Sir Arthur Church and his Links to William Morris and the Arts & Crafts Movement

Lorna Parker

Arthur Herbert Church (Figure 1) was born in London in 1834 and attended a preparatory school in Brighton, followed by King's College, London, and a further private school in Brighton where he showed particular interest in both art and chemistry. From 1851 to 1856, Church studied and carried out research at the Royal College of Chemistry in Oxford Street, London, where he was assistant in the private laboratory of Professor A.W. Hofman (1818–1891). Here he met many brilliant scientists, including Michael Faraday (1791–1867), and John Tyndall (1820–1893), one of the first to recognize the effects of ‘greenhouse’ gases on the Earth’s climate.

Church was also by now, however, an accomplished artist, and seriously tempted to adopt the career of a painter.1 However, his strength in science meant that from 1855 to 1859 he studied natural science at Lincoln College, Oxford, becoming, in 1856, research assistant to the Professor of Chemistry, Sir Benjamin Collins Brodie (1783–1862). With his love of both chemical research and painting, Arthur Church was set for a long and distinguished career in which he forged links between the arts and sciences by improving paints, pigments and glazes. He also wrote extensively in agronomy, applied chemistry and laboratory science, economic botany and nutrition, and history of science, as well as the fields discussed in more detail here. In 1894, he published a biography of the potter, Josiah Wedgewood.2

Current interest in Arthur Church lies in his influence in the growing
Figure 1: Arthur Herbert Church, 1899.
Frontispiece to: A.H. Church, Records and Recollections (1899). See note 1, infra.
Arts and Crafts movement of the latter nineteenth century. He next based himself in the Cotswolds, where, from 1863 to 1879, he was Professor of Chemistry at the Royal Agricultural College, Cirencester; but he continued painting to a high level in his spare time and exhibited at the Royal Academy Summer Exhibition in 1854, 1866, 1867 and 1870. His research into the chemistry of painting grounds, media and varnishes led to his being consulted by local Cotswold artisans, including William Morris, and the potter, Henry Doulton. Whilst at the Royal Agricultural College, Church discovered turacin, a colourful pigment containing 7% copper found in the feathers of birds. He also became an expert on gems and precious stones, and described the mineral churchite (hydrated yttrium phosphate, YPO$_4$. 2H$_2$O) which is now named after him, and wrote the first of a number of editions of Colour: An Elementary Manual for Students.$^3$

In 1869, Church gave a course of public lectures in the Corn Hall, Cirencester, on 'Art in Common Life'. These were entitled: 'What is Ornament?', 'Art in Manufacture', and 'Art in the House', and illustrated the ways in which Church strove to apply his scientific research to popular art and artisans. His one recorded consultation with William Morris was based on a problem which occurred while printing Morris's epic, The Works of Geoffrey Chaucer, in 1896.$^4$ Apparently, the paper used was being discoloured by some kind of discharge from the ink, and Church suggested a remedy in the form of a chemical washing. Although this solution was later rejected by Morris, in favour simply of bleaching the sheets in the sun, at the time Morris referred to Church's suggested test as 'very important', and Burne-Jones went specially to interview Church about it.$^5$

In return for advising Morris, it seems that Church was able to call on him to design some stained glass for the chapel at the Royal Agricultural College. (Figure 2) This was to be Arthur Church's gift to the College where he was Professor for sixteen years, and can be seen today in the Signs of the Zodiac tracery of the chapel's east window.$^6$ The window is typical of Morris's early stained glass in its richness yet subtlety of colour, and its main features standing out brightly in a framework of clear glass. It was actually designed in 1865 by Philip Webb, and at its heart is the 'Flaming Star', one of Webb's favourite motifs. (Figure 3) The relevant entry in
In his autobiography, Church comments that the William Morris stained glass in the upper tracery East window is 'somewhat marred by the crude colours of more recent glass inserted in a triangular window above it'.

Today, that effect is arguably compounded by a large memorial window to an ex-Principal, Robert Boutflour, which has been inserted below it. This colourful window depicts the Latin 'Benedicite Omnia Opera', in which all of God's creations are called upon to worship him. It was designed and made by Paul Quail in 1963, but its placement directly below the Morris stained glass is somewhat unfortunate. The College chapel also contains a stone screen between ante-chapel and chapel in which the quarries illustrating agriculturally important plant types were designed by Arthur Church.

Throughout his life Arthur Church was a great collector of old English...
pottery, furniture and paintings. Along with his interest in chemistry as applied to archaeology, this led to his acting, from 1869 to 1879, as curator at the Corinium Museum, Cirencester. Here, he carried out substantial investigations into antique glass, Roman coins and other metal work, and Oriental and English porcelains. In 1867, he published a guidebook to the museum which ran to ten editions.9

In 1879, Church moved to Kew where he had a house specially built for himself and his wife, which he filled with his valuable pictures, Oriental bronzes, porcelain, antique embroideries, English pottery, and a unique collection of Japanese sword-guards. In the same year he took up post as Professor of Chemistry at the Royal Academy and remained there for thirty-two years, retiring four years before his death in 1915. This appointment, of a Professor of Chemistry at an Academy of Art, was unique
in Europe and during his tenure, Church delivered lectures to students which covered much new ground.

During this time he studied many chemical problems involved in painting, and carried out a large number of investigations which led to his book, *The Chemistry of Paints and Painting*, which ran to four editions.\(^\text{10}\) In his latter years, Church devoted much attention to the restoration of frescoes in the House of Lords, and to the prevention of decay and the reparation of stone buildings injured by acid smoke, including Westminster Abbey and St. Paul's Cathedral. A further book was a handbook of precious stones, first published in 1882 which reflected his many important contributions to mineralogical chemistry, his thorough knowledge of the minerals of Cornwall, and his excellent personal collection of precious stones.\(^\text{11}\) In 1898 he was appointed President of the Mineralogical Society.

In November 1909, Church was made a Knight Commander of the Victorian Order, in recognition of his part in effectively promoting the science behind the Arts and Crafts movement. He died in May 1915, aged 81, and in 1917 his widow, Lady Church, had a collection of his obituaries privately printed and circulated.\(^\text{12}\) These came from national and local newspapers, archaeological, Royal Society and other scientific journals, and addresses of private individuals. All universally praised the knowledge and influence of a pioneering chemist, archaeologist and art collector who applied modern scientific methods to solving the technical problems of the past.

**NOTES**


5 Kelvin, ibid., p. 300

6 The Royal Agricultural College chapel is open to the public, 9am–5pm, Monday to Friday. All visitors should first register at the Porter’s Lodge adjacent to the chapel.


8 Church, 1899, op. cit., p. 22.


11 Arthur Church, Precious Stones considered in their scientific and artistic relations. London: Chapman & Hall, 1891, 164 pp.