paper published in the *British Medical Journal* in 1878, George Lawson suggested a mechanical frictional cause, with the scrotum acting as a causative and pathogenic agent, rather than the soot itself.<sup>11</sup>

In 1873, at the Third Surgical Congress in Berlin, Richard von Volkmann (1830-1889) suggested that the distillation of coal could be a cause of scrotal cancer due to products of the process, such as creosote, anthracene, or naphthalene. Although in 1890, Spencer claimed to have found soot particles in the epidermis of chimney sweepers with scrotal can-

cer,<sup>12</sup> it is the current belief that his finding was a staining artefact.<sup>4</sup>

From 1889 to 1891, Henry Butlin (1845-1912) (Figure 7)—a surgeon and laryngologist from St. Bartholomew's Hospital and president of the Royal College of Surgeons from 1909 to 1911—investigated why the disease was confined to England.<sup>13</sup> He found that the main difference between the continental sweepers and those in England was the protective clothing worn by those on the continent. It was not until the early 20th century that Richard Douglas Passey (1888-1971) demonstrated how to induce skin cancer with soot extract.<sup>14,15</sup> Sir Pott's description had



**Fig. 8** A bust of Lord Anthony Ashley-Cooper (Lord of Shaftesbury) by F. Winter in 1886. Picture made by user Musphot on Wikimedia Commons in 2008. Reproduced with no changes with permission from Wikimedia Commons.

another beneficial effect: the disease was widely described in the English literature of the early part of the 19th century.<sup>16</sup>

During Pott's time, there was no effective cure for the advanced disease. Early precursor (probably *in situ*)

lesions could be successfully removed, but this treatment did not work for advanced lesions. Arsenical paste was suggested by several authors as a therapeutic alternative.<sup>9,17-20</sup>

## The decrease in the incidence of scrotal cancer

It is difficult to establish the real number of children who worked as sweeping apprentices in 18th century England. In 1785, Jonas Hanway (1712-1786) estimated that in London and Westminster there were 150 master-sweeps who employed about 550 climbing children<sup>1</sup>; however, the figures increased quite a bit in one century: The report of 1862 made by the Children's Employment Commission on the violation of the Chimney-Sweeps' Act of 1840 established a number of several thousand children between the ages of five and 14 working as climbing children, many of whom were girls.<sup>1</sup>

Legislation on the use of children as apprentices had been in action since 1788. In the Law Act of that year, regulations were outlined, including the attire that the children should wear. The brass cap badge was worn as part of the uniform, and the master's name was on it as a sign of authority. The Law Act also established that no children under eight should be employed as sweeping apprentices.

In 1803, the Society for Superseding the Necessity of Climbing Boys by Encouraging a New Method of Sweeping Chimneys and for Improving the Condition of Children and Others Employed by Chimney Sweepers was formed.<sup>1</sup> Several illustrious members were part of this society, including the dukes of Bedford and Sutherland and the marquis of Westminster, Earls Morley, Harroway, and Surrey. The society also had a royal patron.

There were several attempts in 1817, 1818, and 1819 to improve the contemporary law on climbing children. Although the attempts successfully moved the law through the House of Commons, they were rejected in the House of Lords.<sup>7</sup> The main handicap in the approval of new and more restrictive laws was the insurance companies' lobby, which claimed that the only way to achieve a safely operable chimney was through a proper cleaning by human hands.

In July of 1834, the Act for the Better Regulation of Chimney Sweepers and their Apprentices and for the Safer Construction of Chimneys and Flues was approved, with very few changes from the 1788 Act.<sup>7</sup> A minimal age of 10 years was required for apprenticeships, and certain improvements in chimney structural requirements were added. This age was increased to 16 in the Act of 1840, with a recommendation that even people younger than 21 years should not work as chimney sweepers.

Despite these Acts, a report by the Children's Employment Commission in 1863 discovered that the number of children employed as chimney sweepers had in fact increased after the Act of 1840.<sup>1</sup> This led to the more restrictive Act of 1864, with conviction for those who broke the law. In their report of 1866, however, the Children's Employment Commission discusses the usual breach of the regulations.

The fact that most encouraged the enforcement of the law was the death of George Brewster in London in 1875 when he was only 12 years old. The child had a tragic story of deprivation. When his mother became ill, his married brother

adopted him, but he was soon passed on to another married brother. It was the latter who gave him as an apprentice to the master chimney sweep William Wyer. This assignment was illegal at the time because George was under the legal age for sweepers. Wyer had a thriving chimney sweeping business, with contracts with three boilers three times a year at Fulburn Hospital in Cambridge.

In February of 1875, George was stuck in a very narrow flue and could not breath properly. The whole wall had to be pulled down to release him, still alive but exhausted. The child died soon after the doctor arrived. The cause of death was suffocation. The post-mortem examination revealed a lot of black powder in the lungs and the windpipe, as well as multiple abrasions on the arms. The coroner's inquest yielded a verdict of manslaughter, and Wyer was sentenced to six months of hard labor in prison.<sup>7</sup>

The difference between George's death and those of previous children was the publicity of the case. Lord Anthony Ashley-Cooper (Lord of Shaftesbury; 1801-1885) (Figure 8)—who was greatly involved with the improvement of English work conditions—wrote a series of letters to *The Times*.<sup>7</sup>

Probably due to the social repercussions of the case of George and Wyer, the Chimney Sweepers Act was approved in 1875.<sup>7</sup> It was more restrictive than previous laws. Among other points, it forbade workers under 21 years of age to voluntarily climb the chimneys, and it prohibited any person from forcing anyone under 21 to climb. Additionally, the police created a register of licenses, as well as periodical inspections.<sup>7</sup>

After this, the cases of scrotal cancer dramatically dropped in England. The number of cases in England and Wales was only 16 from 1910 to 1912 and fell to four by 1923.<sup>21</sup> In the period from 1948 to 1952, there was only one case of scrotal cancer out of 5,000 cases of cancer seen at St. Bartholomew's Hospital.<sup>21</sup>

## Conclusions

Pott's observations on chimney sweeps and scrotal cancer were a landmark milestone in medicine that began our understanding of chemical carcinogenesis besides helping save children from a horrible fate.

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