The London of Robert Boyle

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Although little original is intact at the locations of Boyle's London home, his places of work, of discussion and of worship, a tour and sight of his portraits is not unrewarding.

Boyle's London Residence

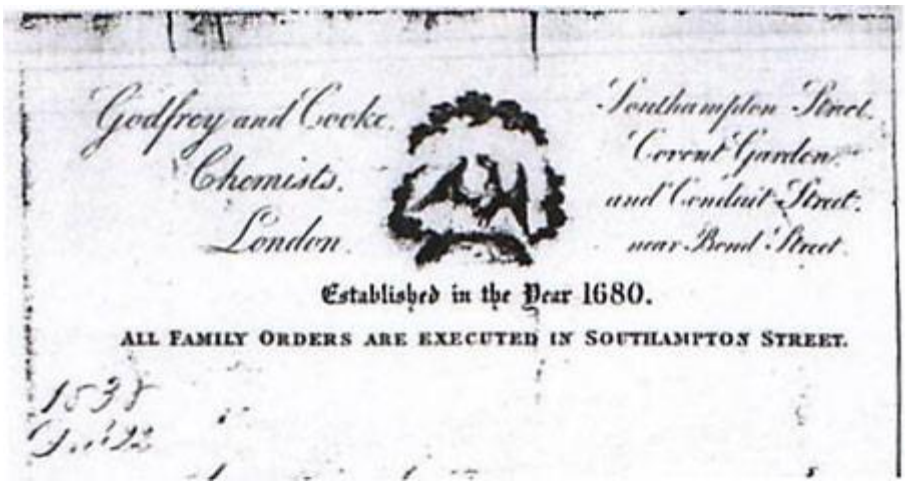
After leaving Oxford in 1668 Robert Boyle lived with his sister, Katherine, Countess of Ranelagh, in Pall Mall.[1] The house, or rather two houses,[2] is now numbered 83. The Boyles lived next door but one to Nell Gwyn, the site of whose house is now numbered 79 and bears a Blue Plaque. Robert Hooke, who had assisted Boyle in his experiments in Oxford on gases leading to the statement of Boyle's Law, was a frequent visitor to Boyle's home. In 1676-77 Hooke busied himself in a 'designe' for altering Lady Ranelagh's house which included a laboratory at the rear of the property for Boyle. These two houses were from 1768 occupied by James Christie, the auctioneer. They were demolished in 1850 prior to the building of new offices for the Board of Ordnance. This later building was pulled down in 1911-12 to make way for the Royal Automobile Club Extension, which remains on the site but is now occupied by J. P. Morgan's bank.

Boyle also had a retreat in the City 'my Messuage or Dwelling House in St Michael Crooked Lane London'. The proceeds of the sale of the lease were left in his will to fund 'The Boyle Lectures'.[1] The church of St Michael Crooked Lane was demolished in 1831 to make way for King William Street.

Phosphorus and 'Boyle's Laboratory'

Luminous phenomena were of great interest in the early days of the Royal Society. Robert Boyle was one of the outstanding experimentalists in this topic in the seventeenth century.[3] The first commercial manufacture of phosphorus was carried out at a laboratory in Maiden Lane (Covent Garden), known as the 'Golden Phoenix'. This laboratory has in the past commonly been assumed to be Boyle's.[4-10] It was however set up by Boyle's 'operator' i.e. technician, Ambrose Godfrey Hanckwitz [11] in 1707, despite the date 1680, carved under the golden Phoenix which stood on the front of the building. Hanckwitz obtained two building leases on two adjoining plots of Bedford Ground in 1706, [12a]one on the west side of Southampton Street (No. 31) and the other on the south side of Maiden Lane (No. 3). In Southampton Street he built himself a house and on the other plot, a large laboratory.

The date 1680 refers to the discovery by Boyle, assisted by Hanckwitz, of a method to give high yields of elemental phosphorus, a landmark event in Hanckwitz's career. With the passage of time this would appear to have been interpreted as the date of the foundation of the business and, as such, appeared on the bill heads (see Fig. 1) and as a trademark on medical devices of Godfrey and Cooke in the nineteenth century.



1. Bill head of Godfrey and Cooke (dated 1830) [from the author's private collection]

Three illustrations (one is shown in Fig. 2), traditionally regarded as representing the interior of the 'Golden Phoenix' are shown by Ince[5] and in Maddison's biography of Boyle,[1] to which Pilcher[10] added a fourth engraving, published in 1769.

2. View of the interior, showing the spring beam [from J. Ince, 'The Old Firm of Godfrey', *Pharm. J.*, 4th series, **2** (1896), 167]

After leaving Boyle's service, sometime after 1683, Hanckwitz set up in business as a manufacturing, analytical and consulting chemist. He had a virtual monopoly in the making of phosphorus[13] because of his mastery of the technical requirements of the process, and was proud of being able to produce seven to eight ounces at one distillation.[14]

Ambrose Godfrey Hanckwitz normally used his first surname only but in formal documents the name always appears as Godfrey-Hanckwitz; his sons, Ambrose and Boyle,[15] dropped the name Hanckwitz and adopted Godfrey as sole surname. The business passed to a nephew, Ambrose Godfrey, son of Boyle Godfrey, who took as partner, Gomand Cooke, around 1795. The Southampton Street house was then made into a shop, surmounted by a stone phoenix and below that the date, 1680. The business became more pharmaceutical in character but remained on the site until 1862, when it moved to the West End.

The old laboratory was ultimately pulled down to provide the site for the Roman Catholic Church of Corpus Christi, which opened in 1874.[12b] This church is well worth a visit in its own right. However, if you have a good imagination you can reverse the transmutation, described below by Ince, and thus additionally visit 'Godfrey's Laboratory or The Golden Phoenix' with the aid of his description of the old laboratory,[5,16] as follows:

'The church porch replaces the former doorway, behind and to the left and the right of which stood the ancient furnaces, that had gradually fallen into decay; the font is placed where the carmine boiler stood; the high altar and choir occupy the site of the room in which carmine was precipitated, and cochineal was stored, the pulpit marks the site of the drying chamber; a large iron pestle was attached to a wooden spring beam that stretched lengthwise in the space that is now the aisle; beyond this stood stills, condensing vats, and a large screw press.'

Ince wrote in 1874,[16] '… few of the congregation who listened to the Archbishop of WESTMINSTER at the Consecration Service were aware of the strange transmutation that had taken place. The Phenix (*sic*) is left undisturbed in Southampton Street, where it has ample leisure to muse over the mutability of human things'. Its leisure only lasted to 1893, the year when No. 31 was demolished.

It is however quite possible that Boyle had a laboratory in the Covent Garden area in addition to that in Pall Mall. This is construed from Boyle's recording of the transport of phosphorus from a site well away from Pall Mall, given in *Icy Noctiluca* (1681/2),[17,18a] as follows:

'The same laborant, who was very helpful to me varying the preparation of the phosphorus, had a worse adventure not long after [earlier his hair had caught fire in an experiment with gunpowder and phosphorus], for bringing me some newly distilled grains of noctiluca, covered with the shining water, that came over with it, he unluckily broke the glass in his pocket, whereupon the heat of his body, increased by the motion his long walk had put into it, did so excite the matter, that was fallen out of the broken phial, that it burned two or three great holes in his breeches, before he could come to me and relate his misfortune, the recent effects of which I could not look upon without some wonder as well as smiles.'

London Spas and Mineral Water Analyses

Boyle made numerous contributions to the analysis of solutions,[19] including the first quantitative analysis of iron in Tunbridge Wells water.[20] In his text *Short Memoirs for the Experimental History of Mineral Waters* (1683/4) he refers several times to tests on well waters in London and in its surrounds. These included wells at Epsom, Acton, Dulledge (*sic*), Barnet, Hamstead (*sic*) and three wells in Islington, including that at the Musick House, Mr. Sadler's Well.

Homes of the Royal Society, the Chemical Society and of the Royal Society of Chemistry

Robert Boyle was a founder Fellow[21] and frequent attendant at meetings of the Royal Society. The first home of the Royal Society, 1660-1720, was in the premises of Gresham College.[22] This college, founded in 1597, was housed in Sir Thomas Gresham's former mansion (Bishopsgate) on the site now occupied by the Nat West Tower. The college moved in 1842 to New Gresham College (Gresham Street) and again in 1991 to their present site, Barnard's Inn Hall (off Holborn). The Royal Society moved from Gresham College[23] to Crane Court (Fleet Street) in 1710, to Somerset House (Strand) in 1790, to Burlington House (Piccadilly) in 1857. The first mansion on the Burlington house site was first occupied in 1667.[24] Over the years, and many owners, it was remodelled several times. In 1854 it came into Government hands and was used to accommodate the Societies they had

moved out from Somerset House. The main house and other buildings were drastically remodelled 1867-73. The Chemical Society moved into old Burlington House in 1857 and again in 1874 to the new wing portion, at the right hand side of the gateway entrance, fronting Piccadilly. The Royal Society moved to their present home, 6 Carlton House Terrace (off Pall Mall) in 1967. The space in Burlington House right wing thus vacated by the Royal Society is now the home of the Royal Society of Chemistry.

Robert Boyle would have been familiar via family visits with the original Burlington House, as it was from 1667 the London seat of his elder brother, Richard (1st Earl of Burlington).

Iconography

Two representations of Robert Boyle exist on awards of the Analytical Division of the Royal Society of Chemistry, namely on the Robert Boyle Gold Medal, [25] presented biennially to distinguished overseas analytical chemists, and on the Robert Boyle Gold Pin. The latter is presented to recipients of the Boyle Medal and also to those who receive the SAC Gold medal, given biennially to distinguished analytical chemists resident in Great Britain and Northern Ireland and in the Republic of Ireland. The same pin is given to both to stress the similarity of award criteria apart from the residence stipulations. The image on the Boyle Medal is based on the engraving by B. Baron of the portrait by J. Kerseboom,[25] that on the gold pin is a miniature copy of the brass cast by C. R. Berch, now in the British Museum, of the ivory medallion by J. Cavalier.

Several oil paintings of Boyle are available to view in London.[26] An original by J. Kerseboom showing Boyle in court dress hangs in the Council Room of the Royal Society. They also have a portrait attributed to J. Riley, and both may be viewed by scholars by prior arrangement. The National Portrait Gallery (Charing Cross Road) have two early Kerseboom style portraits, one of which is on show. The Wellcome Historical Medical Museum has a Kerseboom style portrait in oils. A portrait of Boyle, in dressing gown and velvet cap, by J. Richardson, which bears a close likeness to his sister, Katherine, hangs in the Council Room of the Royal Society of Chemistry along with a Wedgewood and Bentley (circa 1775) blue jasper white relief portrait of Boyle. Both are available to view provided meetings are not in progress.

The Resting Place

Robert Boyle died on 30 December 1691, seven days after his sister, 'the grief for her death put him in convulsion fits which carried him off.' [27] Brother and sister were buried in the chancel of St. Martin's-in-the-Fields. However, when the old church was demolished in 1721, prior to the building of the present church, no systematic record was made of the dispersal of the remains of the bodies buried there. Tilden [28] looked into the matter carefully in 1921 and was unable to locate the last resting place of the 'Father of Chemistry' – sometimes alleged to be on Boyle's tomb, although, as explained above, regrettably this does not exist.

Acknowledgements

The author wishes to record his sincere thanks to the Science Library for their professionalism, cheerful and welcoming approach.

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