

Research Article

Thomas Richardson Colledge and Peter Parker, Two Early Nineteenth-Century Missionary-Ophthalmologists in China: a Case of (Inter) Cultural Anthropology

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Citation: Heule F (2018) Thomas Richardson Colledge and Peter Parker, Two Early Nineteenth-Century Missionary-Ophthalmologists in China: a Case of (Inter) Cultural Anthropology. Anthropol Open Acc: AOAP-113. DOI: 10.29011/AOAP-113/ 1000013

Received Date: 16 January, 2018; **Accepted Date:** 26 February, 2018; **Published Date:** 7 March, 2018

Abstract

Background: The life and works of two ophthalmologists, T. R. Colledge and P. Parker are discussed in their time and working environment. The period of the first scientific encounters with China, after an age of war, is explored during the early nineteenth century.

Method: George Chinnery and Lam Qua were painters in the genre of 'China Trade Paintings.' In Chinnery's works people figure from the social, medical and commercial scenes. Lam Qua's portraits of patients can be seen as pre-photographic documentation. On the paintings one sees books, writing material, instruments, and persons. I studied these works to see whether they help sustain the anthropological approach.

Results: The critical evaluation, from different perspectives, gives a good impression of the ideology, scientific innovations, and performance of the doctors, and their painters. Two aspects of the history of ideas became obvious: the orientalist's view (Europe-centered and imperialistic, with a tinge of exoticism) versus the view from the East (values of sharing, learning, and mutuality).

Conclusion: Comparing the paintings with similar works, confirms their value as monuments of time. The study of material cultural elements can contribute to the knowledge of the exchange of scientific and religious ideas, between East and West.

Keywords: T.R. Colledge; P. Parker; Ophthalmology; China Medical Mission; China Trade Paintings; Scientific Realism

Background

In this essay two oil-on-canvas paintings from the early nineteenth century, together with biographies and the social history are presented with their artists based on research into the professional careers of Thomas Richardson Colledge and Peter Parker and the period of their activities. In the field of medicine at that time a specialist training was in its infancy and for many only began after a period in general practice. With the paintings one meets face-to-face self-conscious specialists aware of the new skills they can offer. The American George Frick for instance can be considered as an early 'Oculist' [1]. The opening of the academic university clinic (1813) and teaching school (1818) of Vienna accelerated new practical developments in ophthalmology

such as: the vision test (1843), eye mirror (1851), eye chart (1854) and peripheral vision meter (1894) partly based on (microscopic) anatomy studies and surgical experiments. Both Colledge and Parker had a medical education with an emphasis on surgery and it is as surgeons that they began their work. They opted for a career in the East made possible after the opening up of China in the first half of the nineteenth century. As judged from the West, China was in a deplorable socio-economic state due to wars, continual natural disasters, famine, farmers' rebellions and political war troubles. From an Asian angle the exhausted 'Middle Kingdom' was an easy victim of Western imperialism, although many Western men and women went there with good intentions often inspired by a professional calling and with religious charities offering a helping hand. On both sides there was awareness of the foreign 'Other' in a mixture of superiority and fear, however, I will try to discern the positive results of their works.

The Portrait of Colledge and his Biography

Thomas Richardson Colledge (郭雷樞, Figure 1) was portrayed by George Chinnery (錢納利) for £500 (as was mentioned by his youngest daughter Frances Mary) [2]. He is standing in his medical cabinet in the company of a female patient. His dress is Western and very fashionable with white trousers, waistcoat, jacket and light-grey tie and a stethoscope around his neck. The woman wears spectacles as she might have had a cataract operation (still with the cataract needle) in which the clouded eye's lens was removed. This leads to short sightedness and lack of accommodation. However, another more arguably option, being rather young, is that she has a severe myopia, which often occurs in Asia. Colledge is looking at her, meanwhile testing her vision by holding her head with his right hand. He could also dictate or explain peculiarities with a raised left forefinger to his assistant on the right or ask him for a translation (in Mandarin or more probably as in many cases the patients and the assistants came from a low social background, Cantonese vernacular). The barefooted patient's son on his knees, in front of the scene offers Colledge a paper with neat calligraphy on the cover (Gilman in my opinion wrongly dates the portrait 1853, instead of 1833 and calls the boy a 'Paramedic') [3]. The young man has put his pointed straw hat on the floor thus showing his pigtail. This was for the Western people an overt sign of subordination during the Manchu reign (Qing dynasty 1644-1911), but can now be regarded as a nineteenth-century orientalist point of view. Next to the hat is a folded umbrella suggesting he comes from outdoors. On the left one sees a bald man against a pedestal with bandages over his eyes waiting to be seen by Colledge. To get a general impression of the type of eye diseases frequently seen in the clinic in those days, I refer to the Table. The assistant, a native man stands behind a desk. His name was most likely 'Afun' the father of Ayok, who was in turn the Chinese boy servant, brought to London by Harriet Low (1809-1877). In July 1834 she took Ayok to St. James Park in London to look at a painting on which his father's face was depicted together with Dr. Thomas R. Colledge (supposedly the painting we discuss here). Looking at his father's face, Ayok 'burst[ed] into quite a hysterical laugh', Low noted in her journal [4]. The desk is loaded with medical paraphernalia such as medical books bound in Western style [5], a wooden box containing small surgical instruments such as a cataract needle [6] and scalpel for the ophthalmologist's office to perform some minor interventions. Besides the writing set which is clearly Western with a bottle of liquid ink, a goose's feather completed with a dredger with fine sand; definitely not in a Chinese educated man's style (Mandarin) with the attributes: ink stone, water container, ink block and brushes

[7]. The chair is typical of English period furniture (Georgian style, probably a remake in mahogany from the area, meant for export). In the rear of the room one sees an open window with sunlight spilling from between the clouds after a rainy day. In the front some foliage with a banana tree, iconic for the tropical climate of the place and terracotta garden ornament on a pedestal. In the centre the large orange curtain gives a warm touch to the whole scene. The painting with the Western lustre of a gilt frame on the right, above the scene shows houses and ships indistinctly. An engraving of this painting was made by William Daniell, London, 1834, now in the Victoria & Albert Museum [8]. Who was this man Colledge? We start with some biographical details.



Figure 1: Portrait of T.R. Colledge by G. Chinnery (1833). Peabody Essex Museum, Salem, Mass. (M23017).

Thomas Richardson Colledge (1796-1879) [9] was born in Cheltenham, Gloucestershire, Britain, in 1796 and received his early medical education under the surgeon Sir Astley Cooper, in St Thomas' Hospital, London. He took up an appointment with the British East India Company (E.I.C.) the powerful trading company and later with the British Government. He practiced in Canton (now Guangzhou), Macau and some other South-Chinese ports [10], already before British or American influences were strongly noticeable [11]. His initial function was Superintending Surgeon of the Hospitals for British Seamen. He married Caroline Matilda Shillaber, a Boston visitor to her brother, the merchant John Shillaber [12] so became the first American lady to be married in Macao (Figure 2). Three of their eight children sadly died: Thomas Richardson, 23 July 1837, aged 18 months; William, 29 Sep 1838, aged 17 months, another infant son 16 Dec 1838, aged 8 months and 19 days. All were buried in Macau (Figure 3).



Figure 2: Caroline. M. Colledge, née Shillaber and her husband, by G. Chinnery.

Colledge founded the first infirmary for indigent Chinese called ‘Colledge’s Ophthalmic Hospital’ (Figure 4) and was also the founder, in 1837 of the ‘Medical Missionary Society in China’, with its energetic motto ‘Heal the sick’ [15] and continued to be President of this society until his death [16]. After retirement, he returned to England in 1841, with an annual allowance granted by Lord Palmerton. Before he left Asia, Colledge mentored an American surgeon, Peter Parker (see below). Interestingly, Colledge took his medical degree at King’s College, Aberdeen, only at the age of 43, clearly to continue working as a M.D. in U.K., and became a Fellow of the Royal College of Physicians of Edinburgh (FRCPE), 1840, a Fellow of the Royal Society of Edinburgh 1844 and a fellow of the Royal College of Surgeons (FRCS), England, 1853 [17].



Figure 3: The grave of the second son of T.R. Colledge and his wife Caroline at the Old Portuguese Cemetery, Macau.

The last thirty-eight years of his life were spent in Cheltenham, where he won universal esteem through his courtesy and skills in general practice 1841-1879. He died at Lauriston House, Cheltenham, 28 October 1879, at the age of 83. His widow, Caroline Matilda, died 6 January 1880. He left some publications concerning the medical mission [18] and an important biographic source is the short text of his youngest daughter Francis Mary [19].

The Biography and Works of Georg Chinnery

The painter of the aforementioned portrait was George Chinnery (1774-1832), (Figure 5), born in London, where he studied at the Royal Academy School. He moved in 1796 to Ireland, where he enjoyed some success as an artist and married Marianne Vigne on 19 April 1799 in Dublin. He returned to London in 1801, but in 1802 sailed to Madras on the small E.I.C. ship ‘Gilwell’, it is said to free himself from his wife. He established himself as a painter there, and five years later in Calcutta where he became the leading artist of the British community in India [20].



Figure 4: Ophthalmologic Hospital of Dr. Colledge, Macau by George Chinnery, 1838.

By 1813 Chinnery was a freemason in the lodge called ‘Star in the East,’ and through these social contacts some of his most famous paintings are of Indian princes, British officials and merchants. His increasing debts prompted him, however, after twenty-three years in India to move to Southern China. From 1825 until his death in 1852 Chinnery based himself in Macau, but until 1832 made regular visits to Canton. He worked very industriously in every medium: crayon sketches, paintings in watercolours, oil-on-canvas and miniatures during the twenty-seven years he remained in China [21]. During the last years of his life he had several Chinese pupils, many of unknown identity who made copies of his art works - a traditional curriculum in pre-modern China - particularly of small landscapes in oils, which make their appearance from time to time as original works of the artist [22]. One of the students, named Lam Qua (林呱) sent from Canton to the Royal Academy in 1833 the work ‘Head of an Old Man’ and in 1846 a portrait representing ‘Captain W. H. Hall, R.N.’. William C. Hunter gave a detailed account about the whereabouts of Chinnery [23]. Crossman positions Chinnery and Lamqua definitively in the ‘China Trade’ [24].



Figure 5: Self-portrait by G. Chinnery (1825/28), oil-on-canvas. The Metropolitan Museum of Art, New York (Nr. 43.132.4).

China Trade Paintings

The ‘China Trade Paintings’ (CTPs, 中国贸易画), or Export Paintings (外销画) [25], included different subjects, e.g. ships of the Trading Companies with their national flags, the coastal area and major cities e.g. Hong Kong, Macao or Canton often with their mountains or iconic buildings such as pagodas as well as portrayals of trade activities in a pre-scientific manner such as the manufacture of silk, tea or porcelain and people usually of the upper class such as captains or traders with their families. The more scientific paintings of the natural history of China form a separate section. Both Western and Asian characteristics can be found in these paintings, depending on the background, training and aesthetic taste of the painter and the client. Chinnery’s works in oil [26] were closely imitated by the Cantonese artist Lam Qua, who himself became a renowned portrait painter (see below). Chinnery also painted landscapes (both in oils, watercolours or gouache) and made numerous drawings of the common people of Macau engaged in their daily activities.

At the time, Westerners were restricted in their access to China, only trading from settlements in Macau and later in Hong Kong. Chinnery went there too and his interest in the local scene did indeed set him apart from most Western artists of the time. In 1846 he made a six-month visit to Hong Kong, where he suffered from ill-health, nevertheless made detailed artistic studies of the newly founded colony. He died in Macau on 30 May 1852 and was buried in the Old Protestant Cemetery (Portuguese: Cemitério Protestante) there [27]. Apart from their artistic value his paintings are historically valuable since he was the only known resident Western painter, in South China between the early and mid-nineteenth-century. He vividly depicted the life of ordinary people and the landscape of the Pearl River Delta during that period. Chinnery’s legacy covers both the Asian and the Western World [28]. Today the CTPs (collected in museums and private

collections worldwide) are studied anew, in the context of Sino-Western communication on the visual arts and material culture [29].

The Painting of Parker and his Biography

Peter Parker (1804-1888), (Figure 6) who was called ‘Bojia’ (伯驾) while he was in Canton is painted in the setting of the ophthalmologist’s office. He is seated in the centre on a wooden chair, dressed as a gentleman in black; the shoes seem shiny leather, a common dress in that period for doctors in practice (see later); he is looking us in the eye, with an affable smile. The books on the table have Chinese characters and are bound in the Chinese manner (i.e. xuan paper, silk cord and stitched binding). In a later paragraph I will enlarge the subject of the ophthalmological books. One may notice that the folded book on Parker’s lap is Chinese, suggesting that he masters the Chinese language (in reading), for instance for proofreading Chinese translations of English texts, however, his critics mention that he was only a moderately fluent speaker. On the right edge of the painting on the table we see a bust representing Hippocrates of Kos the founder of Western Medicine.



Figure 6: Portrait of Peter Parker by Lam Qua, dated 1840s.

In front of the books one notices a small glass container for ether, an inhaler on a black lacquer tray referring to Parker’s introduction of anaesthesia in China [30]. Over the table is a hanging scroll with Chinese calligraphy, a gift from a thankful patient. The following text can be discerned. The big Chinese characters on the right (only half visible) from top to bottom read: ‘妙手回春, through the magic of his hands he restores youthful health, and gives longevity’ (litt. ‘Spring season’). On the left it reads ‘寿世济人, maintain the world and benefit the people.’ Habitually the smaller characters to the left side are the name of

the person (usually the patient) who would donate a scroll like this with the calligrapher's name, the place and the date that this scroll was made. This particular scroll was bestowed by his Excellency, the high Imperial Commissioner Qiying (耆英, 1787-1858), who was active in several Sino-British peace negotiations, during which he cooperated with Parker [31].

To the left of Parker is a Chinese patient, seated on a western chair and one recognises the pigtail (see above). The local assistant was in fact one of Parker's three first medical students in 1837, called Kwan A-to (关韬) a Manchu, who wears a coat with reversed sleeves and slippers taking an active part in checking the patient's eye-sight, such as the presence of simultaneous movement of the eyeballs, accommodation and acuity. Crossman even suggests that he performs an operation [32]. On the polished round (mahogany) table is a wooden box with ophthalmological tools (see above). Behind this scene is a portico with a view of the sea with ships, and a coast with a pagoda. The ship on the right shows the (early) United States of America's flag at the top. The painting above Parker's head shows a house but is too dark to see the details. The gilt frame is in Western style [33].

Parker was born in Framingham, MA in 1804 into an orthodox farming Congregational family. He received a B.A. degree from Yale University in 1831 and his M.D. degree from the Medical Institution of Yale College, in 1834 [34]. In January 1834, he completed his theological studies at Yale and was ordained as a Presbyterian minister. In February of that year he travelled to Canton where he was the first full-time Protestant Medical Missionary to China [35]. In 1835, he opened an Ophthalmic Hospital there which later, in 1845, became the 'Canton Hospital', also known as the 'Canton Pok Tsai Hospital' (广州博济医院) [36]. Parker specialised in diseases of the eye, including cataracts, and also treated all kind of tumours, introducing Western anaesthesia in the form of sulphuric ether [37].

Although the hospital was intended specifically for the treatment of eye diseases it was soon found impracticable to exclude patients suffering from other complaints and the traders supported this regime. Over 2,000 patients were admitted the first year. Apart from his schedule of preaching to the patients he trained several Chinese students in the art of medicine and surgery, some of whom attained considerable skill such as Lam Qua's nephew Kwan A-to

see above [38]. Parker's publications, personal diaries along with his correspondence (especially to his family) and sermons are in the Yale Medical Historical Library, New Haven, Connecticut, U.S.A. (waiting to be transcribed); his correspondence with the American Board of Commissioners for Foreign Missions (ABCFM) is at the Houghton Library, Harvard University, Cambridge, MA, and U.S.A [39]. Parker published reports of the Canton Hospital in the journal *Chinese Repository* 1836-1856 (Figure 7).

The following are the diseases presented at the hospital; 1st, are those of the eyes, 2d, other diseases.

| | | | |
|------------------------------|-----|------------------------------|----|
| 1st: Amaurosis - - | 50 | Hypertrophy - - | 4 |
| Acute ophthalmia - | 68 | Complete loss of the eyes | 36 |
| Chronic ophthalmia - | 40 | Total loss of one eye | 11 |
| Purulent ophthalmia - | 21 | Tumors of the eyelids | 2 |
| Rheumatic ophthalmia | 2 | Tumors from the conjunctiva | 5 |
| Ophthalmitis - - | 12 | Injuries in the eye from | |
| Ophthalmia tarsi - | 18 | bamboo - - | 3 |
| Ophthalmia variola - | 25 | Paralysis of the muscles | |
| Conjunctivitis - - | 13 | of the lid - - | 3 |
| Hordeolum - - | 10 | Quivering lid - - | 1 |
| Cataract - - | 56 | Obstruction of nasal duct | 1 |
| Entropia - - | 89 | | |
| Trichiasis - - | 24 | 2d: Abscess of the arm - | 1 |
| Pterygium - - | 47 | Abscess over the mastoid | |
| Opacity and vascularity of | | process communicating | |
| the cornea - - | 168 | with the ear - - | 4 |
| Ulceration of the cornea | 43 | Abscess of the parotid gland | 1 |
| Nebula - - | 40 | Abscess of the hand - | 2 |
| Albugo - - | 43 | Abscess of the head - | 1 |
| Leucoma - - | 13 | Abscess of the face from | |
| Adipose or fleshy thickening | | carious tooth - | 1 |
| of cornea - - | 14 | Anasarca - - | 3 |
| Staphyloma - - | 39 | Ascites - - | 1 |
| Staphyloma scleroticum | 3 | Cancer of the breast - | 1 |
| Onyx - - | 6 | Cancer of the face - | 1 |
| Iritis - - | 29 | Necrosis of the lower jaw | 2 |
| Synechia anterior - | 8 | Luxation of the lower jaw | 1 |
| Synechia posterior - | 9 | Disease of the lower jaw | |
| Myosis - - | 6 | with great tumefaction | 2 |
| Mydriasis - - | 8 | Benign polypus of the nose | 2 |
| Closed pupil with deposition | | Malignant polypus of the | |
| of lymph - - | 12 | nose - - | 1 |
| Proclivencia iridis - | 2 | Curvature of the spine with | |
| Glaucoma - - | 5 | paralysis - - | 4 |
| Night blindness - | 8 | Phymosis - - | 1 |
| Day blindness - - | 2 | Fistula in ano - - | 4 |
| False vision - - | 2 | Cauliflower excrescence of | |
| Exophthalmia - - | 2 | uterus - - | 1 |
| Scleritis - - | 2 | Sarcomatous tumor - | 4 |
| Choroiditis - - | 2 | Incised tumor - - | 1 |
| Hydrops oculi - - | 3 | Imperforate auditory foramen | |
| Atrophy - - | 10 | - - - - | 2 |

Table : Diseases presented at the eye hospital (1836), 1st are those of the eyes, 2nd other diseases [42].

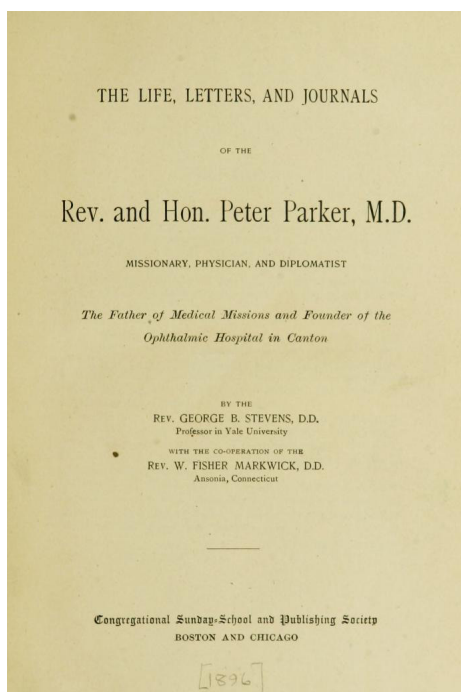


Figure 7: Booklet: Life, letters, and journals of Peter Parker, 1896.

A merchant, called David Olyphant allowed Parker to use one of his warehouses as a hospital “So that patients could come and go without annoying foreigners, by passing through their hongs (行), the factories of legally-licensed Chinese businessmen or exciting the observations of natives by being seen to resort to a foreigner’s house, factors which rendered it most suitable for the purpose” [41]. In 1840, during hostilities between Britain and China, the hospital was closed and Parker returned to the U.S.A. On 29 March 1841 he married Harriet Colby Webster (1818-1896) in Washington D.C. After his return to China in 1842, he reopened the hospital, and the flow of patients was as crowded as before. He served as president of the ‘Medical Missionary Society’ of China after his mentor T.R. Colledge stepped aside before (Table).

(Figure 8) It is not clear whether Miss Smith is a relative of Herbert Eugene Smith M.D. who was Dean of the Yale Medical

School from 1885 to 1910. Parker had a short correspondence with him. The pharmaceutical preparation is an oral one (for a sore throat?), not for an eye disease.

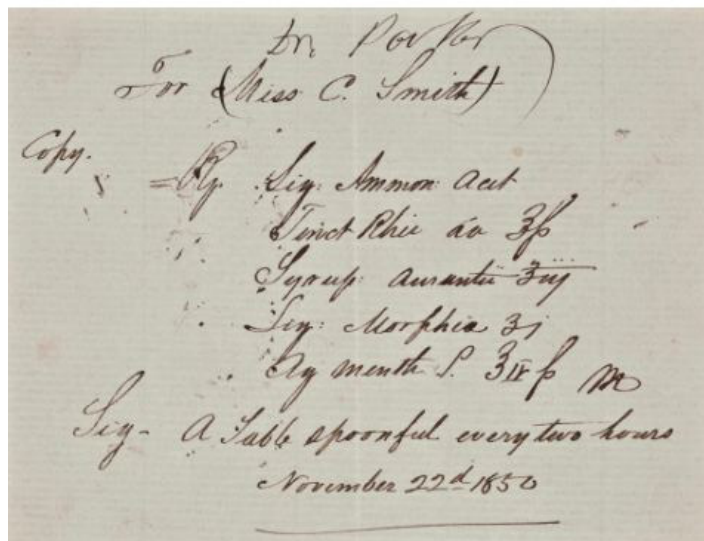


Figure 8: Dr. Parker, handwritten prescription for a Miss C. Smith, dated 22 November 1850 [43].

In 1844, Parker worked as an interpreter and diplomat between the Qing Empire and U.S.A. administration [44], while still keeping the hospital running. However, he was dismissed by the ABCFM in 1847 because the Board doubted ‘the usefulness of medical missionaries’. In 1855, disappointed and with his health seriously impaired, he returned to the United States. He was proud to be asked, in 1856, by the U.S.A. president Pierce (1804-1869) to return to China for further negotiations and to gain more (trade) concessions from the Qing Empire. Parker, however, was unsuccessful in this endeavour and in 1857, his health again failing, he returned to the U.S.A. He became a regent of the Institution in 1868, a member of the American Board in 1871 and as a member of the Evangelical Alliance, stood up for religious freedom. He died in Washington, D.C. in 1888 [45]. The grave of Peter and his wife Harriet are in Washington’s Oak Hill Cemetery (Figure 9) [46].

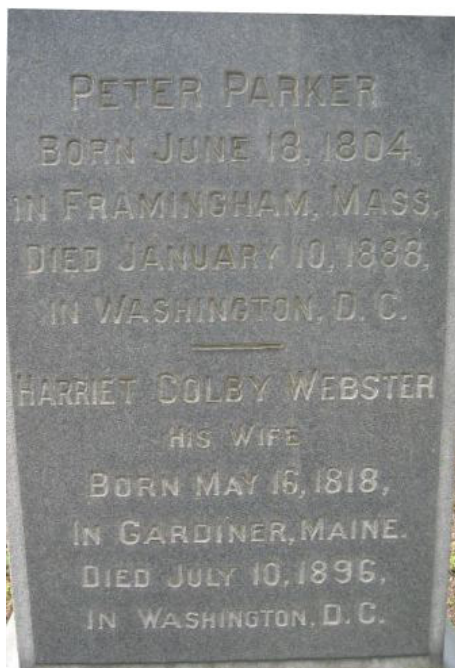


Figure 9: Tomb stone of Parker and his wife.

Lam Qua, his Works of Arts and Biography

While in China, Parker met Lam Qua or Kwan Kiu Cheong (关乔昌) (c. 1801-1860) (Figure 10).



Figure 10: Self-portrait of Lam Qua, 1840. Peabody Essex Museum, Salem, Mass.

He was a Chinese painter from the Canton (Quandong) province in Southern China, who specialised in Western-style portraits mainly intended for Western clients (in the category CTPs). Lam Qua was the first Chinese portrait painter to exhibit in the West. Parker commissioned him to paint patients at the Canton Hospital with large tumours or other major deformities. From 1836 to 1855, Lam Qua produced a series of medical portraits, mainly pre-operative portraits of his patients (Figure 11).



Figure 11: Lam Qua, A man with bilateral ectropion (inflamed and reversed lower eyelids), oil-painting, 1830–1850, Yale University, Portrait No. 81.

Some of these paintings form part of the collection of Lam Qua's work held by the Peter Parker Collection, at the Harvey Cushing/John Hay Whitney Medical Library at Yale University [47]. Parker left these portraits to the Pathology Department of the Yale Medical School, which later gave them to the Library. These vividly realistic but grotesque paintings with great individual personality were intended to be objective in their presentation of painful cases by focussing on the disease [48]. They also fit in the art category of 'Scientific Realism' as they give the reality meanwhile pointing to the unvisionable a message of suffering and healing skills of the doctor. Hayot explores this aspect further, from a Western and Chinese point of view [49]. Gilman states that Lam Qua's painting of Parker is clearly similar to Chinnery's portrait of T.R. Colledge and compares the positions and roles of the figures, which emphasise (the power of) Western science [50]. Apart from his medical portraiture [51] he was known for his portraits of Western and Chinese merchants in Canton and Macau. He had a workshop in 'New China Street' (同文街) among the 'Thirteen

Factories' (十三行) or the Shisan Hongs, Trading Houses of the 'Barbarians' (夷) where Hong businessmen and the people of the Western Trade Companies met in Canton [52]. Lam Qua is said by some contemporaries to have studied with Chinnery (see above) in the 1820s although Chinnery himself denied this. Lam Qua became well-known and skilled in Chinnery's British style of portraiture [53]. He developed a following among the international community in Canton undercutting Chinnery's fees.

The Representation in the Portraits

In the two portraits of Chinnery and Lam Qua discussed here a Western drawing style is seen with an arithmetical perspective, realistic settings and Western figures who dominate the scene. The doctor is in the centre, standing or sitting, dominant and self-aware, epitomising the values of scientific ideas of medicine, the Protestant religion and protagonists of the modernization of China. These are all elements of a new era for China, cooperating with western nations, regarding politics, trade and science. The patients are to one side, their faces only half or not at all visible. Their clothing and complexion is Chinese, the assistants are also Chinese (under Manchu reign). In the missionary hospitals a new doctor-patient relationship was established with doctors at the dominant position. That the reception was good can be seen from Chinese people's feelings of gratitude to the medical missionaries. Such good doctor-patient relationships were the results of common action of multiple factors, including Christianity, free medical charges, humanistic management ideas, the avoidance of medical risks and respect for traditional Chinese culture's family concepts and more. Their disease however, which forced them to seek help is important and the Western doctors could offer help with modern medical scientific knowledge (and religious charity) to rid them both of disease and their state as heathens, a situation it was generally believed at the time, to be akin to barbarity. In the paintings, the doctor did not look into the eyes of individual patients to seek a 'Call for help' [54] his (scientific) focus was on the disease. In this new moral vision of humanity the unique person disappears. This helped Colledge, and even more so Parker to shine in his lectures

to his colleagues back home, for the sponsors, in publications, and portraits. The painters themselves enjoyed their skills-drawing in the 'English Grand Style' of Reynolds and Gainsborough-and made \$10 per painting, more than their fellow-painters of Chinese subjects which cost only \$8 [55]. The Chinese observer of the paintings in those days would feel alienated due to the strange perspective, the unfamiliar portrait aesthetic and the un-Chinese representation of disease, neither abstract nor symbolic, and a relative denial of the concepts underpinning Traditional Chinese Medicine (TCM) [56, 57].

The Scientific Realism styles

The two paintings presented in this paper can be compared with four paintings from the movement of scientific realism (1840s-1880s), the precursor of modernism (Figures 12-15). First is 'The Gross Clinic' an oil-painting by T.C. Eakins, 1875. The core of the work is the physician S.D. Gross, in a rembrandtesque way surrounded by students and assistants in a medical amphitheatre. Now in the Philadelphia Museum of Art and the Pennsylvania Academy of Fine Arts (Figure 12). The second is 'Before the operation', by Henry Gervex (1887) showing Dr Pean, teaching at Saint Louis Hospital, in Musée d'Orsay, Paris (Figure 13). Third is 'The Doctor' by Sir S.L. Fildes (1891) showing the family doctor in the poor folks' home with a sick child; this Dickensian painting was used in a political campaign with the slogan 'Keep politics out of this picture' with 65,000 posters spread, a new concept of merchandizing by the insurance companies (Figure 14). The fourth is 'Theodor Billroth Operating' by Adalbert Franz Seligmann (c. 1890) showing the German surgeon operating in the auditorium of Vienna General Hospital, significantly showing all the participants wearing 'white coats', a model for hygiene. It is on display in the Österreichische Galerie Belvedere, Vienna, Austria (Figure 15). The painters in this style present a true account of the physical world, around the (famous) doctor, his patients and students as a proof of up-to-date scientific theories (technical operations, hygiene procedures like white clothes, or care programs), figuring in a historical process of progress, making genuine, existential claims [58].



Figure 12: 'The Gross Clinic' by T.C. Eakins, 1875.

Figure 13: 'Before the operation', by Henry Gervex, 1887.

Figure 14: 'The Doctor' by Sir S.L. Fildes, 1891.

Figure 15: 'Theodor Billroth Operating' by A.F. Seligman, c. 1890.

Figures 12-15: Examples of the Scientific Realistic style.

Books on Ophthalmology, in English and Chinese c. 1833-50

On the painting of T.R. Colledge some western books are visible. Ophthalmological books in English that could have been in his library at that moment (in alphabetical order): George Guthrie, *Lectures on the Operative Surgery of the Eye* (Haymarket: Burgess and Hill, 1823); William Lawrence, *A Treatise on the Diseases of the Eye* (London: H.G. Bohn, 1833); Squier Littell, *Manual of the Diseases of the Eye* (Philadelphia: J.S. Littell, 1837); William Mackenzie, *A Practical Treatise on the Diseases of the Eye* (London: Longman, Rees, Orme, Brown & Green, 1830); John

C. Saunders, *A Treatise on some Practical Points Relating to the Diseases of the Eye* (Philadelphia: B. Warner, 1821); Benjamin Travers, *A Synopsis of the Diseases of the Eye and their Treatment* (London: Longman, Rees, Orme, Brown & Green, 1824); William Clay Wallace, *A Treatise on the Eye* (New York: Samuel Colman, 1839); James Wardrop, *Essays on the Morbid Anatomy of the Human Eye* (Edinburgh: G. Ramsay, 1808-18) [59].

On the painting of Peter Parker the Chinese books could be Chinese translations of Western works on Ophthalmology e.g. in Hobson's *Treatise on Physiology* [60]. Sing gives a detailed account of the complicated process of 'Sinicizing Western Science'

[61]. However, authentic Chinese Works on Traditional Chinese Medicine are also possible as many patients around Canton liked this type of approach. The author Sun Simiao (孙思邈, died 682 AD) wrote 'Subtleties of the Seven Seas' (银海精微, 1368?), which has had great impact on Chinese Ophthalmology until today. Also Renyu Fu's (审视瑶函, Shenshi yao han) [Precious Book on Ophthalmology] 1644 was influential [62]. Chen gives an overview in which he nicely illustrates the practically autonomous growth of this specialism in China [63]. More recently the progress of technology in China over time is subject of (medical) scientific research. Needham, Spence and others have contributed to open this rich domain of knowledge [64].

Discussion

The two ophthalmologists, Parker and Colledge, trained in the science and skills of medicine in their country of origin, travelled to China, but they both held a strong conviction that they should help alleviate both the spiritual and physical misery they had heard about. The city of Macau had been open to Westerners for a long time (since 1600) but the medical work they initiated for local people was quite new and worth an anthropological approach [65]. The doctors were both devoted theologians/missionaries and faith-driven in their actions. For many years missionaries from Europe and U.S. worked in China, but well-organised medical work had not begun until Colledge c.s. started [66]. As practising medicine took up most of their time their pastoral role came second and this was a drawback for their sponsoring organizations. In their correspondence the doctors struggle with this issue and recognise that their basic ethical and theological education was insufficient to tackle the strange ideologies of the East and handle the reactions of a people who looked upon the doctors as 'Barbarians' practicing witch-craft and their religious message as 'Superstition' [67]. Nevertheless, despite mutual doubts about intentions the encounter between Europeans and Chinese was in several ways fruitful and many profited from ophthalmology practised as a science.

The study of the anatomy of the eye and the understanding of the mechanism of vision paved the way for the new pathophysiological insights and clinical progress of the nineteenth century. After 'Couching' (an old technique of dislodging the lens, thus removing the opacity) [68], innovative techniques were developed for handling cataract. The first half of the nineteenth century was a remarkable period of consolidation and the second half brought the operative treatment of glaucoma, whilst the ophthalmoscope opened a world undreamt of, uplifting ophthalmology to the most exact of clinical specialties [69]. An increasing list of publications and translations reflects these facts [70]. Both doctors make a professional career in this field which is obvious from the two discussed paintings, their recorded papers and care results. One has to acknowledge that hospital administration and medical education were well organised in this far off place as the reports show and

these efforts laid a firm basis for modern ophthalmological care and dissemination of scientific ideas in China [71].

Conclusion

With the critical evaluation of the two paintings and four similar pieces of European material culture, considering the underlying thesis of truth in (medical and theological) science it is demonstrated that it lay a foundation for anthropology with (inter) cultural, non-western, social, medical, scientific and religious aspects, in that time and place. The two ophthalmologists, discussed in this essay were shown to be real members of the community of early scientists that helped to shape modern China. The information from medical, social, historical and philosophical perspectives give a good impression of the ideology, scientific innovations and performance of the two western ophthalmologists and their painters. The CTPs form a specific genre in visual art and material history, often being a true blend of Eastern and Western elements, regarded by many observers-even today- as rather esoteric, difficult to place from an aesthetical point of view, mediocre in quality, nevertheless prized collectors' items, documenting the episode. The representation of patients in paintings with an accent on the disease instead of the person was a new element, especially in the Chinese environment [72].

The (East) Asian Study approach tries to focus on the worth of the country and people in focus, however, scientists in the field have noticed a 'Gap' with traditional 'Orientalism' [73].

This was the reason why I undertook thorough research of both doctors' and painters together with a detailed description of their works in conjunction in order to highlight the narrative they bring. More effort should be put into closer cooperation between researchers from medical, socio-cultural and art disciplines both from east and west, wherever they meet. In my opinion this type of analysis, in an international dialogue, could bridge gaps in mutual respect.

Acknowledgements

The author wishes to thank Museum Boerhaave of Medical History in Leiden, The Netherlands and the Maritime Museum Rotterdam, The Netherlands for their kind support. I am also grateful to Miss Yi Chieh SHIH (施以潔), Department of History and Art, University of Geneva, Switzerland; Prof. J.R. Vingerling, Head of the Dept. of Ophthalmology of Erasmus Medical Center Rotterdam, The Netherlands; and Prof Mrs. M.B. CHING, (程美寶) Department of Chinese and History, City University of Hong Kong who helped with critical suggestions; also the support of Erasmus University China Center (EUCC, 伊拉斯姆斯大学·中国事务部), Erasmus University Rotterdam, The Netherlands is much appreciated. Figures and Table stem from public domains or permission was granted.

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