

ALFRED BROTHERS (1826-1912) AND HIS ROLE IN PHOTOGRAPHIC PUBLISHING

by Steven F. Joseph

The complex relationship between photography and publishing in the nineteenth century is beginning to receive the attention it deserves. Competent monographs on some of the more important figures to bestride the two activities have been written, and the first national bibliographies of the Victorian photographically illustrated book have recently appeared in print.¹ It is therefore appropriate to try and apply a bibliographical methodology to the task of examining the life and works of an early photographer, using published images as raw data for analysis, when these images constitute a significant corpus of the photographer's creative work. In the case of Alfred Brothers (figure 1), who was active in this field throughout a long career, his unusual versatility both as photographer and publisher as well as printer and writer demonstrates a practical appreciation of the possibilities of photographic publishing as the technology developed.

Alfred Brothers was born in Sheerness, Kent, on 2 January 1826, the son of John Brothers (1786-1834), a local shopkeeper, at that time working as an apothecary.² After John Brothers' death in 1834 his widow moved her family of 10 children to Maidstone where, at the age of 13, Alfred Brothers was apprenticed to a bookseller called Smith. He devoted much of his three years there to self-improvement, showing a predilection for the sciences.³ It was during his apprenticeship that Brothers first came into contact with photography, in the rudimentary form of ready sensitized photogenic drawing paper, which was retailed by Smith in packets. As Brothers himself recalled: 'I had read of Talbot's experiments and this caused me to purchase a

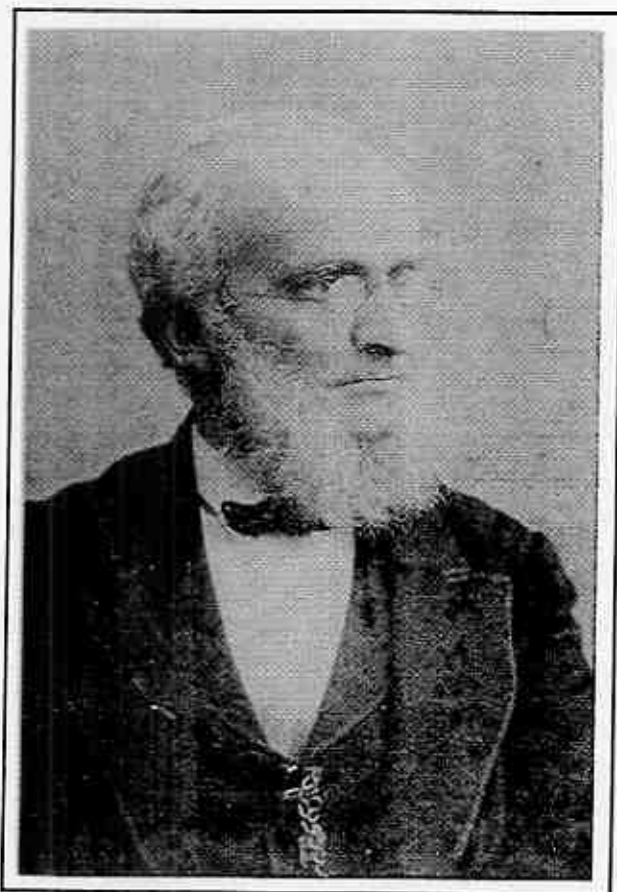


Figure 1. Alfred Brothers in old age. Anonymous albumen print, 153 x 104 mm. (Courtesy of Mr. H. N. Chamberlaine-Brothers.)

small quantity of nitrate of silver . . . and I printed lace, leaves of flowers etc.'

Brothers' career evolved predictably for an ambitious young man bent on self improvement in Victorian England. He became a bookseller's clerk in Maidstone, and, in 1848, clerk to a firm of solicitors. Meanwhile, he was pursuing his scientific interests, and in July 1846 was elected to the Committee of the Mechanics Institute in Maidstone. His pursuit of self-help led Brothers to take up draughtsmanship, and he proved talented enough to produce a series of views of Maidstone and its neighbourhood in 1848 which were lithographed.

In 1853 Alfred Brothers was appointed secretary of the Maidstone branch of the Anchor Insurance Company. In June of the same year he married Luisa Buck (died 1877). In 1855 came the turning point of his career, which Brothers remembered in the following terms:

I was requested to take up my residence in Manchester as Secretary to the existing local Board of Directors. The Office was over the Exchange Arcade. The business of the company was slight and the office hours from 10 to 4 gave me plenty of leisure time. My connection with the company terminated in the Spring of 1856. [This] leisure time . . . enabled me to interest myself in practising photography.

His interest was pricked on seeing a photograph by Lachlan McLachlan (most probably a portrait) in an optician's window. He subsequently bought a quarter plate camera from the optician, called Carsartelli, and for a short period might have worked as McLachlan's operator. Certainly when McLachlan left for London and the Crystal Palace on commission from Negretti and Zambra, he ceded the studio to Brothers. But the legal basis of this transaction remains unclear, for when McLachlan returned to Manchester early in 1856, he was eventually able to take his studio over again, after repeated negotiations for a partnership with Brothers had failed.⁶

The onset of Brothers' career coincided with the creation of the Manchester Photographic Society. At its first exhibition, held in the Autumn of 1856, Brothers' modest exhibits comprised a case of collodion positive portraits, as well as individual portraits from collodion negatives, including ones of J. Harland and S. Cottam, both fellow members of the MPS. More significantly, the Manchester Photographic Society offered Brothers a first taste of the exigencies and vagaries of photographic publishing.

As recorded in the MPS Minute Book 1855-56,⁷ the Council of the Manchester Photographic Society decided at its meeting of 17 August 1855 to proceed with the publication of a photographically illustrated part work. 'The letterpress of the publication to be a description of the plates, or amplified according to the capabilities of the subject, also notices of the plans used in obtaining the picture . . .' The nature of the text was further refined at the meeting of the Council of 30 August 1855, when 'Mr. Dancer proposed that after the printed description of each view in the publication, a description should be appended

of the process used, time of exposure and any other particulars of interest.'

Publication of the first number was delayed because a certain Mr. Sandford of London proved incapable of supplying the positives he had offered to print, and this task had to be confided to Thomas Sutton and Louis-Désiré Blanquart-Evrard at their establishment in St. Brelade's Bay, Jersey. They delivered 650 prints each of the four selected images, and the *Photographic Illustrations by Members of the Manchester Photographic Society* was finally issued in January 1856.⁸

Although the Rev. W. J. Read in his preface to the first number had stated that ' . . . it is hoped that no fewer than four [numbers] will be issued during the year', the Chairman of the MPS, at the Annual Meeting held on 7 August 1856, was able to announce no further developments. An appeal to the members, made the previous January, 'to take negatives at their earliest convenience' had fallen on deaf ears.

It must have been with some gratitude therefore that the Council accepted Alfred Brothers' offer to print photographs for a new number of the *Illustrations* first conveyed by the Secretary, Cottam, on 5 November 1856. By the General Meeting of 4 December 1856 it was reported that 'the Council had decided upon two of the pictures for the forthcoming Number of *Photographic Illustrations* — one to be a portrait of Mr. Wm. Fairbairn, CE, FRS, a Vice-President of the Society, and the other a copy of an oil painting by F. Wyburd 'The Kiosk-Lalla Rookh'. Two further prints were selected — a calotype view of the entrance porch of Haddon Hall by J. Compton and a wax paper view of Conway Castle by James Mudd — but these were subsequently withdrawn by their authors due to fading.

When the second (and final) number of the *Photographic Illustrations* appeared in March 1857, priced at 6s for the public or 2s 6d to members of the MPS,⁹ it contained the two images by Brothers, each with an accompanying page of text. Whereas the negative of 'The Kiosk' is recorded as having been taken on 30 September 1856, thus predating Brothers' offer, the portrait of William Fairbairn (figure 2) is dated 23 December 1856, suggesting that Brothers executed the commission after the subject matter had already been chosen.

By any standards the photograph of Fairbairn is striking, and testifies to the photographer's abilities in portraiture. When a framed print was exhibited at the MPS meeting of 7 January 1857, Cottam told his audience that: 'the portrait is an exceedingly characteristic one of our respected fellow citizen, and is a good specimen of photography, and being untouched, will bear comparison with many of more ambitious pretensions.'

Unfaded copies in the MPS collection in the Manchester Central Library demonstrate not only Brothers' skill in composition but show that he had already acquired a mastery of printing techniques, especially the need for thorough washing of prints after fixing. The accompanying photographic memoranda give us a valuable insight into the process of creation. The portrait was taken

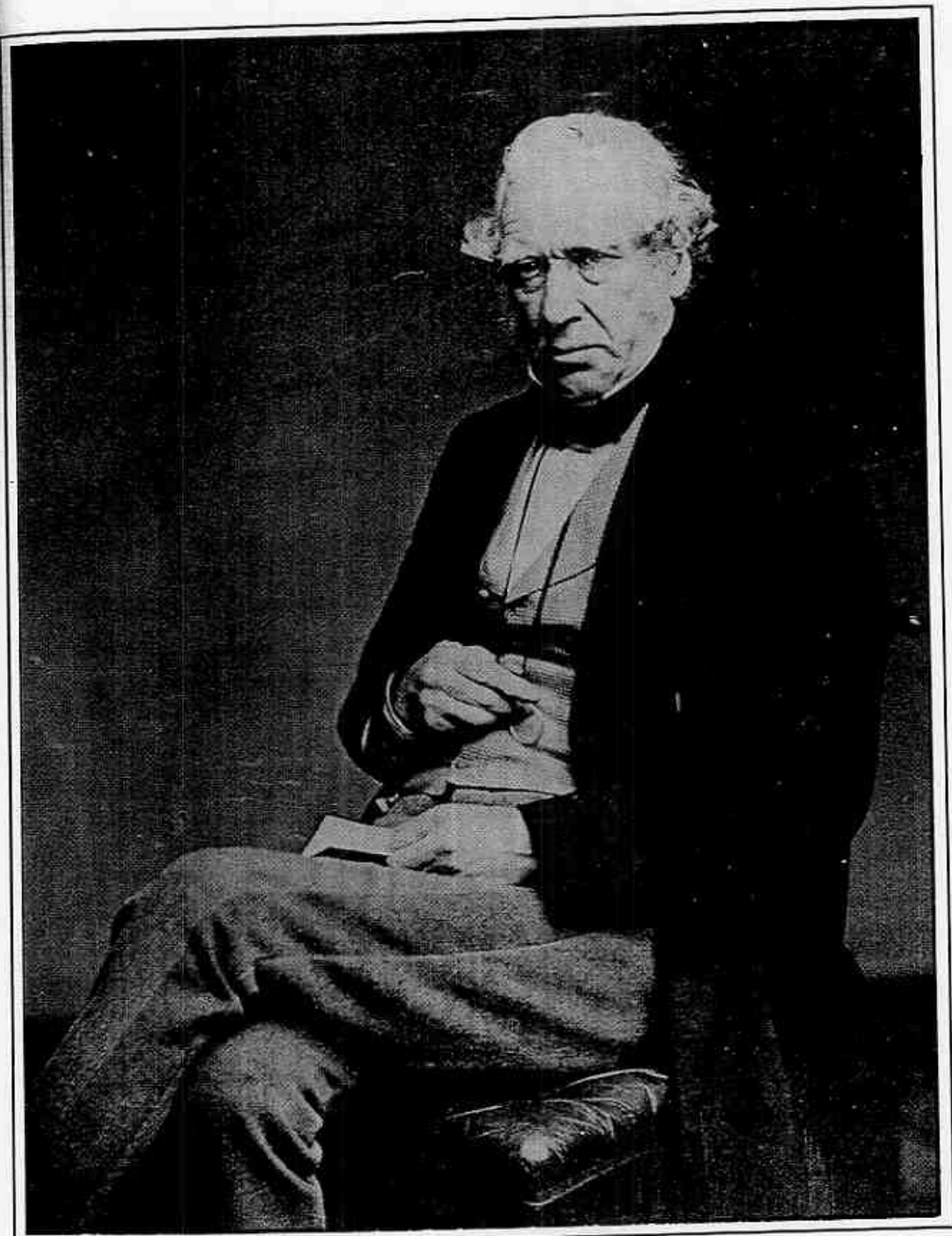


Figure 2. William Fairbairn, CE, FRS, FGS, by Alfred Brothers. Albumen print from collodium negative, 223 x 175 mm on mount with lithographed caption. (Courtesy of City of Manchester Cultural Services.)

at 1.30 p.m. in variable light on 23 December 1856, with a 4 in. compound lens by Ross with the diaphragm at full aperture. Exposure was 1½ minutes, and the collodion negative was developed with proto-sulphate of iron and deepened with bi-chloride of mercury and ammonia. The positive was 'printed, toned, and fixed with chloride of gold and hypo-sulphite of soda, washed forty-eight hours in repeated changes of water, and mounted with gelatine'.

The portrait was also shown at the Exhibition of Art Treasures held in Manchester in 1857, of which Fairbairn was Chairman of the Executive Committee.⁸ This Exhibition was also important for Brothers' publishing activities, since it enabled him to honour another commission. At the opening ceremony on 5 May, he managed to obtain two pictures of Queen Victoria and her entourage on the platform, despite problems caused by the surging crowd. At least one of these early examples of photo-reportage appeared, bearing the publisher's printed credit of Thomas Agnew & Sons. It was dated 6 July 1857, thereby indicating a two month gestation period during which Brothers would have had time to fill his order, using copy negatives if required.⁹

Brothers, in his autobiography, recalls that he enlarged his business in 1859 when he acquired (with the help of a £500 loan) the premises at 14 St. Ann's Square which had previously housed James Foard, the daguerreotypist who had apparently begun as Beard's manager in Liverpool before taking over the latter's interests in Manchester as well as Liverpool on his bankruptcy in 1850.¹⁰ However, directories record Brothers' permanent occupancy of the studio from 1858 until 1895.¹¹ Be that as it may, Brothers quickly established himself as one of the more prominent portraitists in Manchester. He recalled: 'The business when I first commenced chiefly consisted of glass positive portraits, mounted in leather cases. At the same time I introduced portraits and copies on various kinds of paper.'

This tallies with the items he listed on an invoice dated September 1859,¹² and which confirm that he was able to supply reproduction work: 'Oil Paintings, Engravings, Sculpture, Daguerreotypes, and other works of Art, copied on glass or paper. Every description of portraits on paper, or glass, plain or coloured'. Brothers also claimed to have taken the first carte-de-visite portraits in Manchester at the request of two military officers who had learnt of the technique in Paris, and the primitive composition of two surviving portraits (figure 3) would seem to bear him out.

Another of Brothers' ventures into photographic publishing required considerable skills in draughtsmanship and public relations, as well as the more mundane abilities of a good portrait photographer. In September 1861, the British Association for the Advancement of Science was due to hold its 31st meeting in Manchester, under the presidency of William Fairbairn. Brothers turned this acquaintance to good advantage, and an early approach resulted in Brothers producing a composite group of the 22 officers of the Association in an interior representing the drawing room of Fairbairn's town house in Ardwick.¹³



Figure 3. Carte-de-visite portrait by Alfred Brothers. Albumen print, 57 × 40 mm, with photographer's annotations dated October 1884. (Courtesy of Mr. H. N. Chamberlain-Brothers.)

In his observations on combination printing, Brothers wrote:

The desire may be to produce a picture of twenty figures in a room, which also is to be represented with its furniture and decoration, and with the figures occupied so as to look natural. First of all we must design the picture, and then carefully photograph the figures, singly or in groups, to fit the design; and the lighting must be the same as adopted in the sketch; also the figures must be their true relative sizes. The room also must be photographed, and an enlarged negative made to be printed as a background for the figures . . . A print of each figure must now be arranged and mounted in a position it is to occupy in the finished picture, and this is to be used as a guide in printing, which in a case of this kind will require the aid of an artist to harmonise the whole.¹⁴

The great interest which composite montages aroused, as a conscious attempt to impose an orthodox syntax on photographic composition, must surely have tempted the ambitious young businessman in Brothers to try his hand at this time-consuming genre.¹⁵ In this case 40 separate

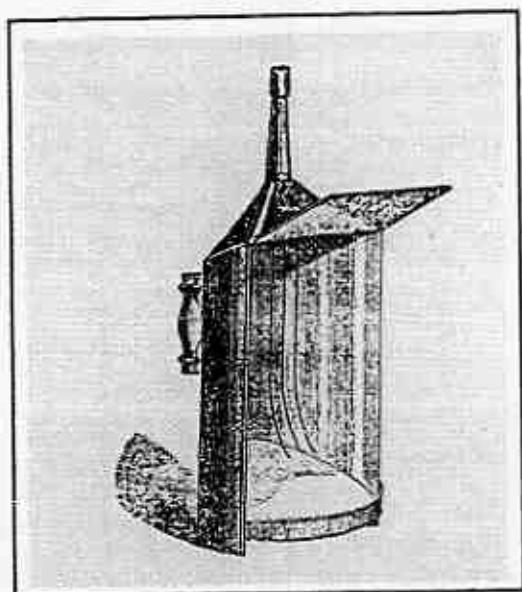


Figure 4. Lamp invented by Alfred Brothers for holding magnesium ribbon during combustion. Woodcut illustration from *Bulletin Belge de la Photographie*, 1865.

printings were needed. In the event, the result was an aesthetic as well as a commercial success. The original print of the Members of the British Association, measuring 2ft 9in. x 1ft 7½in., was presented to Fairbairn. A copy negative was made and a prospectus released jointly by Brothers and the London lithographic firm of Day & Son, soliciting subscriptions for copies 15½in. x 9½in. mounted on plate paper at one guinea each.

The 1860s marked the apogee of Brothers' career. In 1860 Brothers was elected to membership of the Manchester Literary and Philosophical Society, subsequently holding the presidency, at different times, of all three sections (photographic, microscopical and natural history, and physical and mathematical). In 1864 Brothers made a series of demonstrations with magnesium lighting which brought him wider recognition. These experiments began on 22 February with a portrait of Henry Roscoe, followed on 6 May by a portrait of Michael Faraday before the Royal Institution. Brothers also took a stereoscopic picture inside the Blue John mine in Derbyshire, by his own calculations early the same year, and constructed a lamp to contain the magnesium ribbon during exposure (figure 4). His reason for inventing the apparatus was given as follows:

In the form of wire the combustion was somewhat uncertain and it was found by the writer that by passing the wire between rollers, or when it was flattened into a thin narrow ribbon, the combustion was much more regular and rapid, and in this form the metal has since been generally used.¹⁶

Copies of Brothers' most successful demonstration prints of photography by magnesium lighting were

immediately offered for sale in the universally popular *carte-de-visite* format (figure 5), but his next project in photographic publishing was a major departure. As Brothers described in his memoir: 'In 1866 I photographed for the late Rev. Henry Green of Knutsford *Whitney's Emblems*. The reproduction was by photo-litho and was published by subscription. This led me to propose the reproduction of old books, and Mr. Green consented to edit the series.'

Photomechanical printing processes had already been applied successfully to the reproduction of line drawings and manuscripts, most notably at the Ordnance Survey Office in Southampton. Brothers saw the potential for the facsimile reprint of rare plate books. In September 1868, the Holbein Society issued a prospectus proposing 'to issue a series of Photo-lithographic reprints of such works . . . and by this means some of the curiosities of book-craft will be rendered accessible.'

A first list of subscribers, issued the following year, contained a total of 211 names, 84 of whom, living in or around Manchester, constituted a virtual Who's Who of local worthies.¹⁷ The President was Sir William Stirling-Maxwell (1818-1878), who, before he succeeded his uncle as ninth baronet in 1865, had been the author of *Annals of the Artists of Spain* (1848), the first book on an art-historical theme to be illustrated with photographs¹⁸ and was thus well qualified to lend his name to a venture which aimed at publishing facsimiles of old plate books by photographic means. The Secretary of the Holbein Society was James Croston (1830-93), a Manchester memorialist and antiquarian whose further collaboration with Brothers is mentioned below. The Society was thus successfully launched, and in 1870 there were about 300 subscribers. The first two volumes to be issued were both by Holbein *Images and Storied Aspect of Death* and *Bible Figures*. Although *The Athenaeum* did not altogether approve of the choice of text, the professional press was quick to appreciate that Brothers had carried out his task with skill and conscientiousness, as stated by the commentator in the *British Journal of Photography* for 1 April 1870:

Given light brown, dingy, broken lettering, on a very yellow and dirty ground, and the photographer knows what he has to contend with, without such a (retouched) negative photo-lithography cannot be accomplished. Mr. Brothers has mastered, in a very admirable manner, all the difficulties enumerated.

Brothers noted that the work was routine, except when, as in the case of the British Museum, he was required to make negatives of the original book on the premises, without the benefit of studio lighting and his own copying camera. The only mishap occurred when copying the work *Lord Tewdonckh*, lent by a private collector in 1884; while in the possession of a third party, part of the text was damaged by fire. It appears that Brothers was forced to indemnify the owner, and successfully brought a case for damages against the third party which, however, left him out of pocket.

Two volumes were issued annually from 1869 to 1871, and 10 more between 1873 and 1892, at which date the

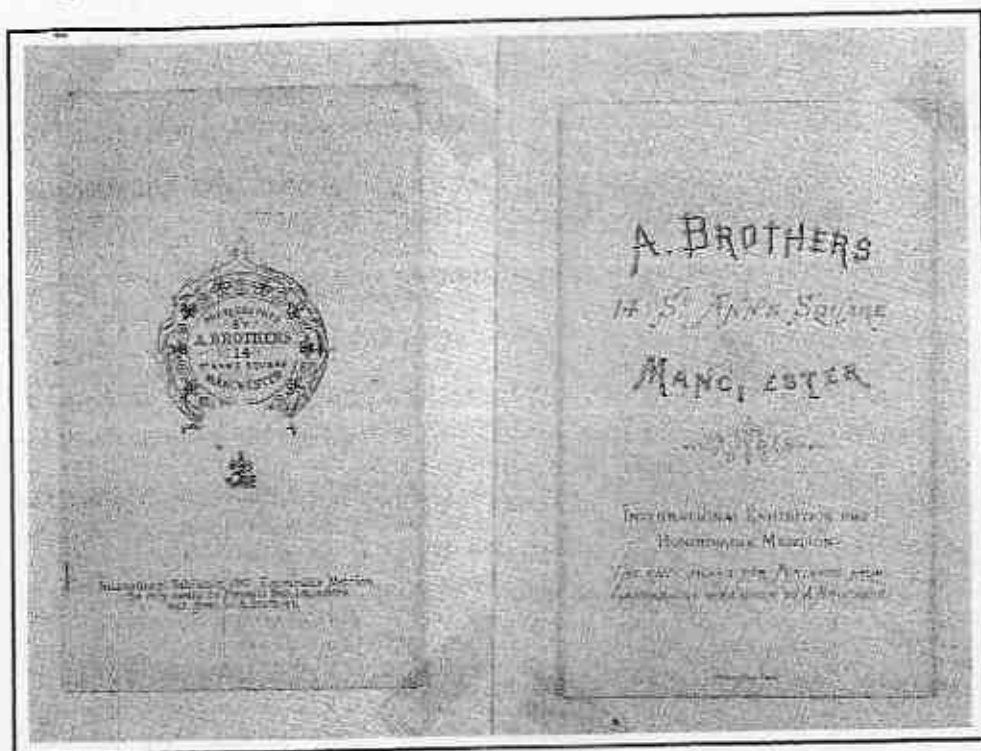


Figure 5. Two lithographed carte backs from the middle to late 1860s. These replaced a plainer carte carrying a typographical credit. (Author's Collection.)

publications ceased. All were facsimile reproductions of early woodcuts or type. Of the early volumes, 560 copies were produced, but there was no market for surplus copies and subsequently the number was limited to that of the subscribers. The Holbein Society died a natural death when the falling list of subscribers could no longer justify the cost of producing the books.

This was Brothers' longstanding though by no means only link with reproduction work, probably the least inspiring commission which a photographer of his generation could receive, but one in which thorough workmanship was prized. A full list of Brothers' work in this area would have to include his nine albumen prints of paintings to illustrate N. N. Solly's *Memoir of the Life of David Cox*, London, 1873,¹³ and 40 albumen prints comprising the *Photographs from Drawings in Black and White*, Manchester, 1877, to commemorate an exhibition of grisaille.

His last known reproduction work is contained in R. W. Procter's *Memorials of Bygone Manchester*, Manchester and London, 1880, another work illustrated in a mixture of processes. Brothers is credited with photographing the three Woodburytypes (two portraits from engravings and one study of the Cromwell statue) and printing the line drawings which were reproduced in photo-lithography. Brothers does not record whether he played a role in deciding the medium and format suitable for each illustration, but the author draws attention to the choice in his Preface:

In forming the list of Embellishments, an attempt has been made to combine the various styles of Art, — the woodcut with the copperplate, and photolithography with the Woodbury and Autotype processes. By such combination variety at least is secured, and variety is in itself a charm.

Landscape photography obviously attracted Brothers far more than the reproduction work which he executed around the same period, since it stimulated his strong aesthetic appreciation and led him to give some general advice on the genre:

The scene presented to the eye of the photographer, although he may be standing in the middle of a road, may be very beautiful; but, if a photograph be taken from the same point of view, the result would not be equally pleasing — the road straight in front, running away to a point and opening out to the full width of the plate in the foreground, would be far from artistic. A little consideration would show that the same scene, taken from a point not far removed, would have a very different effect. The greatest care, then, should be taken to consider well what will appear on the plate before making an exposure . . . It is always desirable to study beforehand the landscape subjects to be photographed. The middle of the day will seldom be the best time. To get the best results, the subject must be studied in just the same way as an artist would study it for the purpose of painting a picture,

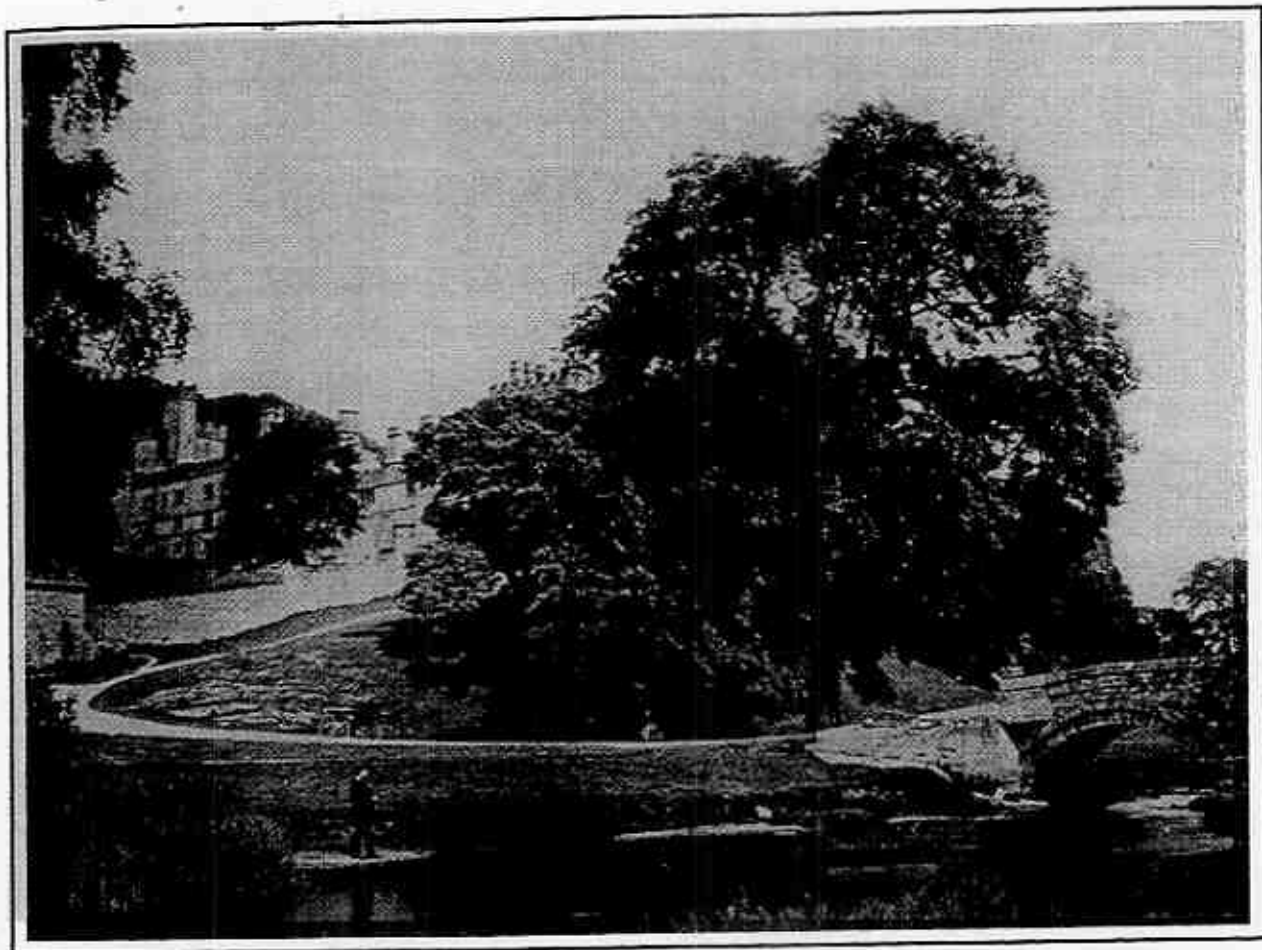


Figure 6. *Haddon Hall, Derbyshire*, by Alfred Brothers. Albumen print 148 x 195 mm on mount with lithographed caption. (Courtesy of City of Manchester Cultural Services.) Brothers is here respecting the convention he was later to describe in his manual: 'Landscapes should always have some object of principal interest, but this interest may often be given to a subject by the proper introduction of figures. Here again, the greatest care is requisite. Figures are not always necessary in a landscape; indeed, a figure badly introduced will mar a picture which in other respects may be good.' (Brothers, 1899, p. 306).

for in no other way can good photographs be expected, excepting by chance. It may be that the photographer cannot give the necessary time for this process of selection. In this case his good pictures will probably be few in number. Success in photography can only be obtained by the same means as in any other art.²⁰

These observations may seem obvious to us, but they were aimed at an audience of interested amateurs, and sum up the essence of the author's experience. That he followed his own advice is clear in his published series. *Haddon Hall, Derbyshire*, Manchester, 1879, is a comprehensive photo-essay of the historic mansion, comprising 20 images covering exterior and interior views under a whole range of lighting conditions (figure 6), as well as a printed title page with photographer's and publisher's credits. Less impressive is the series he produced for the Rosicrucian Society at about the same period, and which he mentions in passing as having been commissioned for private

circulation by the order which he had joined.

The Manchester Central Library possesses an oblong folio album²¹ which contains 39 albumen prints, generally 260 x 200 mm, depicting views of the meeting houses associated with the Rosicrucian Order and homes of prominent members. The mounts carry the printed caption 'Photographed by and for the Rosicrucians' but are otherwise anonymous. The lacklustre quality of many of these views, which are inexpertly retouched and badly printed, and the omission of any photographer's credit, suggests that Brothers himself did not consider the series one of his best performances.

He felt on much surer ground when he was able to create, even on commission, series which observed a certain unity of place and theme, and which could in some way be linked to the local pride felt by Mancunians at their city's emerging status as the powerhouse of Empire. This can be seen in Brothers' association with the Museum and Library in Peel Park, Salford, which lasted over 20 years

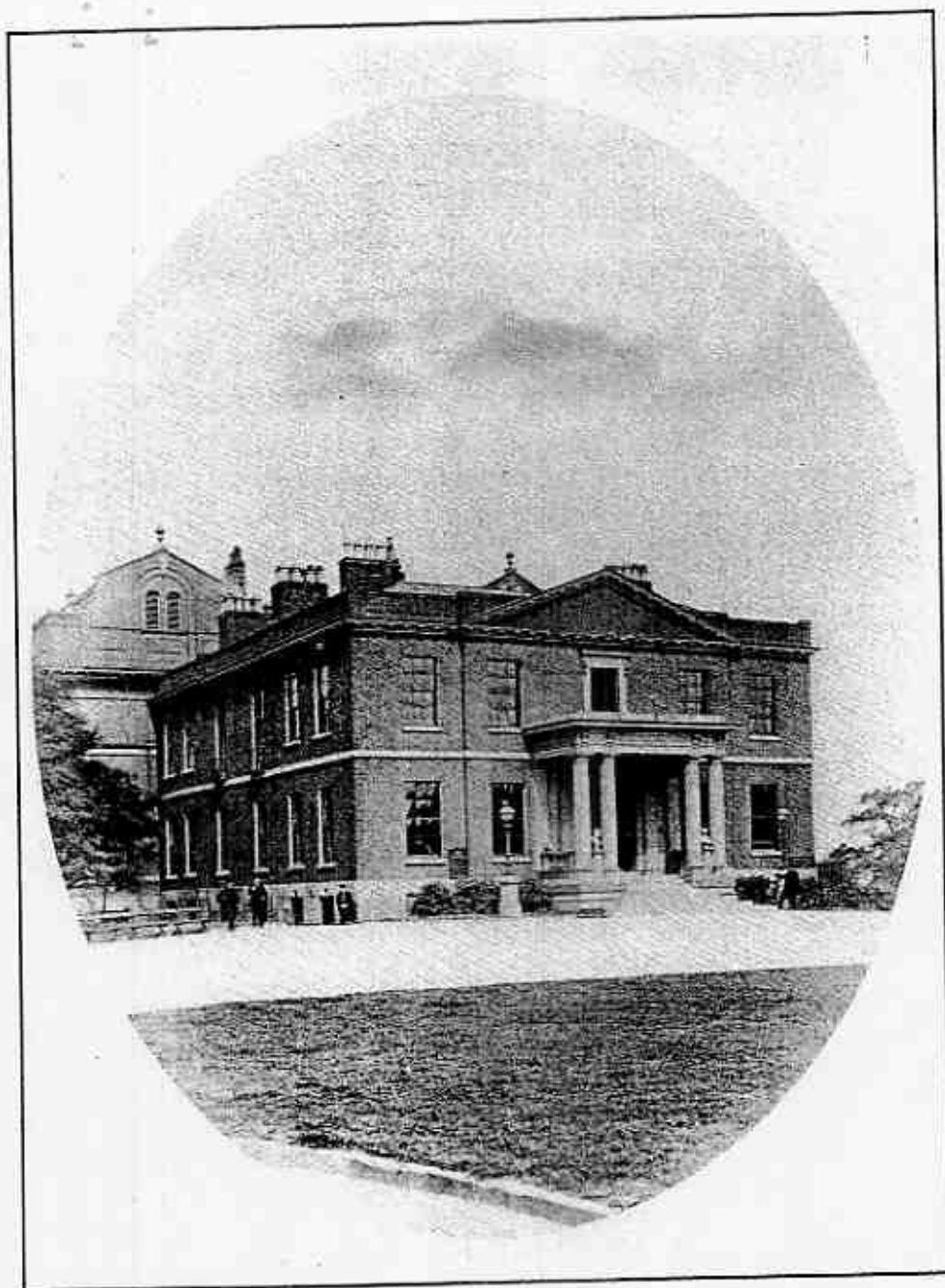


Figure 7. *The Royal Museum and Library, Peel Park, Salford* by Alfred Brothers. Albumen print, 198 x 156 mm on mount with lithographed caption. (Author's Collection.) The negative was obviously retouched to accommodate a cloud effect. Brothers did not favour the blank sky effect, but warned: 'Very good indications of clouds are sometimes made by painting on the back of the negative; but this must be skilfully done, or the effect will be anything but natural. The same may be said if cotton-wool is used. In all cases preference should be given to natural clouds.' (Brothers, 1899, p. 297).

and produced some excellent published work. It began modestly enough when Brothers supplied an albumen print of the statue of Joseph Brotherton which was used as the frontispiece to a brochure produced to commemorate the inauguration of the Brotherton Memorial in 1858.²²

When the Museum and Library Committee decided to publish a presentation volume on Peel Park, Brothers was called upon to photograph and print the six exterior

views which were then used to illustrate John Plant's *The Memorial Statues and Royal Free Museum and Library, Peel Park, Salford*, Salford, 1868 (figure 7). A revision of the letterpress was occasioned by the opening of a new wing of the library in 1878, and Brothers produced seven views for a second edition of the work published the following year. The boldness of his approach to photographing the statues reflects the confidence and civic pride which these marbled

images of local worthies such as Peel and Cobden were supposed to inspire.

Brothers was not slow to realize that there were other ways to capitalize on civic pride. In 1875, he prepared and published a set of collotype copies of line drawings on *Old Manchester*. James Croston received a fee for writing an introduction, and Brothers financed the operation by strictly limiting the copies to be printed to the number subscribed for. He had learned a lesson from the problems which the Holbein Society had experienced with remainders, and Brothers played safe. The work is of no photographic interest, but is significant for encouraging Brothers to project a companion volume which would contain views of the new industrial Manchester, to set alongside the vanishing historic centre. Brothers reminisced:

I commenced taking negatives of the streets and buildings. The question of suitable weather, the time of day when some of the views could only be taken had to be considered and this is particularly the case in a city like Manchester. Therefore considerable time was occupied in accumulating negatives and it was not until 1878 that the book was ready for publication.

Brothers fails to add that an additional reason for the delay was slowness in attracting an adequate number of subscribers. In the end *Manchester As It Is: A Series of Views of Public Buildings in Manchester and its Vicinity*, with an introduction by James Croston, was published in an edition of 250, compared to 450 copies for the previous work. Obviously nostalgia was a stronger selling point than industrialization, but the venture gave rise to some of Brothers' strongest work, studies of buildings and cityscapes of immediate appeal and lasting worth (figure 8). There are 40 images in all, three of which were taken by J. Pollitt, the rest by Brothers himself, and reproduced in collotype by the autotype process. Brothers was conscious of the documentary value of this work for later generations, and alluded to it in his memoir:

After a lapse of thirty years it is interesting to compare the views in the book with the streets and buildings as they are today. In fact the title of the book *Manchester As It Is* became a misnomer as soon as it was published . . . The old three-horse omnibuses were quickly superseded by the two-horse tram-cars, and now those cars have disappeared and cars are moved by an invisible power . . . The streets themselves are changed, and

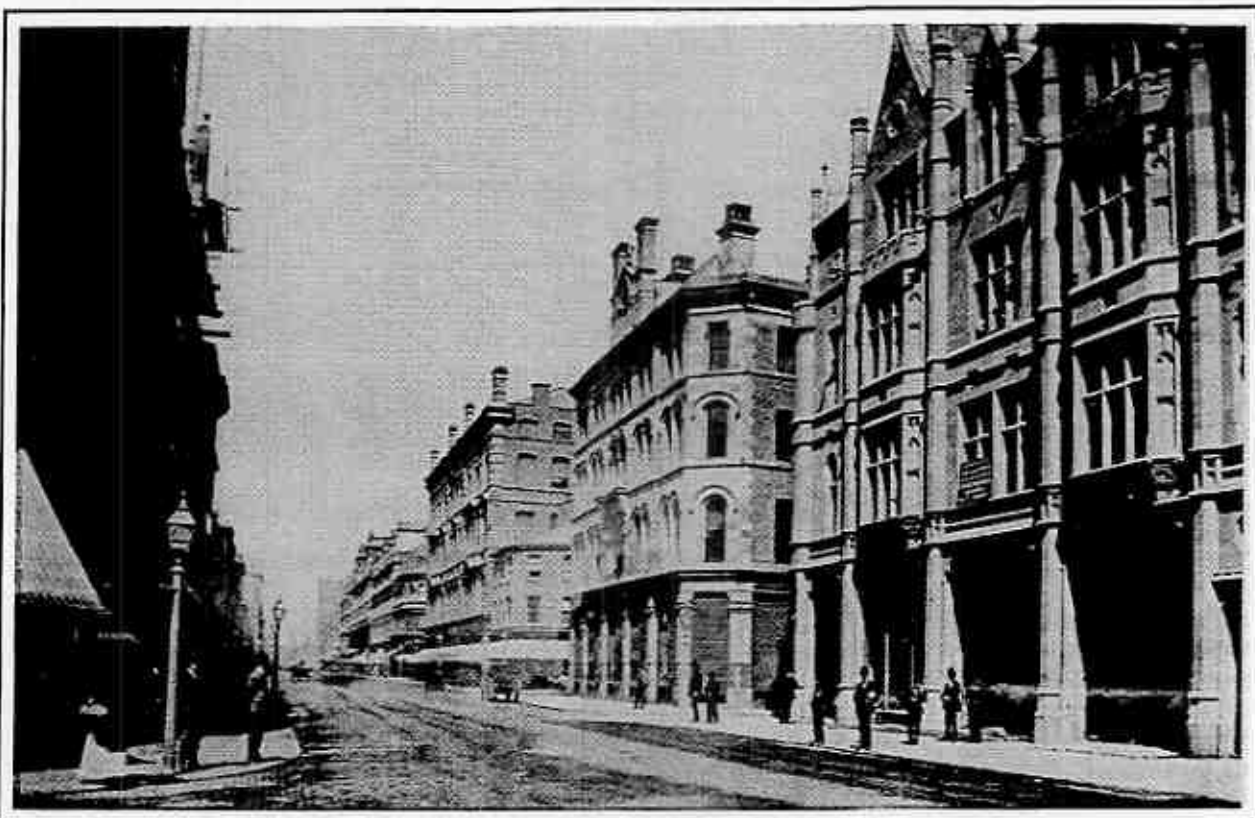


Figure 8. Deansgate — Looking North, by Alfred Brothers. Collotype print, 142 x 182 mm, plate 27 from *Manchester As It Is*, 1878. (Courtesy of City of Manchester Cultural Services.)

scarcely one retains its appearance as at the date of publication of the book.

Astronomy was an abiding interest of Alfred Brothers. While he was still in his teens, he had lectured to the Mechanics Institute at Maidstone on the subject, and, when he moved out of the centre of Manchester with his wife and six children in 1867, he had an observatory constructed in his new house at Wilmslow. His work on lunar photography was sufficiently well thought of for him to be elected a Fellow of the Royal Astronomical Society in 1864.²² It was not long before Brothers was searching for a method of turning his enthusiasm for astronomy to solid commercial gain. As he teamed up with Croston for publishing works of topographical and antiquarian interest, so he found Richard Anthony Proctor (1837-1888) as a technical collaborator for his publishing activities in the field of astronomy. In his memoirs, Brothers underplays his entrepreneurial instincts and leaves the impression that it happened almost casually:

In 1869 I met the late Mr. R. A. Proctor at the Royal Astronomical Society and then suggested to him to publish a catalogue of double stars and binary stars. This he could not undertake, but he told me he had a project of making a star atlas and showed me a specimen map he had prepared. I wrote to him on 25th June 1869 suggesting that if he would prepare a set of maps they could be reproduced in facsimile by photography. My proposition was accepted, and the atlas was published by subscription. The project was very successful.

In fact, the work which appeared — *A Star Atlas for the Library, the School, and the Observatory* — was published by Longmans, Green & Co, Proctor's usual publisher, in 1870. Brothers is only credited as being the printer of the 12 maps, which he produced by a photolithographic process similar to that which he was successfully applying to the reproduction of line drawings for the Holbein Society. However, his role was probably more significant than just printer, since he retained certain publication rights on the maps, and marketed them as a set of lantern slides 'to illustrate lectures or for educational purposes' at a price of £1.15s.

Brother's ability to exploit an image in different forms was also a feature of his next joint venture with Proctor. *A Chart of the Northern Hemisphere, on an equal-surface projection* was photographed and published by Brothers from his Manchester studio in November 1871. The original drawing of the chart contained 324,198 stars and occupied Proctor in six solid months of draughtsmanship. In its published form the work has a title page, one page of letterpress introduction and a key map, as well as the chart itself, a circular albumen print 285 mm in diameter. Brothers promoted the chart in other forms and inserted an announcement offering it for sale as a carbon print or 'Solar Autotype, on Imperial mounts, with lettering £1.1s' and as an 'Autotype, Mechanical' (presumably a printed collotype) at half the price, printed by the Autotype Company. Thus, Brothers catered for the possibility of

displaying the chart as well as for its presentation in book form.

Alfred Brothers' speciality was eclipse photography, which required technical mastery beyond the average for astronomical images. His major contribution to astronomy came in 1870, when he was invited to join an expedition to Syracuse, Sicily, set up under the auspices of the Royal Astronomical Society to observe the total solar eclipse.²⁴ Brothers' chief objective as official photographer was to secure images of the solar corona, the existence of which had caused controversy amongst astronomers ever since it had first been observed. Brothers eloquently set his aim in context:

In all total eclipses of the sun, certain phenomena appeared which were difficult to explain. An aureola of light, the corona, was always visible, and certain coloured objects close to the edge of the moon, known as 'red prominences', were the cause of much speculation until the eclipse of 1860, when an expedition was sent to Spain, where Mr. De la Rue and Father Secchi made photographs, from which it appeared that, as the moon passed over the sun, the red prominences were gradually covered and uncovered; and as the photographs taken at different and distant stations showed the same effects, it was, of course, concluded that the phenomenon was an appendage of the sun . . . The cause of the corona being still unknown, it was decided to send expeditions to Spain and Sicily in December 1870, one object of which was to obtain photographs of this phenomenon. It had been contended that the beautiful corona of light, always seen during total eclipses, was an effect produced in our atmosphere; and it was also maintained that the appendage really belonged to the sun.²⁵

Brothers' great competence in eclipse photography owed a lot to the pains he went to in order to secure the right equipment. Previously, astronomical photographers had relied on small modifications of ordinary reflecting or refracting telescopes to obtain their images. Brothers realized that, to fix the corona in all its glory, enabling detailed analysis and good enlargement, he required a photographic lens of long focus, but one nevertheless capable of producing an image with a short exposure. He was able to employ the 'Rapid Rectilinear' lens manufactured by Dallmeyer and obtained images in Sicily suited to his purpose. When compared with other pictures taken two hours earlier by the American expedition encamped in Cadiz, with their shared features, Brothers proved once and for all that the corona was of solar rather than atmospheric origin.²⁶ There is no evidence that Brothers tried to exploit his solar eclipse series commercially, perhaps because Proctor, whose book on the sun was already in print, was not planning to revise the work, and no other possibility presented itself.²⁷

Brothers gives an account of the genesis of a companion volume by Proctor on the moon, which confirms that Brothers himself was the initiator of their final project together, and one which also gave the photographer a

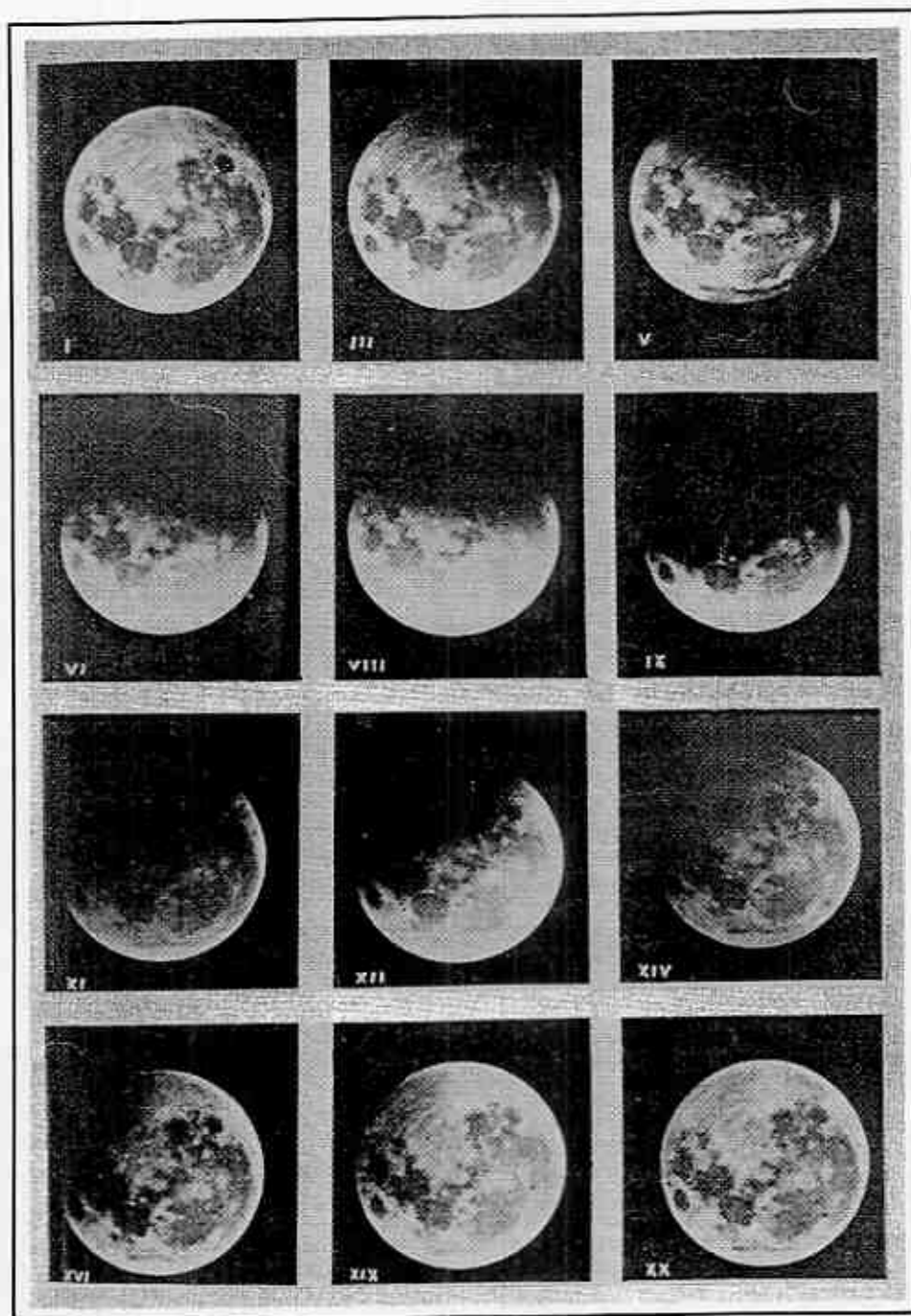


Figure 9. *The Progress of the Lunar Eclipse of Oct. 4, 1865* by Alfred Brothers. Composite albumen print, 183 × 126 mm, bound hors texte into subscribers' copies of R. A. Proctor's *The Moon*, 1873. (Courtesy of City of Manchester Cultural Services.) Brothers observes on p. xu: 'These [photographs] are intended to show what may be done with a refracting telescope (5 inches in aperture), not like Rutherford's, corrected for the chemical rays, but of the ordinary construction.'

chance to display his gift for eclipse photography:

In 1871 the late Mr. Rutherford of New York called on me when he visited England, and presented me with a set of three negatives of the moon, showing the phases of the first quarter, full and last quarter, and gave me permission to publish them should I decide to do so. At this time they were the best pictures produced . . . I knew that Mr. Proctor contemplated writing a book on the Moon, and I suggested that it should be published and that Rutherford's photographs should be used as illustrations.

The first edition of *The Moon: Her Motions, Aspects, Scenery, and Physical Condition* duly appeared under the Longmans imprint in 1873, and was dedicated by the author to another astronomer and photographer, Warren De La Rue. The ordinary edition has 22 plates and a photograph of each of the three Rutherford moon studies, printed by Brothers in albumen and bound directly into the book. Brothers himself published a subscribers' edition, containing an additional folio volume of images, including plates 17 to 22 of the ordinary edition and the Rutherford images enlarged to 345 x 267 mm. Notices in the ordinary edition stated that the folio and the text volume could be purchased together at £2.2s or the folio alone at £1.11s.6d. Another peculiarity of Brothers' edition is that the text volume contains two further illustrations of his own moon photographs, including a composite print featuring the stages of lunar eclipse, probably the first of this type to appear in print (figure 9). This was the same series which he had presented to the Royal Astronomical Society eight years before, and which he now had a chance to circulate to a wider audience. The photographer's achievement had originally been described in the following terms:

The Society has received from Mr. A. Brothers a sheet of photographs of the Moon, taken during the Eclipse on the 4th Oct. with his Equatoreal telescope of 5 inches aperture. Mr. Brothers writes that the prints must not be looked upon as photographs of the Moon, as many very much superior have been taken, but merely as pictures of the Eclipse. The atmosphere was so much disturbed during the whole time of the Eclipse that the sharpness of detail is lost to a great extent. He attempted to obtain the entire outline of the Moon, but failed to get more than greater sharpness of the shadow; this will be seen in No. 10, which was exposed 15 seconds; Nos. 8 and 12 were exposed 3 seconds, and the remainder from 1 to about 2-tenths of a second.²⁸

The 1880s witnessed a sudden and drastic decline in Brothers' career. He is understandably vague in his reminiscences as to the precise causes, but it seems likely that part of the reason lies in another publishing venture which went badly wrong. In 1881 he signed an agreement with a painter called Sargeant for the publication of a group portrait of the Members of the House of Commons. According to Brothers, the painter absconded with some of the funds raised from subscribers; while Brothers had

to meet the full cost of etching and printing himself. The aggrieved photographer may have tried pursuing matters through the courts, and he attributed his subsequent insolvency to this ill-fated venture. Even though the premises in St. Ann's Square were to bear his name throughout this period, Brothers' position as an independent trader was seriously compromised, and he was forced to sell the studio to a certain Alfred Alcock in May 1885 for £600. He briefly took a salaried but hardly remunerative job as curator and assistant secretary of The Manchester Literary and Philosophical Society, but with the help of backers or 'sleeping partners', he was able to buy back his firm in 1887, and continue business as before.

It is against this background of financial uncertainty that Brothers embarked on the publication of a wide-ranging reference book on photography, an undertaking which reminds us once again of his all-round technical competence and of the high esteem he must have enjoyed amongst his contemporaries in the profession. In his autobiography Brothers recalled what was for him the novel experience of literary creation:

At the latter part of 1888 Messrs Chas. Griffin and Co. wrote me that Mr. Watson Smith had given my name to them and they wished to know whether I would undertake to write for them a book on photography . . . This work I undertook and on Feb 9th 1889 an agreement was signed . . . It was a matter of anxiety to me what form my book should take. Many months were occupied in *thinking* and reading, and a whole year had passed before a word was written, but at last a commencement was made, and as material accumulated the work seemed to lose some of its gigantic proportions, and after the first few pages were written some of the difficulties I had imagined disappeared . . . Within a week or two of the stipulated time (3 years) of the Agreement the manuscript was completed and forwarded to the publishers . . .

There was a delay when the publisher advised Brothers to prune the manuscript and to make alterations to the structure, but he used the time to make a selection of suitable subjects for the illustrations, insisting on giving as many processes as possible to exemplify the rather dry detail in the text. When *Photography: its History, Processes, Apparatus, and Materials*²⁹ came out in 1892, it was greeted as a scrupulous exposition of the subject, covering chemistry, optics and materials with equal skill. The print run of 1,000 copies sold out, which stirred Brothers to express dissatisfaction at the level of his royalties. These indeed must have seemed meagre when compared to what he had been used to receiving as his own publisher:

The remuneration to authors for work of this kind is [a] not princely 10% on all copies sold 'at home' and 5% when sold 'abroad', the commission in both cases being on the published price. If the edition ran into thousands the result would be more favourable. My remuneration amounted on a rough estimate to about sixpence an hour for the time occupied.

Brothers' handbook went into a second, revised edition seven years later.³⁰ In the preface to this, Brothers acknowledges the efforts of his son Horace Edward Brothers (1863-1944) in revising the chapters on chemistry and optics. To judge from the credits to some of the illustrations, half-tone plates were supplied by Brothers' own firm, now being run by another son, William James Brothers (1856-1930), under whose direction it had diversified into process work.

About 1901, the business was bought by the Manchester Wood Engraving Company,³¹ and soon afterwards Alfred Brothers retired to Handforth in Cheshire, where he devoted his time to gardening, painting in oils and occasional lecturing. He entertained the possibility of bringing out a third edition of his handbook, keeping in touch with the latest developments in photography, and continued to be active right up to the time of his death, aged 86, on 25 August 1912. To close this account of Alfred Brothers, photographer and publisher, perhaps it is better to leave the final word to an anonymous obituarist, who was in no doubt as to the qualities and merits of Alfred Brothers the man: 'Personally Mr. Brothers was a man of singular charm and simplicity, quiet, unobtrusive, and unselfish as became the genuine student anxious to gain further knowledge, and diffident about his own great achievements'³² ●

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REFERENCES AND NOTES

1. Amongst monographs we may cite: R. McLEAN, *Joseph Cundall, A Victorian Publisher*, Pinner (1976), and R. TAYLOR, *George Washington Wilson, Artist and Photographer 1823-93*, Aberdeen (1981). The first two national bibliographies are: H. GERNSEIM, *Incunabula of British Photography 1839-1875*, London (1984), and F. HEIDTMANN, *Wie das Foto ins Buch kam*, Berlin (1984).
2. Biographical information, as well as the direct quotations in this article, are drawn from the short memoir which Brothers wrote in 1908 for the benefit of his family. A 72-page typescript of this autobiography is available on microfilm in the Manchester Central Library, Archives Department (MF 2749).
3. It is interesting to note that a fellow employee of Brothers was a certain Bell, later to become half of the partnership of Bell & Daldy, publishers who issued a range of photographically illustrated books in the 1860s and 1870s.

However, I have been unable to find any trace of Brothers ever having worked for this publishing house.

4. GILLIAN READ, *Manchester Photographers 1840-1900*, Bath (1982), indicates that McLachlan operated from premises at 4a St. Ann's Square uninterrupted from 1855 to 1861, while Brothers is recorded only from 1858 onwards as operating out of 14 St. Ann's Square, premises occupied by Beard and Foard in 1855.
5. Manchester Central Library, Archives Department M33/1/1/1.
6. GERNSEIM, *Incunabula*, No. 49, incorrectly states that the issue contains four albumen prints. In fact, the first number contained a preface and six pages of text, as well as two views of Bramhall Hall by Joseph Sidebotham, the reproduction of a bust of Thomas Arnold, and a posed image of James Nasmyth operating a steam hammer at his Heathcroft factory. The images of Bramhall Hall and Nasmyth's steam hammer are reproduced in B. COE and M. HAWORTH-BOOTH, *A Guide To Early Photographic Processes*, London (1983), p. 26, where they are correctly identified as salted paper prints.
7. C. ESHBORN, *One Hundred Years of Photography: The Centenary of The Manchester Photographic Society 1855-1955*, Manchester (1955), p. 72.
8. Exhibit No. 126. Brothers exhibited other portraits, including the Bishop of Manchester and Alderman Agnew.
9. Sotheby's Belgravia, *Photographic Images and Related Material*, 21 March 1980, lot no. 365.
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13. M. HALLETT, 'Brothers' Group Photograph', *History of Photography*, 9 (1985), pp. 317-18.
14. A. BROTHERS, *Photography: Its History, Processes, Apparatus and Materials*, London (1899), p. 326.
15. For a thorough examination of the topic of combination printing, using the work of Rejlander and H. P. Robinson as examples, see W. CRAWFORD, *The Keepers of Light, a History and Working Guide to Early Photographic Processes*, New York (1979), pp. 51-61.
16. BROTHERS, *Photography*, pp. 61-62.
17. C. L. BARNES, *The Holbein Society*, Manchester (1927), 16 pp., reprinted from *The Manchester Quarterly* (Jan-April 1927).
18. GERNSEIM, *Incunabula*, No. 9.
19. GERNSEIM, *Incunabula*, No. 565. This work is a typical product of the 1870s, incorporating a mixture of processes for the illustrations — mounted autotypes, printed heliotypes, a woodcut vignette on the title page, and albumen prints by Brothers and R. W. Thrupp of Birmingham.
20. BROTHERS, *Photography*, pp. 306-307.
21. Manchester Central Library, FF 728.8 R1, has the binding title *Rosierucian Society's Photographs/Lancashire and Cheshire*, and an accompanying manuscript list of plates. The accession date of the copy is 22 February 1890.
22. GERNSEIM, *Incunabula*, No. 86.
23. The Archives of the Royal Astronomical Society contain extensive material by Brothers, including letters to the Society over the period 1863 up to his resignation in 1900.
24. RAS Papers 51 contains 31 letters by Brothers in a batch of correspondence concerning the expedition.
25. BROTHERS, *Photography*, pp. 290-91.
26. A. BROTHERS, 'On the Photographs taken at Syracuse during the Eclipse of the Sun, December 22nd, 1870'.

- Monthly Notices of the Royal Astronomical Society*, 31 (1871), pp. 167-71.
27. Unfortunately, it has not been possible to consult Brothers' own papers on the expedition, which may have cleared up this point. Some 450 items, including photographs of the eclipse, the equipment used and the members of the expedition, mounted in a 156 page album, were sold as lot 549 in a sale of works relating to science and medicine at Sotheby's on 7 October 1975.
28. *Monthly Notices of the Royal Astronomical Society*, 26 (1865), p. 62.
29. London (1892), 8vo, xiv, 364 pp, 24 plates and 122 figures in the text, price 18s. In addition, copies bound in the publisher's cloth should contain 14 pages of advertisements and a 64-page publisher's catalogue.
30. London, 1899, 8vo, xviii, 367 pp, 37 plates, price 21s. The plates in this edition are for the most part different to those used in the first. Copies in publisher's cloth should also contain 86 pages of advertisements.
31. 'Death of a pioneer photographer', *The Daily Mail* (27 August 1912).
32. 'The late Mr. Alfred Brothers', *City News, Manchester* (31 August 1912).

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