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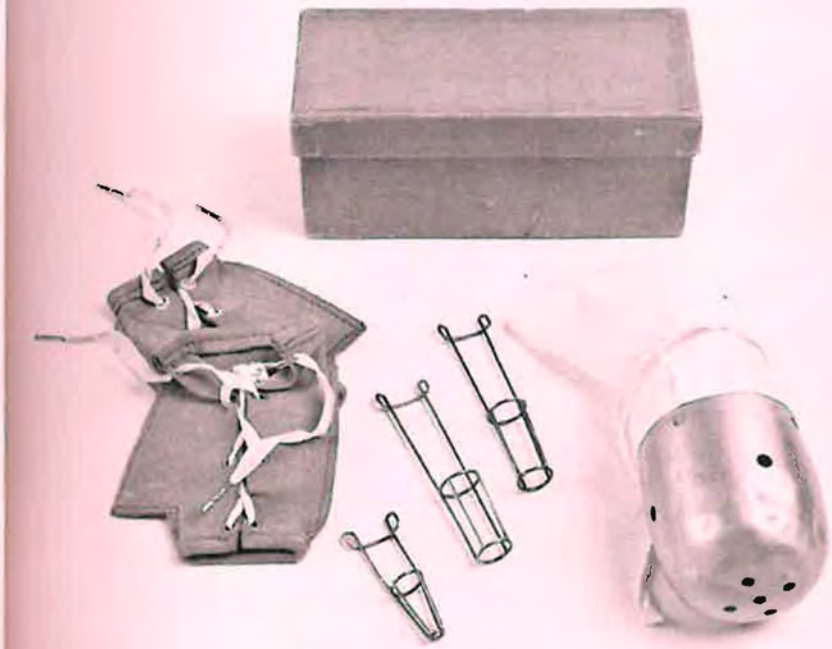

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DENTAL HISTORIAN

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THE LINDSAY SOCIETY
The History of Dentistry

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In Britain: members of the British Dental Association, dental students and other interested persons not dentally qualified. Overseas: all dental practitioners and other interested persons not dentally qualified. Membership applications should be sent to the Honorary Secretary, Dr Brian Williams, 14 Howard Road, Great Bookham, Surrey, KT23 4PW.

Subscriptions
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Dental Historian
Persons wishing to submit a paper for publication (ideally as an email attachment) should send it to one of the co-editors of *Dental Historian:*
Professor Stanley Gelbier *at* sgelbier@yahoo.co.uk; or
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Dental Historian is sent free to members. Non-members wishing to purchase a single issue can do so by sending a cheque for £15 sterling made out to the Lindsay Society for the History of Dentistry to the Distribution Manager, Dr Geoff Garnett, Hey Barn, Back Lane, Newton-in-Bowland, Clitheroe, Lancs, BB7 3EE.

EDITORIAL

This and the next issue of Dental Historian are co-edited by Prof Stanley Gelbier and Dr Margaret Wilson. She has been the honorary curator of the dental museum in the Manchester University Dental Hospital for 15 years, has contributed several papers to Dental Historian and lectured to the Lindsay Society on the history of dentistry. She is delighted to have the opportunity to initially work with Stanley Gelbier as co-editor as part of a transition to assume the sole editorship of the journal in January 2014.

Some readers were amused by a picture in the last issue showing Peter Heffer teaching dental students. The girl on the right is Margaret Mitchell who became Dame Margaret Seward, President of the GDC, Chief Dental Officer to the Department of Health (England), Editor of the British and International dental journals and longstanding member of the Lindsay Society. She says the picture was the first (of many) dental photograph in which she appeared, taken for a dental recruitment publication.

In this 50th anniversary year Stuart Robson describes the origins of the Lindsay Society. Stanley Gelbier has a particular interest in the memoire by Laurence Oldham. He was a dental clerk/orderly (dental surgery assistant) at the Air Ministry Unit during part of Oldham's service there. Both were National Servicemen. Another service story is of Leslie Cheeseman's time as a dental clerk orderly in wartime India; but another article tells of his activities as a leading umpire. There are two articles on the fight for early lady dentists to gain qualifications. Papers on leading dentists are on Loma Miles (UK), François-Joseph Talma (France) and Guillermo Carlos Trigo (Argentina). There are also articles on some early work of Angle and Cunningham and on an immigrant dentist and one who had a transplant. Finally there is news from the Lindsay and Henry Noble Societies. All the authors are thanked for their well-penned contributions.

FRONT COVER: THUMBS GUARDS AND BABY MITTS: Rachel Bairsto[+]

Thumb or digit sucking was a great worry to parents in the early twentieth century. It was viewed as a dangerous habit, not only because of the dentoaveolar changes prolonged sucking could lead to but also because it could result in expensive orthodontic treatment. A 1937 newspaper article made interesting comments on the type of child prone affected: "There are certain types of babies for whom thumb sucking is a really serious habit. These are the thin undernourished children who are the victims of rickets." The author suggests that there are different types of thumb-sucker: some have a vacant expression almost as if they have taken a narcotic; others sucks so violently that they can be heard across the room. Thumbs guards and baby mitts were recommended to combat this habit. The babe mitts, also known as metal socks, date from 1906. They fitted over the babies hands and wrists. The thumbs guards worked in a similar way and were tied to the fingers with ribbon.

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ORIGINS OF THE LINDSAY SOCIETY FOR THE HISTORY OF DENTISTRY

Stuart Robson*

Introduction

On the special occasion of the Society's Golden Jubilee Conference in Cardiff as a historical institution it was appropriate that a short review of its own history was apposite. I have drawn heavily on the minute books.[1]

In 1962, it was decided there should be a club for the study of the history of dentistry. The prime movers of this project were J Archie Donaldson, editor of the *British Dental Journal* and Jim E McAuley. The group they gathered around them decided that the club should be named the Lindsay Club to honour and perpetuate the memory of Lillian Lindsay CBE. This remarkable lady was the first female dental graduate in the United Kingdom, qualifying with honours at Edinburgh Dental School in 1895. Apart from dentistry she was a great historian and a self-taught linguist with an additional interest in literature. She had many academic and personal honours bestowed on her, including being elected the first lady President of the BDA in 1946. Sadly she passed away in 1960, two years before the Club was founded.

The Lindsay Club

The inaugural meeting of the Club was held on 18 October 1962, so October 2012 marks the Golden Jubilee of what was then the Lindsay Club. It has since been re-designated the Lindsay Society. Why the title changed from Club to Society is a mystery lost in the passage of time, probably one of those things that was considered a good idea at the time! Perhaps the word Club has sporting connotations whereas Society resonates more as a learned organisation.

The first chairman was Ronald Cohen, a learned dental historian. His widow, as Muriel Spencer, is a former librarian of the British Dental Association. She is still a member although getting on in years and living in Leamington Spa. The secretary was McAulay and the treasurer, Donaldson. Leslie Godden, a former editor of the *BDJ* and Desmond Greer Walker, President of the BDA in 1963, completed the committee.

The Club received the approval of the then BDA Council and became a small but nonetheless a constituent part of the BDA, although curiously it was associated with rather than affiliated to the BDA. Presumably this was to make it independent of BDA finances so it had to be self-supporting.

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President Lindsay Society, 2010-12.

[1] *Minutes of Lindsay Society meetings,* 1962-2012.

To go back to the beginning

It is worth digressing a little at this juncture to look at how and why the Lindsay Club was conceived. Jim McAuley had an inherent curiosity in extraneous medical and dental details which led him to seek the origins of anatomical eponyms, that is to say the origins of personal names associated with names such as Paget's Disease or Sjogren's Syndrome. He wanted to know more about them. Pursuing this interest, when he was in Army Dental Corps during World War 2, McAuley was passing through London with half a day to spare, so he called into the BDA headquarters at 13 Hill Street, in Mayfair. He visited the library where he met Lillian Lindsay, who by then was the BDA's librarian. Later he was posted to command a Field Dental Unit attached to the special forces being gathered in Burma by Orde Wingate, know as the Chindits. Owing to the monsoon weather McAuley had time to spare so he wrote to Mrs Lindsay asking for some reading material about dentistry and allied topics to pursue his curious hobby. She sent some things to him and they started a friendship.

After demob from the army his interest in medical and dental history led McAuley to join the Osler Club of London in 1952, although this was mainly medical based. Osler was the Professor of Medicine at Oxford and was elected the first President of the Royal Society of Medicine's History of Medicine Section, a position that he was succeeded in by Mrs Lindsay. The Osler Club was very successful and led McAuley to wonder about founding a similar body devoted solely to the history of dentistry.

In 1960, he contacted Leslie Godden, then editor of the *BDJ*, who in turn suggested that they should get Archie Donaldson involved. This triumvirate of McAuley, Godden and Donaldson developed the idea together and. with enthusiastic input from Ronald Cohen and later John Menzies Campbell, they had an exploratory meeting in March 1962. They drew up a constitution which indicated that membership would be limited to members of the BDA, "other than overseas dentists and others not dentally qualified"

The first meetings

For the first meeting was held in October 1962 when the guest speaker was Sir Zachary Cope, a renowned medical historian. His address was entitled 'The Tomes Tradition'. As far as can be ascertained it was largely about how dental education for undergraduates had evolved. Thirty members were present at Hill Street to hear this lecture and refreshments (unspecified) were provided.

Subsequently several members of the Osler Club not only joined the Lindsay Club, but also presented lectures on such diverse subjects as dental anaesthesia, relationships between dentistry and medicine, history of the theories of tooth decay and dentistry in the armed services. In that connection the 50th Anniversary of the Army Dental Corps was in 1971 when, at their invitation, a joint meeting was held at the RADC headquarters in Aldershot. A history of the RADC Museum was presented by the then curator, Staff Sergeant Poole.

Looking through the minutes there were some other fascinating meetings. On one occasion, Cohen organised a visit to the Vale of Evesham to explore the family history of the man who might be considered to be father of the science of dentistry in the UK, Sir John Tomes. They visited St Peters Church at Welford on Avon where Tomes's parents were married and John was baptised in 1815, and then to Weedon where Sir John's first child John, who died aged 3 in 1848, lies in a family vault.

Another curiosity was a paper given by McAuley on Paul Revere, a famous 18th century dentist in Boston, Mass in the USA. He was involved in the American War of Independence in 1775 and spawned the well known poem by Longfellow:

> "Listen my children and you shall hear, of the midnight ride of Paul Revere, on the eighteenth of April in seventy five'."

Revere rode from Boston to give early warning about the advancing British army which resulted in the battles at Concord and Lexington. The curiosity is that Paul Revere's great granddaughter was Lady Grace Osler, wife of Sir William Osler who founded the Osler Club previously mentioned: shades of the TV programme 'Who do you think you are'!

Over the years the Club and later the Society met each autumn, usually at attractive venues with some local history, ranging from Utrecht, Malta, York, Edinburgh, Winchester, Lancaster, Stirling, Bournemouth and Ironbridge. A successful joint symposium was held at Dumfries with the Henry Noble Research Group based in Glasgow.

Looking to the future plans are afoot for a joint venture with the Royal Odonto-Chirurgical Society in Edinburgh in 2017.

At this Golden Jubilee time, it is worthwhile to reflect for a few moments on the half way stage, the Silver Jubilee meeting held in York 25 years ago with a range of delegates aged between 25 and 90.[2] [3] Muriel Cohen who is mentioned above, spoke about Mrs Lindsay; and Dr Christine Hillam, a long time member and author of *The Roots of Dentistry*[4] gave an excellent paper about dentistry in York in the 18th century. That meeting was enhanced by a visit to York Minster library to see the original of Charles Allen's 1685 book *Operator for the Teeth*, the first dental textbook printed in English. Also there, are some excellent illustrated manuscripts relating to St Apollonia the patron saint of toothache sufferers who has since has been adopted to encompass dentistry.

[2] J E McAuley, Foundation of the Lindsay Club, *British Dental Journal* 1988; 165: 419.
[3] M A Clennet, Lindsay Club Silver Jubilee Conference, *British Dental Journal* 1988; 164: 90, 360.
[4] C Hillam (ed.) *The roots of dentistry,* London: British Dental Association, 1990.

Dental Historian

This potted history of the Society would not be complete without reference to the journal *Dental Historian.* This publication started as a newsletter in 1975. Under the guidance of Christine Hillam and Margaret Clennett it developed into the booklet published every six months with which we are now familiar and whose circulation is way above the membership numbers. Latterly this journal has developed further due to the efforts of Dr Geoff Garnett and Professor Stanley Gelbier to whom the Society is most grateful. The other publications attributed to the Society are *The Advance of the Dental Profession*[5], a comprehensive hardback history of the BDA edited by Ronald Cohen, and a booklet about Lillian Lindsay 1871-1960.[6]

Relations with the BDA Museum

Not unnaturally, there has always been a close relationship between the Lindsay Society and the BDA Museum, maybe never more so than currently under the patronage of Museum Director, Rachel Bairsto, and her colleagues. Its education officer, Melanie Parker, frequently presents historical papers at Lindsay Conferences and contributes to *BDA NEWS* and *Dental Historian.* Members of the Society have worked over many years as volunteers in the museum, identifying items, aging them, cataloguing them and otherwise supporting the organisation which is amongst the best small museums in London attracting many lay visitors and school parties.

The Society's excellent relationships continue to this day. For example the Society provided seed corn funding for the purchase of a 1929 portrait by Sir John Lavery. Titled 'The Dentist' it now adorns the BDA headquarters in Wimpole Street, London. Some of our members contribute to the John McLean Archive project, eg by interview people for oral histories of dentistry. The Lilian Lindsay Memorial lecture at the annual BDA Conference is increasing successful and has attracted speakers of world renown including Professor Nairn Wilson, former President of the General Dental Council. Elsewhere in this issue of *Dental Historian* can be seen the latest list of speakers, talking in Cardiff.

A new logo for the Society

The Committee decided to mark this Golden Jubilee by designing a logo to enhance the identity of the Society. After seeking several options a final version, illustrating the book of life and the association of dentistry with medicine and in the BDA's corporate colour to reflect the close links between the two organisations, was designed by a marketing firm in Daventry called FUEL.

[5] *The Advance of The Dental Profession* (ed R A Cohen), London: British Dental Association, 1979.
[6] *Lilian Lindsay 1871-1960* (ed R A Cohen), The Lindsay Society, circa 1969.

THE LINDSAY SOCIETY
The History of Dentistry

Finally, as ever, the success or otherwise of a Society depends on the enthusiasm of the members who undertake its organisation and administration. Apart from all those already mentioned, a historical appreciation must be accredited to a former secretary Dr Anne Hargreaves, treasurer Dr Peter Frost, the current secretary, Dr Brian Williams and former chairmen Dr John Beal, Dr John Craig and Professor Robin Basker amongst many others.

WOMEN DENTISTS AND THEIR PATH TO RECOGNITION

Julie Papworth *

Women in medicine

The story of women's fight to be accepted into the medical profession is a well told one. Their path was not easy and numerous examples can be found of the prejudices they faced. The stories of the abuse endured by some of the early female pioneers fill the reader with admiration that women persisted through episodes such as that reported in the press in 1870:[1]

An unseemly disturbance took place yesterday afternoon in front of the Royal College of Surgeons, Edinburgh. About 100 students congregated around the gates at the hour when the female students enter the place to attend lectures and, as they approached, the students howled, hissed and cheered the ladies. Some less gallant than the others closed the gates and kept the ladies standing among a large crowd who jostled them in an unbecoming manner. Eventually the gates were opened and the female students entered the class-room amidst a perfect storm of hisses and cheers.'

Even the great Professor Lister, so far sighted in many ways, was reported as saying that,[2] "it passed his comprehension how anyone who knew what surgical study was, could entertain for a moment the idea of having ladies admitted to study surgical cases along with young men." He considered that "the medical profession was, of all others not excepting the military profession, that for which ladies were least adapted."

His view was a common one. It was felt by many men that:[3]

Ladies generally know they have already a fair share of power, and that its basis is not political or professional, but social and domestic; and they comprehend that they can better serve the proper purposes of their lives than by taking University degrees and entering in to the hard conflicts of the world of public life and the rough contests of men.

Additionally it was perceived that there were significant "considerations of delicacy about ladies studying with men in anatomical and physiological classes."[4]

Despite all the barriers in her way Elizabeth Garrett Anderson succeeded in qualifying as a doctor: after she passed the Society of Apothecaries' examination in 1865 she became the first British qualified woman to have her name entered on the Medical Register. Others followed in her path and very gradually, thanks to their

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[1] *Dundee Courier & Argus* (Dundee, Scotland) 19 November 1870; Issue 5398.
[2] *Liverpool Mercury* (Liverpool, England) 27 December 1871; Issue 7466.
[3] *The Dundee Courier & Argus* (Dundee, Scotland) 10 November 1862; Issue 2886.
[4] Ibid.

examples of professionalism, the difficulties began to ease. By 1899 it was estimated that there were 'in London and the provinces no fewer than 37 institutions officered wholly, or partially, by lady doctors and there are nearly two hundred registered medical women who have been educated at the Handel Street School or The Royal Free Hospital in Grays Inn Road'.[5]

Women and dentistry in Britain

In Britain, the development of the dental profession and the progress of women within it followed behind that of the medical profession. The first hospital devoted to the teaching of dentistry whilst providing care for poor people was the Dental Hospital of London which was opened by the Odontological Society of London in 1858. It provided formal education as well as training for students from 1859 onwards. Also in 1859, the Metropolitan School of Dental Science was opened by the opposing College of Dentists to provide lectures and demonstrations in dentistry. Facilities for clinical work in dentistry were provided later when the College opened the National Dental Hospital in 1861.[6] However, it was to be almost thirty more years before opportunities arose for women dentists to train there.

In February 1887 it was reported[7] that 'The Committee of the National Dental Hospital, 149 Great Portland Street, has resolved to admit female medical students to the practice of the hospital'. At the Annual Meeting of the Hospital the Secretary explained that "the principal object of the Committee was to admit those ladies who intended practising in India in connection with the Zenana mission".[8] Later that same year, Arthur G Klugh, Secretary to the National Hospital and College, wrote to several newspapers with the following request:[9]

Sir, - The committee desire me to ask if you would kindly announce through your columns that they have resolved to admit ladies to be trained as dentists at this hospital. This is a further step to that which you have already announced – viz., that registered female medical students are admitted to the practice of the hospital. This admission of the lady medical students was induced by the fact that ladies could not obtain the necessary dental education at any general hospital and that this want was particularly felt in those cases where ladies intended practising abroad, or in India in connection with the Zenana Mission. This recent resolution is owing to the fact that although ladies could obtain qualifications from licensing bodies entitling them to practise as dentists the necessary education to enable them to do so is not provided in England. Calendars and all information may be obtained on application to the Dean.

Very quickly the popular press commented on this announcement. Only two days later *The Standard* reported:[10]

[5] *Leicester Chronicle and the Leicester Mercury* (Leicester, England) 29 July 1899; Issue 4627.
[6] It was later incorporated into University College Hospital.
[7] *The Standard* (London, England) 15 February 1887; Issue 19530, p 3.
[8] *British Journal of Dental Science*, 1887, Report of the Annual Meeting of the National Dental Hospital, pp 341-342.
[9] *Daily News* (London, England) 13 October 1887; Issue 12952.
[10] *The Standard* (London, England) 15 October 1887; Issue 19738, p 5.

The announcement that the Committee of the National Dental hospital have decided to admit female medical students is a sign that yet another profession is being more fully thrown open to women. At present ladies can practice as dentists in this country and a certain number of them do. But their difficulty is that there exists no means of training them in England, so that the lady dentists have necessarily to go to the expense of acquiring their professional education in countries where all branches of medical instruction are available to both sexes. This disability is now removed by the action of the Great Portland Street authorities so that there is nothing to prevent ladies who have the means and the inclination to qualify themselves for the practice of a decidedly useful vocation. At first sight it would seem that there are some drawbacks to women's success in the sphere of dentistry. Most people who have sat in the dentist's chair of torture (and who in these days of neuralgia and dyspepsia has not?) must have come to the conclusion that no small amount of nerve and physical strength is required by a successful operator. Of the former quality women have again and again shown that they possess an abundant share; and we need hardly fear that a female dentist will flinch in using the awe-inspiring implements of her craft. Whether the delicate hand of the lady operator will be equal to the terrific tugs and wrenches that seem to be required before the sufferer is released from a throbbing molar is more doubtful; but probably modern science has placed within her reach the means of counteracting inferiority in muscular strength.

The writer went on to reflect that 'the craft is obviously one that needs quickness, neatness and delicacy of touch and eye, and in all these things women are not commonly deficient.' After considering the various careers available to women and the difficulty that many women experienced in earning a decent living in any of them, he concluded that the change would greatly benefit women as:

Girls who really know how to do something useful can generally manage to get remunerative employment. Hence, girls who are thinking of earning their own livelihood should begin by learning one of those useful practical arts such as dentistry which are always required.

The opportunity that the change afforded to train women who wanted to work as Christian Missionaries ensured its wider acceptance. One reporter noted approvingly the benefits that it would bring to the Zenana Mission, writing:[11]

The want of knowledge of dentistry has been severely felt by those ladies who practice as doctors in India in connection with the Zenana Mission. It is well known that the native women in that country suffer much in the seclusion of their Zenanas from the want of proper medical attendance, as the utmost jealousy is shown in admitting medical men, even when life or death is in question; and the European ladies who have gone out there to practice have been eagerly welcomed. It is evident that skill in dealing with diseases of the teeth should be a most important part of their qualifications, the relief of suffering being a chief object of the mission. Most of them are, of course, Englishwomen and it seemed a very grave defect that, when preparing at home for the exercise of the profession they have chosen, they should be unable to procure instruction in dentistry. It certainly seems a little singular that such should have been the case for none of the ordinary objections advanced to women mingling with men in medical training classes apply to dentistry. That it has

[11] *Liverpool Mercury* (Liverpool, England), Monday, October 17, 1887; Issue 12408.

been so suggests in what a variety of ways women have been handicapped in the race of life, and how slowly fair-play towards them makes its way. This action of the authorities of the Dental Hospital, however, is an indication that matters are advancing in the right direction, and that the artificial restrictions and barriers which have hitherto hindered women taking their proper place in the ranks are gradually but steadily disappearing.

News of the new regulation quickly spread around the country. Although the 'Lady' writing her weekly 'Feminine Fashions and Fancies' column in a Newcastle paper[12] had to confess that she had "always thought that a dentist's was a most uninviting profession" she was quick to praise "the liberality of spirit displayed by the Council of the National Dental Hospital who not only are willing to admit students to their classes, but express their readiness to recognise them professionally."

Punch magazine wrote a poem in recognition of the new idea.[13] Entitled 'To a Lady Dentist' it went as follows:

Lady Dentist, dear thou art,
Thou hast stolen all my heart;
Take too, I shall not repine,
Modest molars such as mine;
Draw them at thine own sweet will;
Pain can come not from thy skill.

Lady Dentist, fair to see,
Are the forceps held by thee;
Lest those pretty lips should pout,
You may pull my eye-teeth out;
I'm regardless of the pangs,
When thy hand extracts the fangs.

Lady Dentist, hear me pray
Thou wilst visit me each day;
Welcome is the hand that comes –
Lightly hovering o'er my gums.
Not a throne, love, could compare
With thine operating chair.

Lady Dentist, when in sooth
You've extracted every tooth,
Take me toothless in your arms,
For the future will have charms:
Artificial teeth shall be –
Work for you and joy for me!

Another writer thought the change would be particularly welcomed by men. He was so enthusiastic about the news that he too wrote a poem:[14]

[12] *The Newcastle Weekly Courant* (Newcastle-Upon-Tyne, England) 21 October 1887; Issue 11101.
[13] *Punch Magazine, 29* October 1887, p 195.

When molars or incisors
Are racking us with pain,
When radical advisors'
Prescriptions are in vain;
And when in our despair we
Resolve to "have it out"
Then to the lovely fair we
Shall rush without a doubt.

Oh, woman, says the poet
So coy and hard to please;
You're angels though – we know it
When we are ill at ease
And if, when brows are troubling,
You comfort us, forsooth,
Your cares you will be doubling
When 'tis an aching tooth.

When angels then attend us,
Though with grim forceps armed,
We'll own, should Heaven send us
The toothache, we are charmed;
And doubtless every true man
Will love an aching jaw
When woman, "lovely woman"
Is near at hand *to draw*.

Others[15] also thought the move would be especially welcomed by men. After remembering "the awful shrieks which he used to hear when he had chambers near the Hospital" one writer decided that it was:

Probably with a view to gentler manipulation that this great reform is being effected, the teeth will be 'coaxed out' as it were, not yanked from the mouth as thought they were tied to the end of a thunderbolt; besides, full-grown men will be ashamed to set up a yell that can be heard half a mile off when a gentle, dark eyed girl, with a delicate wrist and a pensive smile says 'Hold still, I shan't hurt you'.

However, the same article recounted several stories which showed that not all women dentists were gentle dark eyed girls, or ministering angels. The first story showed that lady dentists could have a vengeful streak:

'A trick was played some years ago by a lady dentist at Havre. In her early days she had had the misfortune to come before the *juge d'instruction* there and had been treated rather roughly and towards that legal functionary she consequently nourished a secret and burning hate that time had no affect whatever upon. As her fame as a dentist spread however, the memory of the magistrate – now retired – had grown dim and as a result he, all unsuspecting man that he was, called at her consulting rooms one day about his teeth. 'I am' said he 'as you are doubtless aware, very

[14] *Hampshire Telegraph and Sussex Chronicle* (Portsmouth, England) 9 October 1887; Issue 5549.
[15] *The North Eastern Daily Gazette* (Middlesbrough, England) 18 October 1887.

particular about my appearance and my set of false teeth which I got in Paris and which everybody down here believes to be real, are a little out of order. I am the more troubled by this as I hope very shortly to marry a sweet and trustful young lady, and if she had any reason to suspect that these teeth were unreal she might jilt me. 'Can you repair them?' 'Monsieur' said the dentist with a downcast look, 'I should not like to undertake a serious work unless previously indemnified by you in case I accidentally injured the teeth'. 'But that I will give you" said the old beau 'though *pour l'amour de Dieu* I beg you will be careful'. The indemnity signed, the lady took the teeth in her hand, her soul burning for revenge and in a moment or two had irreparably broken them. "It is a pure accident I assure you Monsieur" she exclaimed. But the old man had rolled over in a fit and the *gobe mouches* of Havre used to relate how, for ever afterwards he raved about his lost bride and the spiteful lady dentist.

The second story confirmed the convictions of many that training women in the professions was to take her away from her true calling of marriage and was thus essentially a waste of time: 'Not long ago there was a female dentist in New York who made a great sensation. She was fascinating in appearance and clever in her profession. But she sighed for that consolation which a dentist's occupation can never give. One day a wealthy man went to her and had his teeth drawn. A woman "who can ease paroxysms of pain in that way" said he "would be invaluable in a domestic establishment" and he threw himself at her feet – would she marry him? Being a woman of an intensely business like turn of mind she consented at once, and standing not upon the order of going, hied with her beloved to the minister, had the nuptial knot professionally tied, and went by the night steamer to Cuba, leaving a host of disconsolate clients who had "placed their mouths in her hands" to mourn her sudden departure.

The third, and most dramatic, story destroyed the concept of women carrying out dentistry for purely noble and altruistic reasons: 'The Queen of female dentists was a lady I met in Los Angeles, California about two years ago. She was not an American, but a French-woman, and strange to say she could speak little or no English, being accompanied in the capacity of interpreter throughout her wanderings by one of the roughest specimens of Whitechapel that I ever saw. But though she spoke not their language, she had a very accurate perception of the peculiarities of the Americans and knew exactly what would suit them. She rode from town to town in a gilded and painted coach, which she said had been given to her by Queen Victoria, drawn by four milk –white steeds, and was followed by another carriage in which was a noisy brass band. The morning of her arrival was ushered in by the tolling of the bell of the little old Mexican Catholic Chapel in the Pico-Square dedicated to "all the angels"; there was a procession of 'prominent citizens' headed by a band sent out on the road to meet her, and as she came into the town and drew up close to Pico House Hotel, there was a multitude of excited people to see her. Suddenly by an arrangement of bolts and springs, the carriage was arranged into a sort of surgery, in which there was room for a patient as well as the operator. The lady gesticulated and said something quite inaudible to the crowd, whereupon her interpreter in a hoarse voice shouted, "She can't speak Hinglish but she sez if anybody ull come up 'ere she'ull take all the teeth in 'is 'ed hout without giving 'im any pain." There was a rush for the carriage, a man was hoisted into it, the band

struck up 'The Star Spangled Banner,' the lady put the whip-cord of her whip around the troublesome tooth, gave a flourish of the wrist, and away went the molar. In a week's time she had taken five thousand dollars out of Los Angeles.

Despite the various misgivings it is clear the decision to admit women achieved results. At the annual dinner of the National Dental Hospital in November 1887 Mr Charles S Tomes presided. There were nearly 100 gentlemen present and toasts were drunk to The Dental Societies and to The Staff of the Hospital. In responding to the toasts, Dr Cunningham remarked that "although none was present on the occasion it must not be overlooked that ladies were amongst the students of the hospital".[16]

In December 1887 the 'Lady Contributor' of the 'Hearth and Home' column of the *Manchester Times* reported[17] that a reader had asked her for particulars of dental education. She was able, with apparent confidence, to "recommend her to apply to The National Dental Hospital and College, Great Portland Street, and to the School of Medicine for Women (hon sec Mrs Thorne) Handel Street, Brunswick Square, London W C." She went on to state "there are scholarships in connection with the latter organisation but I do not know the details of the examination".

It soon became clear that considerable difficulties still remained. Over ten years later one furious writer stated:[18]

It was "perfectly exasperating to see the petty jealousy with which some men try to bar the way for women to earn their bread in the professions. Men are willing enough for women to work as nurses because the work is very hard and badly paid. But when it comes to professions one would really think that women were some kind of reptile of the lowest class so indignantly do a certain section of the 'nobler sex' (doctors most especially) throw obstacles in their way, less the *dignity* of their profession should be infringed upon.

Aspiring lady dentists were advised:

As lady students are admitted to the National Dental Hospital exactly in the same way as men are, she can there obtain (after three years apprenticeship to a dentist) all the special dental instruction needed for obtaining the dental diploma, but she cannot get her LDS degree from the Royal College of Surgeons of England because, that august body, thinking its 'dignity' would be infringed by the admission of the 'inferior sex' to its degree, refuses them to women. She will have to take a journey to Edinburgh, or Glasgow, or Dublin as the faculties of medicine in those cities do not consider it beneath them to admit women to the diplomas of LDS in exactly the same way as men and with equal privileges.[19]

Fortunately, "the paltry spirit" of these men did not "effect the object of keeping women out". The "feebler sex succeeded in bursting the bars, opening the gates

[16] *The Standard* (London, England) 26 November 1887; Issue 19774, p 3.
[17] *Manchester Times* (Manchester, England) 10 December 1887; Issue 1587.
[18] *Reynolds Newspaper* (London, England) 20 November 1898; Issue 2519.
[19] Ibid.

and overcoming the Cerberus who snarled and growled at the portal, where however he did not guard well enough to keep the bold intruders out"[20]

Determined women like Lillian Lindsay persisted. Despite being refused entry to a London school (the dean of the National interviewed her through a window, whilst she stood on the pavement) she succeeded in obtaining a place at the Edinburgh School and became the first woman in the United Kingdom to qualify as a dental surgeon, gaining the LDS from the city's Royal College of Surgeons when she qualified there in 1895. She went on to gain numerous honours, culminating in her becoming the first lady President of the BDA in 1946. Her achievements and professionalism changed perceptions, destroyed prejudices and removed the barriers for the thousands of women who have followed in her footsteps since.

[20] Ibid.

LILIAN'S LADIES: A GLOBAL PERSPECTIVE*
Part 1

Melanie Parker[+]

The qualification of Lilian Lindsay (neé Murray)

On the occasion of the Lindsay Society's golden anniversary it seemed appropriate to look at the contribution of the woman after whom the society is named. Lilian Lindsay was a great dental historian whose collection formed the basis of the British Dental Association (BDA) Museum. However she not only had an interest in history but made history herself, becoming the first female to qualify as a dentist in the United Kingdom.

Lilian Lindsay (neé Murray) was born in 1876, the third of eleven children. She lost her father at just fourteen years old. She was awarded a scholarship to attend North London Collegiate School where her teacher Miss Buss wanted her to follow a career in teaching deaf children. Murray had other ideas deciding to become a dentist instead. The registrar at the General Medical Council suggested that she applied to the National Dental Hospital & Metropolitan School of Dental Science. The Dean, Henry Weiss, was not as amenable as the registrar had anticipated however, and did not even permit Murray to enter the building as she might distract the men. He interviewed her whilst she remained on the street. Unsurprisingly she was refused admission but Weiss did suggest that she contact the Edinburgh Dental Hospital and School. This was fortunate as not only was she admitted but she also met her future husband Robert Lindsay there.

Murray (Fig 1) qualified in 1895 and soon became the first female member of the BDA.[1] She had a successful practice before retiring to support her husband in his role of secretary to the BDA and herself establishing the BDA library. Eventually she went on to become the BDA's first female president.[2]

It seems clear that it was another female dentist who provided a strong inspiration for Murray in her career choice. Towards the end of her life she concluded that she must have chosen dentistry in a fit of temper at being told being directed by Miss Buss to a career she didn't want and because of the example set by Olga von Oertzen.[3] The latter was a friend of Lindsay's mother and aunt whom they had met when they attended a progressive school in Neuwied, Germany. Von Oertzen graduated Doctor of Dental Surgery (DDS) in 1881 from Pennsylvania

* Based on a presentation to the Lindsay Society annual conference, 6 October 2012.

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[1] *British Dental Journal*, 1895; 16: p. 656.
[2] 1946.
[3] Lilian Lindsay, The Autobiography of Dr Lilian Lindsay Annotated by E.M. Cohen and R.A. Cohen, *British Dental Journal*, 1991; 171: pp. 325–328.

College of Dental Surgery and came to London around 1886. Unfortunately for her the GMC only accepted the Doctor of Dental Medicine (DDM) from Harvard and the DDS from Michigan (and as she did not qualify by experience of working in the UK) so von Oertzen was unable to enter her name on the Dentists Register. There seems to have been a close relationship between Lindsay and von Oertzen as the latter left Lindsay money in her will as well as both her dental practices.

Figure 1 Lilian Murray, 1895, Royal College of Surgeons of Edinburgh
Image: BDA Dental Museum LDBDA 11545, c 1895

Lilian Lindsay was not the first woman to practise dentistry in the UK. Her predecessors could be said to include female toothdrawers and female barber-surgeons, the latter often assisting their husbands or continuing their business after their husband's death. When dentists as we know them emerged in the 18th century again we find women practising.[4]

With the establishment of the census it is even easier to confirm that women were working as dentists before Lindsay's graduation. The introduction of the Dentists Register in 1879 affords a similar exercise. At least 26 women can be found in the first register – all of course unqualified. The Royal College of Surgeons of England (RCS Eng) had been granted the exclusive award Licentiates in Dental Surgery (LDSRCSEng) diplomas from 1860 but as it did not allow women to sit any of its exams no dental qualification was open to women in Britain. It was not until 1908 that the English College agreed to admit women to all its exams. Four years later Lily Fanny Pain became their first female licentiate in dental surgery. In the same year Kate Latarche became the first woman to obtain a degree in dentistry with the award of Bachelor of Dental Surgery (BDS) from Victoria University of Manchester.

This then was the British context for Lindsay's achievement, but how did she stand in a global context? The rest of this paper and a subsequent one will address this issue as fully as possible despite the absence in general of women from mainstream histories of dentistry, language barriers and the lack of dental history museums and societies like the Lindsay Society to assist.

Like Britain other countries had women aplenty working as dentists without a qualification. However, these two papers aim to be restricted to those women who undertook some instruction at dental school and who obtained a recognised qualification by passing an examination, for often the struggle was harder for women once qualifications and registration had been introduced. The papers will aim to give a global overview and at the same time focus on a few particularly pioneering women who have left their mark in the sources.

[4] J. Menzies Campbell, *Dentistry Then and Now*, Glasgow: privately printed, 1981, pp. 259-264 and Sally Dummer, 'Petticoat Practitioners': Women in Dentistry, *Dental Historian*, 2008; 48: pp. 45-54.

Lucy Beaman Hobbs Taylor

Lucy Beaman Hobbs Taylor (Fig 2) is believed to be the first woman in the world to qualify as a dentist.[5] Unlike many of her successors she had no medical background or family members who were involved in medicine. For ten years she worked as a teacher, studying under a practising physician in her spare time, before moving to Cincinnati, Ohio in an attempt to enter Eclectic Medical College.

Figure 2 Lucy Beaman Hobbs Taylor, 1866, Ohio College of Dental Surgery
Image: Wikipedia – unknown source

The college turned Taylor down but one of the professors suggested dentistry to her instead. Similarly to the UK she needed to undertake training in a dentist's surgery before starting at dental school. After many refusals the Dean of Ohio College of Dental Surgery, Dr Jonathan Taft, took her on followed by a Dr Samuel Wardle, an English immigrant. To the latter Taylor gave great credit for her, and all other women's progress in dentistry: "to him alone belongs the honor of making it possible for women to enter the profession."[6] Taylor supported herself by sewing at night.

Taylor applied to Ohio College but was refused admission so Dr Wardle advised her to start practising without a diploma as many male dentists were doing that. After a couple of false starts she settled in Iowa. She obviously earned the admiration of dentists there as in 1865 the Iowa dentists invited her to join their dental society and took her to the American Dentists Convention. There the Iowa dentists made a formal demand that the dental colleges accept her. Finally, Ohio College had a change of heart and persuaded her to return to the state.

Taylor entered Ohio College, in the senior class, on 1 November 1865 with 18 men. She qualified DDS just one term later on 21 February 1866 as the college counted her training with the two dentists and her own work experience of nearly 5 years. The Dean, Jonathan Taft, said the class that year: "excelled all previous ones in good order and decorum - a condition largely due to the presence of a lady".[7] She would not permit cigars or cigarettes in the laboratory, objected to chewing tobacco and criticised what she believed to be improper behaviour. She only missed one lecture and that was at the request of the professor of anatomy! Her performance

[5] Taking the definition of having attended dental school and passed an examination. In 1852, in Sweden, Amalia Assur was given special permission by the Royal Board of Health to practice independently as a dentist (having assisted her father previously), despite the fact that the profession was not legally open to women until 1861.

[6] Lori Ann Dees, Before We Were Created Equally: The Story of Lucy Beaman Hobbs Taylor, DDS, *Journal of the History of Dentistry*, 2001; 49: pp. 105-110, p.106.

[7] Ibid., p.108.

during the course and final examination was outstanding. A year after her graduation she married a Mr Taylor to whom she taught dentistry and together they created one of the most successful dental practices in the state of Kansas.

Sadly this ground breaking start wasn't really taken up by American women (although in the last couple of decades the situation has improved). The next American woman didn't graduate until 1874[8] and it took until the 1990s before a third of dental students were women.[9] Where America did make a significant contribution was in educating women from other countries.

Henriette Hirschfeld

The second woman to qualify as a dentist was a Prussian by birth. Henriette Hirschfeld (neé Pagelsen, Fig 3). Widowed at the age of 30 her thoughts turned to a new occupation. In a letter she said:

After being left a widow and thrown upon my own resources, I looked to see how women supported themselves. I saw how they were shut out from many occupations suited to their sex and abilities, and how they had to work for a trifle, or how ill they were treated because the few places open to them were overfilled. Fully convinced that this state of affairs had to be changed in many respects, I concluded to do my part in taking up and carrying out my old favourite idea; so I came to Philadelphia.[10]

As a young girl Hirschfeld had been interested in dentistry due to her own frequent toothache and resulting visits to the dentist. She could have practised in Prussia without a qualification as it wasn't compulsory provided dental titles were avoided, but this wasn't for Hirschfeld. As there weren't any dental colleges in Germany she needed to travel abroad. She obviously wanted to ensure that such an outlay of time, money and energy would be worthwhile so before she left she obtained a promise from the Prussian government that she would be allowed to practice upon her return if she obtained a diploma from an accredited American dental college.

It is unlikely that Hirschfeld had heard of Lucy Hobbs Taylor's achievement as it wasn't publicised at the time. She also did not head for Ohio but instead went to Philadelphia. This may have been because the Dean, Dr James Truman, had spoken in favour of women dentists in his address to the class of 1865. Pennsylvania also had a long history of German immigration.

Hirschfeld arrived in 1867. She knew little of the language but was fortunate to be taken in by the Trumans to improve her English. She applied to Pennsylvania College of Dental Surgery but the professor of anatomy refused to teach her. Apparently his reluctance was not to her studying anatomy but to educating the sexes together. Truman however interceded and made arrangements for Hirschfeld

[8] Annie D. Ramburger
[9] Dees, op cit., fn. 6, p.109.
[10] Ellen Kuhlmann, The Rise of German Dental Professionalism as a Gendered Project: How Scientific Progress and Health Policy Evoked Change in Gender Relations, c. 1850-1919, *Medical History*, 2001; 45: pp. 441-460, p. 453.

to study anatomy at the Women's Medical College of Philadelphia. This obstacle removed Hirschfeld was admitted to Pennsylvania College. Her fellow male students were less than enthusiastic greeting her with "a storm of hisses".[11] However she stuck out the two year course and qualified DDS on 27 February 1869. The faculty was moved to make a statement:

It will be observed that amongst the list of graduates occurs the name of a lady, Mme. Henriette Hirschfeld. As this is an innovation on established usages, it seems proper to state that in every particular she performed all duties required of a student and was enabled to equal the other graduates in all departments...[12]

Figure 3 Henriette Hirschfeld, 1869, Pennsylvania College of Dental Surgery
Image: *Dental Cosmos*, 1911

Hirschfeld returned to Berlin where the opening of her surgery caused a stir. At first high society ladies sent their servants, then their children and then risked a visit themselves. Some men even followed suit. "It is now nine months since I opened my office, and my success has far exceeded my expectations. Nearly half of my patients belong to our aristocracy, and two of the royal princesses are among them..."[13]

Hirschfeld continued: "I don't think many of my professional brethren like it much that the females have crept into their privileges, but I can't help the poor fellows, they will have to get used to it."[14] She established a women's clinic and hospital and published articles and lectured, mostly in the USA. In 1899 she passed her successful practice to her niece.

Hirschfeld was correct in her prediction: many German women followed in her footsteps, going into dentistry and in particular undertaking their study in America. They were perhaps drawn by the publicity. When Pennsylvania claimed Hirschfeld was the first female dental graduate Ohio College suddenly decided to publicise Lucy Beaman Hobbs Taylor's earlier graduation. The American dental colleges do seem to have mixed feelings though about female students, something also reflected in the dental press. Sometimes they were competing to claim precedence and at other times they appear to have been worried that they were opening the flood gates to women. Within three years of proudly announcing Henriette Hirschfeld's graduation her old college, Pennsylvania, had rejected a fellow Prussian, Emilie Foeking. Fortunately for her Baltimore College of Dental Surgery was persuaded by James Truman to admit her

[11] John M. Hyson, Women Dentists: The Origins, *California Dental Association Journal*, 2002; 30: pp. 444-453, p. 448.
[12] James Truman, Henriette Hirschfeld (Henriette Tiburtius), D.D.S. and the Women Dentists of 1866-73, *The Dental cosmos: a monthly record of dental science*, 1911; 53: pp. 1380–1386, p. 1382.
[13] Kuhlmann, op cit., fn. 10, p. 453.
[14] Hyson, op. cit., fn. 10, p. 448.

instead. Did Baltimore, the first dental school in the world, suddenly worry that its reputation for innovation was being usurped?

Pennsylvania also wobbled over two other German women: Louise Jacoby and Veleske Wilcke both studied for a year at Pennsylvania (1872-3) and then because of opposition to them from a small group of male students most of the faculty decided they could not complete the second year. The papers in Philadelphia were very critical of the faculty for their actions. The board of trustees, fearing that they would lose a court case, overruled the faculty. Wilcke stayed at Pennsylvania but Jacoby switched to Baltimore. Despite this early blowing hot and cold in the 40 years after Hirschfeld's graduation, when just five women had graduated within Germany (from 1901), 45 German women graduated DDS from the USA.[15]

The Germans didn't have a monopoly though. The third woman to qualify as a dentist in America was a Russian.[16]

Countess Helene Vongl de Swiderska

Countess Helene Vongl de Swiderska (Fig 4) came originally from Lithuania. She lost her mother at an early age, a common theme with many of these pioneering women (although, of course, female life expectancy was far lower than it is today). Aged 16 she married the Count de Swiderska and they had a son.

Figure 4 Countess Helene Vongl de Swiderska, 1872, New York College of Dental Surgery
Image: *Harpers Bazaar*, 1872, reprinted *Journal of the American Dental Association*, 1928

It would appear that her husband's title came with very little money as the Countess decided to take up an occupation to create a legacy for her son. She is also recorded as desiring an earnest profession for her own sake. No doubt she chose medicine because father, brothers and uncle were all physicians and her father had already tutored her in the sciences. She undertook preliminary studies in medicine with her father and then decided that dentistry would be the easiest branch of medicine to enter.

Dentistry was virtually unknown in Russia at the time so in her early 20s the countess headed to Berlin only to find that dentistry there was no better than in Russia. Instead, and perhaps hearing of Henriette Hirschfeld's 'successful return to Berlin from America, she headed across the Atlantic. She applied to New York College of Dental Surgery where she was refused entry until finally they agreed making her promise that she wouldn't expect any allowances due to her gender! Having mastered the language in just three weeks she

[15] Kuhlmann, op cit., fn. 9, p. 450.
[16] Just pipping another German, Marie Grubert, by two days.

entered the college. She was only required to attend one session as she was given credit for her previous studies and graduated DDS on 4 March 1872. Afterwards she returned to St Petersburg.

Interestingly, within a decade of de Swiderska's graduation the situation in Russia seems to have changed and there was no need for aspiring Russian women to cross the Atlantic unlike their German counterparts who continued to train in America.

America was, and is, of course a country of many races and some of the pioneering women dentists no doubt faced racism as well as sexism.

Ida Gray Nelson Rollins

Figure 5 Ida Gray Nelson Rollins, 1890, University of Michigan
Image: courtesy of the African-American Registry

Ida Gray Nelson Rollins (Fig 5) was born in Clarksville, Tennessee to a black mother and white father. At an early age she and her parents moved to Cincinnati, Ohio. This move could have been good luck as she undertook an apprenticeship with Dr Jonathan Taft, Dean of Ohio Dental College, who had helped Lucy Hobbs Taylor. Gray didn't study at Ohio though but went to the University of Michigan Dental School which by this time had graduated a number of female dentists. She qualified DDS in 1890 becoming the first African-American woman to qualify as a dentist.

Rollins returned to practise in Cincinnati before marrying and moving to practise in Chicago. For the most part she treated children but her surgery was open to anyone. She retired in the 1930s having mentored other African-American women into the profession. Her novelty certainly seems to have been a success: it was reported that a newspaper editor said of her: "her blushing, winning ways makes you feel like finding an extra tooth anyway to allow her to pull."[17]

Faith Sai So Leung

Faith Sai So Leung (Fig 6) was Ida Gray Nelson Rollins' Chinese-American equivalent. She was born in China but was adopted by American Christian Missionaries who took her back to the United States. She showed great manual dexterity from an early age and spent much of her free time in the mechanics laboratory of a cousin of her adoptive parents who was a dentist in San Francisco. She began her studies at the College of Physicians and Surgeons of San Francisco in 1900 with two other girls but they soon dropped out.

[17] African American Registry website,
http://www.aaregistry.org/historic_events/view/ida-gray-nelson-first-black-dentistry

Figure 6 Faith Sai So Leung, 1905, College of Physicians and Surgeons of San Francisco
Image: *San Francisco Call*, 1907[18]

She qualified in 1905 and set up her surgery in Chinatown, San Francisco where she treated patients from across the social classes. Sadly, she was killed by an underage driver in Chinatown just seconds before she pushed her son out of the way.

The United States of America was, as we have seen, a pioneering country for educating women dentists, both its own citizens and those from abroad. How did the rest of the American continent fare?

Caroline Louisa Josephine Wells

Canada was somewhat behind its southern neighbour. The first female dental graduate was Caroline Louisa Josephine Wells. Toronto Dental School was founded in 1875 by the Royal College of Dental Surgeons of Ontario. In 1888 the school affiliated with the University of Toronto and agreed to confer the DDS. Wells qualified in 1893 and went on to have a successful 36 year career. Like the United States her fellow females only followed slowly – by the 1960s less than 2% of dentists in Canada were women.[19]

Margarita Chorné y Salazar

Central and South America have a far more progressive history relating to female dentists than their northern cousins.[20] The earliest record of a female qualifying as a dentist in Central or South America comes from Chile. The University of Chile, which included a medical school, opened its doors to women in 1877. Seven years later Paulina Starr became the first female to be awarded its dental qualification. Sadly little else is known about her life unlike the first woman to qualify as a dentist in Mexico, Margarita Chorné y Salazar (Fig 7).

Salazar came from a dental family – her father and brother ran one of the most prestigious dental practices in Mexico. There were no dental schools in late 19th century Mexico so she began her training under her father's supervision and completed it with a Dr Chacon. In order to practice dentistry she had to take an exam at the Faculty of Medicine of Mexico and had to have a letter of recommendation from a renowned dentist.

[18] Ruth Berg, The Only Chinese Woman Dentist, *San Francisco Call*, 15 September 1907, p. 11.
http://cdnc.ucr.edu/cdnc/cgibin/cdnc?a=d&d=SFC19070915&cl=CL2%2e1907%2e09&e=-------en--20--1--txt-IN-----#

[19] Canadian Dental Association, *A Century of Service*, 2002; 4: p.3
http://www.cda-adc.ca/_files/cda/about_cda/history/HSPart4.pdf

[20] With thanks for assistance on this section to Professor Dr Diana Daich de Eidelsztein and her students for sharing their research for a paper: *Pioneer Women.*

Margarita Chorné y Salazar, 1886, Faculty of Medicine of Mexico.
Image: book cover[21]

Salazar's examination, in 1886, sounds designed to test the mettle of any student as besides the three examiners she had an audience. She answered each question in both Spanish and French, the latter which she had learnt in order to read medical texts.

The reaction to her passing of the exam was mixed. One newspaper said, "The Mexican people now have a young lady competent in dentistry that will open the field of dental surgery to other women."[22] Others feared it would endanger the stability of Mexican homes. It would seem as if Mexican women disagreed with the latter worry and steadily entered the dental profession. Two further women passed the medical faculty exam in the 1890s and in 1905, just a year after the first dental school in Mexico opened another woman, Clara Rosas, started her training, graduating three years later. Rosas went on to join the teaching staff and Salazar also continued to set an example by remaining in practise for 40 years. By the end of the 1930s one third of dental school students in Mexico were women and by the 1970s they were in the majority.[23]

Celina Duval and other South American females

Several other Central and South American countries saw their first qualified female dentists before or at around the same time as Britain. In 1888 Celina Duval was awarded her dentists degree in Montevideo, Uruguay which she revalidated the same year at the School of Medicine of the University of Cordoba in Argentina. The first Argentine dental school opened in Buenos Aires in 1892, offering a four year diploma course. Two women were amongst the first graduates: a Brazilian, Cidanelia Gonzalez, and a Russian, Fanny Britz. Before the end of the century Brazil too had seen its first qualified female dentist: Isabella Von Sydow was the first woman to graduate from the school of dentistry at the University of Rio de Janeiro.[24] Like Mexico in modern Brazil over half of dentists are female.

The American continent, then, has a proud history of pioneering women dentists. Part two of this paper will examine the achievements of early female dentists outside of the American continent as well as continuing the story within the United States and will show the influence of British roots across the globe.

[21] Martha Diaz de Kuri, *Margarita Chorné y Salazar La prima mujer titulada en America Latina*: Documentación y Estudios de Mujeres, 1998

[22] Rosa Maria Gonzalez Ortiz and Martha Diaz de Kuri, Women in Dentistry *Journal of the History of Dentistry*, 2001; 49: pp. 37-41, p. 40

[23] Ibid., pp. 40-41.

[24] 1899.

ALBERT EDWIN WILLIAM (LOMA) MILES (1912-2008)

W A Barry Brown*

Introduction

A E W Miles (known to his friends as Loma because he was the only one in his histopathology class to correctly diagnose a malignant myeloma) joined the prosthetics department of the London Hospital Medical School in 1940, but he also had an interest in oral pathology and parodontology. He had previously worked with [later Sir] Wilfred Fish at the Royal Dental Hospital of London, where the latter's research efforts had strongly influenced him. In 1945 Miles (Fig 1) was appointed as a research worker; and five years later professor of dental pathology. He was the only dental professor at the London until joined by Geoffrey Slack in 1959. Miles retired in 1976 to become an emeritus professor.

Figure 1 Professor Miles, April 2003

After retirement he corresponded with me on a variety of topics. I had first met Miles when he came to examine James Scott's anatomy students at Queen's University in Belfast in the 'sixties. In 2003 he suggested I write what I could remember about the charismatic Scott, which I did. It was added to a website[1] organised by his son, Michael, to which Miles also contributed his memory of Scott. From then on Miles wrote to me a series of letters from his home in Cleaver Square, Kennington in South East London, which recorded his experiences and the people he had known in the dental profession. On 4 January 2004 he wrote:

Several people have urged me since I entered the ranks of the ancients to place on record my recollections of the seminal changes that occurred in dental education during my lifetime, brought to a peak in the post-WWII years. They

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[1] www.computing.dcu.ie/~mike/jhs.html

extend from 'hearsay' about such figures as Mummery that I heard from Sprawson, who was of the generation immediately after Mummery, and some of the giants of the past and more importantly first hand experiences of his own contemporaries, Sir Norman Bennett, Colyer, Lady Mellanby, E W Fish and Bradlaw, all of whom I overlapped with also.

The following paper is an extract from his letter to me written on 27 May 2003.

Miles had a habit of using many abbreviations and capital letters in his correspondence and for the sake of clarity and conformity here the full words and lower case are normally used.

The letter

Dear Barry

I suppose most boys and girls who come into dentistry do so because their fathers were. To that extent our backgrounds were similar but it is interesting that whereas your childhood was just before or early in World War II, but you had an experience of WWI and its special horrors through your mother.

I was born in 1912 and was 2 years old at the outbreak of those horrors but hardly sentient. However, I do recall events that almost certainly are pre-school, for instance of sitting on the floor in a screaming paddy because my mother would not let me play with the seeds or the "mess" she had just scraped out of a marrow; also some overwhelming sadness in my parents that I have always thought was hearing of the death of my father's youngest brother, aged 17/18, on the Somme in 1916; a little later, almost certainly 1917 when the losses from torpedoing were at a critical level, my aunt (father's younger sister) whose husband was a regular Scots Guardsman, sometimes corporal depending how he had been behaving, been through the Boer War, captured at one of the first battles with the Germans in 1914 at Mons. She was living with us (no children). She came home at the end of one morning unable to contain her anxiety and distress; she had queued all morning for rations and got virtually nothing. My sister was three years older than me but I remember she was there when in the middle of the night my father held me in his arms to see the 'Potters Bar Zeppelin' caught in searchlights and shells bursting all round it and the breaking up and falling in flames. My father took me out in the morning to see crowds in the street looking for shrapnel and other souvenirs; I remember men digging shrapnel out of the woodblocks of the road with penknives.

My father was a dentist, of 1921.[2] Eldest son of eight of a working class family in Pimlico (my mother from a watchmaker/craftsman family in Clerkenwell); grandfather a big man, a City policeman who told us children stories of the villains, who tended to grab you by the collar of the capes they wore, became the

[2] ie was registered with the Dental Board of the United Kingdom although unqualified, when registration became compulsory in 1921.

devoted and beloved verger at Trinity Church, Chelsea, not far from Sloane Square, a place of fashionable weddings he deferentially attended and boasted of. He was about 93 when he died and my father about 95. Peabody Buildings, Pimlico[3] was not far away, I remember both the outside and the cramped insides well, the neat black leaded iron stoves but more I remember my dear kind gentle grannie like a miniature Queen Victoria; seemed specially fond of her eldest grandson; I can hear the echo of her, "Have a hegg[4] child" for tea when I visited her as a schoolboy. Christened Albert like my father probably after Prince Albert, I can remember as a tiny being called the little prince and such and it is a curious example of what can go on in the child mind, that it worried me to think I was related to the Royal Princes and my mother was not truly mine.

At some time my father must have served his 7-year apprenticeship with a firm in the City and been part of one where he learned chairside skills; I never enquired into this but just accepted that we had become middle-class and my father could afford to send both my sister and me to roughly equivalent schools (I can now appreciate that he was a liberal of his time as well as a Liberal and ardent supporter of Lloyd George). My sister went to the Hornsey High School for Girls at the bottom of a hill, in the Hornsey Village, and I went to the Stationers Company School at the top categorized we were told as a Day Public School but we could not detect any similarity to Billy Bunter's Greyfriars. Looking back I think it must have been a good school and gave me a good knowledge of French and a couple of years of grounding in German (I chose instead of Latin) and I can remember being taught the principle of chemical equations and linkages of molecular structure. However, I was always inclined to be rebellious and anti-learning or anti-establishment, yet I read avidly books I got every Saturday from the Public Library even to making notes on what information I gathered e.g. sailing ships. When I was 16 I began to feel I was drifting and had to think of earning a living. Past the stage when I wanted to go in the Navy, Royal or Merchant, I went through a period of deciding to become a teacher of handicrafts or woodwork (we had good classes at school). I was good with my hands, making and mending things and won second prize in a national fretwork competition when about 13. Gradually this changed and the idea of becoming a doctor, the status and helping people appealing to me, but could I pass the exams? Could my father meet the expense? I had no means of learning about scholarships; my father learned about Dental Board grants so I began to accept dentistry as a substitute but first had to get the entrance qualifications. Someone

[3] The Peabody Trust was founded in 1862 as the Peabody Donation Fund by an American banker, diplomat and philanthropist, George Peabody. He aimed to tackle the poverty he saw in London where he then lived. Two years later the first Peabody estate was opened, in Spitalfields. From then other estates grew up to house poor people. It was incorporated in 1948 by a private Act of Parliament and is now a charity registered with the Charity Commissioners.

[4] I guess by 'hegg' she meant egg.

told me of cram classes at Regent Street Polytechnic. I left school in July and started at classes for matriculation at the Poly in September, English, English Literature, Mathematics and, I think, French. For a year I did nothing but study; all the classes were efficient and inspiring, those in English subjects especially those of an elderly, genial man who loved literature and inspired us all. We were of various ages and backgrounds with some foreigners, about 30 of us. Set books were Macbeth, Lamb's Essays, the essayists generally Hazlitt etc. and Wordsworth and other poets of the period. It was really a taste of being taught those subjects in a small-class University context. I continued that reading for interest and enjoyment throughout my student life and ever since. I matriculated in the distinction category and was also recorded as the top of our class; what a morale booster at a critical time.

We got a Dental Board grant and I started at the Royal Dental Hospital in Leicester Square, in January I think. There were two entries in the year in those days. As far as I can remember, there was a premedical course, chemistry, physics and biology. I remember dissecting a worm and doing drawings of sections. Then it was up in the mechanics laboratory: swaging and making lead dies etc all of which I enjoyed and was good at. I greatly enjoyed the metallurgy lectures and read avidly books on alloys and such and won the class prize, which must have given me a taste for praise because I came away with the reputation of a Prizeman. I began to realize I had a useful brain as well as a pair of hands. By the way, matriculation was only required for degree courses, all I needed for the LDS or the LRCP MRCS later was College of Preceptors or similar. Nobody at RDH pointed out that I could do the BDS but then the first BDS, the son of a member of staff, was at that time qualifying. Later when I was at Charing Cross, the only medicals doing a degree were those from Cambridge University - the elite.

I was enormously impressed by Eric Wilfred [later Sir Wilfred] Fish first by his application of anatomy and physics to full denture design; a system with principles to follow instead of a patchwork of empiricisms. Later by his ideas about aetiology and treatment of periodontal disease. In my last year and as a House Surgeon and later when in the following year Fish gave me a couple of sessions a week to look after his Parodontal Clinic he had just started, I became *persona grata* in his research labs, got to know his technician and saw histological techniques at close quarters.

I have always been interested in people as 'specimens' and had observed the Consultants and teachers in detail and concluded there was no reason if I tried hard enough why I could not become one of them but it was necessary to become medically qualified. Fish had in fact been a pioneer in what we now know as PhD studying under the guidance of an already experienced researcher. His first research was done for an MD under a physiologist, but few people realised that. I felt a desire to do the whole medical course anyway because I felt incomplete; I had experienced some of it, but not pathology, in depth nor midwifery or surgery proper; I still felt I might leave dentistry. Several of the younger teachers encouraged me, so relying on a part-time practice and my

father's back up, I took the plunge and, being accepted by King's College, for the LRCP course, a story in itself, I started a year of intense work doing anatomy and physiology. I passed the exam with little margin and by October got into the wards wearing a stethoscope.

It is worth mentioning that the period I spent as a medical student was one of distinctly left politics among the young and sympathy or more extreme for Russia, which we regarded as the potential saviour of the West against the Nazis. There was even talk of communist cells among medical students; I experienced an urge to try to go with the International Brigade to Spain. Clifford Ballard[5] and I were friendly, he was a tiny bit senior to me; we talked about these things feeling war was inevitable and the years ahead gloomy; no future to bring up a family in. He had a girl friend and they expected to marry as soon as he qualified. This was the time the Cambridge spy group, with Blunt and Maclean, was formed; the ideas they embraced of a loyalty to mankind superior to national patriotism were widely discussed below the surface. Much later, after we had dropped the atom bombs on Japan, similar views were abroad when the Americans refused to share the nuclear knowledge with the Russians; it was inevitable that they feared ultimate attack by USA and mounted protective defences whereas there had been a chance of everlasting peace. I was inclined that way myself and felt it was a chance that should have been bravely taken with all the risks it entailed. This is why Fuchs is said to have preserved a sublime sense of righteousness even when most of the world regarded him as a filthy traitor.

I qualified in medicine in June 1939, did a short locum house job at Charing X, married at the beginning of August and returned to London just as war broke out, much in debt to my father. F St John Steadman, one of my contemporaries at RDH/Charing X, rang me up and said "Off to the war" would I do some consultant sessions at Queen Elizabeth Hospital for Children at Hackney. It turned out they were paid for by the London County Council. There were later some as anaesthetist for which I was paid more. I also did associated School inspections and later a locumship for a dental practitioner in Hampstead who was smitten with phthisis. I scraped a living together. I suffered a reaction following my efforts to get qualified and was in a psychological mess, a nervous breakdown of which indecision whether to join the Royal Army Medical Corps or not, confused by much talk that the war will all be over by the spring. Things were so dead on the Western Front.

Early in the New Year I must have noticed the advert for the demonstratorship at London Hospital Dental School in preparation for the students (dental) being brought back from Cambridge and places in Essex where they had been evacuated and thought I would apply. It was in Prosthetics and with my interest in Fish revived, I felt enthusiastic about teaching it to students. I was interviewed with some enthusiasm by A G Allen and Evelyn Sprawson when they found I was a prizeman from RDH where they both came from.

I think I was only half-time so retained all my "earners". As students

[5] Later professor of orthodontics at the Eastman Dental Hospital.

gradually returned from Cambridge and places in Essex where they had been evacuated, there was plenty to do; my Conservation (work) opposite Bill Peebles who was a very experienced man with whom I got on well with, as long as I recognised I had much to learn from him; he was also half-time, employed by a special Dental Board grant, the other half had gone to the war. The war in earnest and bombing of London soon started, a Dental Consultant went into the Navy, and dental clinics had to be re-opened, [later Sir Evelyn] Sprawson stayed at home a lot, it was said that his wife was ill; I began to run some classes in general pathology with a microscope and slides in response to an appeal by students, signing up cavities at intervals. I spent as much time as I could in the medical college meeting the preclinical staff among whom was Alex Comfort in Biochemistry and Physiology. Dixon Boyd had some interesting people in Anatomy but it must have been 1944 before Angus Bellairs came back from the Army in North Africa and Italy more full of stories of the lizards and snakes he had caught than of his war experiences. We started some work together as he developed his PhD work and we became life-long friends.

I was granted the other half of the Dental Board grant which gave me a useful rise; as patients increased and clinics had to be run, I was dealing with fractures, helping in the gas-room, sometimes giving the gas when the shortage of anaesthetists became serious. Hard work but immense fun and learning all the time. Pausing for a moment, what I have written seems narcissistic and self-indulgent and out of proportion but now it is down on paper, I will leave it there.

[Max] Horsnell came back from the RAF and ran the Children's Department. It must have been now that Brian Cooke and John Pedlar returned but first I must mention that Clark-Kennedy, the wily old Dean of the Medical College, saw me one day after I had been made a dental Consultant which I did not want and had been given Sprawson's lectures in dental anatomy and pathology to do plus a session for "research and preparation of lectures", and some assistance from a technician in the Histology Department. A G Allen was the Dental Dean. Clark-Kennedy said it is felt to be wise to appoint Horsnell or you as an Assistant Dean to Allen to give you the opportunity to instill new ideas; we favour appointing Horsnell - you don't want to do it do you? I said no it is not the job I would like to do and do not feel I could do it well. I'm glad you said that; your job is to get research on its feet in the school. This was music to me and many years later when I was under pressure by [Geoffrey] Slack to become Dean, rumoured to be because he did not want to become the first Dean after the new school opened that he had done most to plan, lest faults became plain - bits were already beginning to fall off! I quoted the remark of Clark-Kennedy to help me escape; I said I still felt that encouraging and facilitating research attitudes was my most useful function. I should have mentioned that when Clark-Kennedy said it is felt to be wise, he had the backing of the Dental Education Committee he presided over and on which also sat Prof Dixon Boyd and the Professors of Physiology and Biochemistry who I could rely on even against possible hostility of the dental consultants who made up the bulk.

Brian[6] and John Pedlar spent the war in the Army Dental Corps and not the RAMC I guess; I do not recall them showing signs of having practised medicine. They must both have been made Registrars. I had a room in the Medical College and we all three had time to meet there frequently and talk about all sorts. I was not much older but they came to learn as much as they could from my experience of academia and what was happening in dental education; I had a foot on the ladder where it was their aspiration to get also. It was helpful for me to talk to some of my contemporaries. All three of us believed teaching had to be in the hands of full timers; I was able to explain what I had heard [later Sir Robert] Bradlaw had pioneered at Newcastle. He was reputed to have bundled all the 'Honoraries' out traumatically and was running the school like a dictator on full timers he had found, perhaps later with the help of the Nuffield scheme and money. I thought the changes in London should be more gradual and carefully planned, after all many part-timers were talented and competent especially in what we could envisage becoming oral surgery - in London there was a great concentration of wealthy patients. We discussed teaching *versus* learning, should lectures end with a period for discussion, principles rather then rote learning; my line was to emphasize the importance of providing a sound scientific foundation in preclinical subjects and in pathology with the possibility of teaching pathology as a preclinical subject.

Brian was already strongly orientated to our Bernhard Baron Pathology Institute, presided over by the famous Hubert Maitland Turnbull, which he loved to refer to as The Temple of Truth but I doubt whether I convinced him of the importance of Anatomy, Physiology and Biochemistry. He was attractively ebullient, assertive but no depth of thought or argument. I regarded both of them, whatever their deficiencies, as of great potential in the face of the need for such in the years that were about to open up. I spent the next 20 years looking for talent and potential in an expanding world of dental research. I doubt whether I made any impact on Brian's thinking. I thought John had the better brain, seemed to have a penetrating enquiring mind and later when I was urging him to plan some research and get on with it, he displayed a sound planning mind. Trouble was he was too analytical; he could work out the number of animals needed for experiments, then he would come back and say "but then so and so might happen" and we would need to check that, so would need subsidiary experiments with so many animals, with several repeats of that and he would say, we must give up, it is beyond our resources, and then come back with an entirely different idea. Other people, like me, before that would say let's have a go and see. He never did anything worthwhile even after he left me, although I got him a Readership, and he took a Chair in Toronto where he ran a department of minor dental surgery very efficiently but never published a thing. His was a wasted brain but he had a happy marriage which I, like some dedicated researchers I met, did not put first. He did work very efficiently with me on writing a chapter on Hormonal Influences on Development and Growth for a large new

[6] B E D Cooke, Founder-Dean of the University of Wales Dental School.

textbook edited by the part-time Dean of Guys dental school, who must have been a friend of the publisher. I was also writing a chapter on Tooth Abnormality, which I sent to him and it went into proof where I found that ontogeny, which I used a few times had changed to odontology. The Dean confessed he did no know what ontogeny meant. The whole scheme fell apart before John and I finished our joint Chapter so the remaining quarter was unfinished and much wasted good work. The successful completion of it might have made all the difference to him.

Brian got himself into the Bernhard Baron Pathology Institute, with a Nuffield grant, but it was not to do a PhD.. He deeply immersed himself in the work of the Department, although the only research that saw the light of day was two papers on the prevalence of epulis in the population over many years, derived from Bernhard Baron Pathology Institute records and collections of sections complete with statistical analysis and a model of new-style research but, as far as I know, he never published any other original work even when he was with Rushton.

In July 1947, when I had had only a chance to publish a couple of papers, the School decided to advertise the Chair in Dental Pathology; I applied of course, another was Arthur Darling. I recall Bradlaw at the very formal University interview presided over by the majestic Principal.[7] Bradlaw asked most of the questions and in a kindly way. Dixon Boyd who was also there told me I did well but they decided none of us was ready for a Chair but it had been agreed that I could be offered a Readership. This assured my future at the London as far as I could see. Darling was appointed to the Chair at Bristol less than a year later.

I was pleased when Brian went to work in Martin Rushton's department. There could be nowhere better. I had worked with Rushton a great deal and he had been very kind to me; I was handicapped by shyness of pathological proportions, and lack of confidence; first as his assistant scientific editor on the *British Dental Journal* when he was its Scientific Editor. This job was new in order to help prepare the journal for the scientific and other needs expected soon to develop in the new age to come. I was to keep the readers in touch with research that had been going on abroad so I had to prepare abstracts from foreign languages; I could do French, and German with a struggle, Rushton was more German-competent and did a few and I unearthed someone who could manage Italian; some I could manage from their English summaries. I also was expected to attend prize-givings and similar events at dental schools in London and write short pieces; gradually I graduated to reviewing some books.

A bit later, the Medical Research Council revived their pre-war Dental Committee, which dispensed grants and did its best otherwise to stimulate dental research. They appointed Rushton as Chairman and I was to be Secretary but only in association with one of the MRC staff who in fact ran everything. May Mellanby returned to it, Darling was on, and the head of the Dental branch of the Ministry of Health and Head of the Royal Army Dental Corps as well as an eminent epidemiologist, a bacteriologist and a distinguished obstetrician.

[7] Of the University of London.

Dental caries was allocated to Darling to stimulate, epidemiology of dental disease to Mellanby, tooth development timing etc to me. My assignment included keeping an eye on Alwyn Gaunt, the only dental external worker on the MRC staff; he was working with Percy Butler at the Royal Holloway College, so that gave me an enjoyable attachment to him and the Collage and to Alwyn whose work on tooth development in mice was first-rate and involved reconstruction from serial sections, something I was learning from Angus Bellairs. At subsequent meetings, the obstetrician presented me some pots of early human foetuses, which obliged me to get sectioned at the London with the help of Ron Fearnhead.

I will squeeze in later my experiences serving on the Board of Studies in Dentistry of the University, eventually as its Secretary first under Professor W E Herbert, the first appointed teacher at Guy's,[8] and then Rushton for perhaps a total of eight or more years, from which my assessment of Rushton largely derives.

Martin was a delightful man, humorous and kind, one of the first scions of a well-to-do family, product of Public School and Oxford I knew at close quarters. Always gracious and at ease (a veneer and inside full of uncertainties as I learned when I knew him better); happy to consider innovative ideas and might even lend some support but not one to rely upon to support or lead against gritty resistance. I knew plenty later, Angus for instance. For that, choose a working-class product.

I saw in Martin enormous potential, what I could do if I only had his! After a time he disappointed me because he never seemed to give more than 80% to anything, I had to give 120% just to keep up. Of course, I am not referring to the last years of his life when he was sadly waging a brave battle against carcinoma of the lung. He had always smoked, a pipe only while I knew him. I visited him several times when he was in the ward at Guy's and at his home in Sevenoaks during a period of apparent recovery.

When I became Reader, I joined the Board of Studies as only the fourth dental Appointed Teacher; the others were Sprawson, only for about a year before he retired which was one of his grouses, Herbert who was a Reader I think and then elevated to Professor at the end of the war, and Rushton as professor of Oral Medicine. Sprawson had been its Chairman for many years. The rest was a motley crew of 'recognized teacher' dental consultants plus a few professors of anatomy and of physiology. Herbert had just been elected in succession to Sprawson when I joined which created a sense of at last we can move forwards I believe. He soon contrived to appoint me his Secretary and I saw a lot of him; efficient but over-bureaucratic I thought. I believe the officers served for 3-4 years and when he went Rushton took over but I stayed as Secretary, which is how I came to work so closely with him for so long. During those 8 years or so, lots of things happened and were planned. University-invited Lectures came in and we several times took advantage of inviting people

[8] As Reader in 1935.

of distinction from abroad who we learned were coming here for other reasons, Gösta Gustafson and P O Pedersen for example: both Scandinavians and enamel researchers. I remember an Australian oral surgeon who submitted a title for his with the words "roots and alveoli". John Zachary Young, who had joined the Board, or someone similar slyly asked, "Is this a botanical paper and does it refer to lung alveoli?" I had an awful job to get the chap to accept the sort of title I suggested. "In Australia, we call a spade a bloody shovel". Nice chap when some of us met him at a small dinner the University provided at Senate House after the lecture. I attended most of those to give some sort of traditional background and information about the University of London, but was openly criticised at a meeting for hogging it and not spreading the privilege among the ordinary members. It was difficult to get them to think up names to sponsor for the lectures.

I was right from the beginning put on the Board of Studies in Anatomy also, I suppose because I taught dental anatomy as well. I thus got to know 'JZ' and many other anatomists; eventually this bore good fruit because I managed to steer through one of their meetings a recommendation by our Board that the university examinations in the preclinical subjects of anatomy and physiology for dental students should be an Appointed Teacher member of the department, namely the Professor or his Reader, instead of saying to the most junior lecturer, "You do it this year". It was a subtle way of saying we wanted them to appoint special staff up to at least Readership level to teach the dentals. Taking advantage of planning a new school, we already had it agreed that strong preclinical appointments would be earmarked to provide teaching for the dentals with Appointed Teachers in anatomy and physiology and so in due course we had a Reader in Dental Physiology (unfortunate term) and Ron Fearnhead in Dental Anatomy. Unfortunately it turned out that Ron, who was notoriously an awkward person, was only housed by the Anatomy Department in the basement of an old house on the Whitechapel campus.

Soon after the Anatomy Board meeting 'JZ' telephoned me and said he understood and sympathized with what we wanted and was quite prepared to plan for a section of Dental Anatomy even under a chair but were people of the right potential available, "remember I expect people of top quality". I mentioned Ron Fearnhead and he said yes he knew of him; I then suggested Alan Boyde. Is he as good as Alan Ness I know in our Physiology Department? In fact had got FRS[9] potential, seeming to imply that Ness had just that potential. I said that it was a bit early to judge Alan Boyde in those terms but I thought he had. I'll get him to come one day soon and give a lunchtime talk to us all. A week or two later, I heard that Alan had such an invitation; next I heard that he had returned despondent and had made a mess of it. Perhaps he judged wrongly and I heard no more and know nothing of any negotiations that may have gone on but about a year later the news was that Alan was off to University College London with a

[9] Fellow of the Royal Society, the highest scientific recognition/

Readership.

When I eventually came to the end of my term as Secretary of the Board of Studies, they made me Chairman by the end of which the whole scene was barely recognisable. Even Bradlaw[10] had appeared as a member by virtue of being Dean at the Eastman. Some of us were still striving for reforms, developing schemes which involved integration between preclinical and clinical teaching, but it was difficult to go beyond the advances that had been made in the MB and perhaps just as well. In any case each of the five schools had their local problems including geographic, and none could be forced to do what they did not want. One idea I was disappointed not to see was pathology (laboratory or principles) and bacteriology examined as a separate subject instead, as I think it remains, just some questions as part of final.

I once had the chance to thank 'JZ' for attending our Board of Studies so regularly; he said that when he was appointed to the Chair at UCL (a zoologist, much resented by traditional human morphologists) he decided to do everything he was expected to for 5 years, including all the committees. I just hope I have contributed something as well as learning a lot about the University. I said he did, his mere presence on the dental committee prevented discussion sinking into the abysmal, which amused him. I used to meet him at Angus Bellair's parties when he once complained to me of the lack of interest in his Department and Boyde of the dental school people, what's-his-name across the road. He meant of course Arthur Prophet, as good a Dean as any as far as I knew but was in too much awe of 'JZ' and all across the road from him. How sad it was impossible to convey to him that if he broke the ice, which all Deans ought be able to do, he could meet a friendly constructive reception.

I served as external examiner in oral biology at the Cardiff Dental School with David Whittaker and David Adams for four years but cannot remember if once a year or twice. On at least one occasion, Declan Anderson was there too because I returned to London with him. I suppose he was taking part in the preclinical exams in the Medical College, about 3 miles away. I had the impression that Whittaker was in charge but Brian's history shows that Adams was and that in due course Adams became Reader in 1976 and Whittaker likewise in 1983. They must have dropped the idea of a Chair. At the time I was examining both were doing interesting electron microscope work. Whittaker had not yet developed his forensic line. I knew the course was run during the clinical period, they explained to me that there had been heavy emphasis on salivary function but otherwise the main core was more or less conventional dental anatomy but with little comparative.

Best wishes,
Loma

[10] Robert Bradlaw probably did more than anyone else to promote and develop dentistry after the Second World War.

THE HISTORICAL FLAWS OF ANGLE'S CLASSIFICATION

Xavier Riaud * +

Edward Hartley Angle (1855-1930)

Edward Hartley Angle (Fig 1) was born in 1855 in Herrick, Bradford County, Pennsylvania. He graduated with a Doctorate in Dental Surgery degree in 1877 and became Professor of Orthodontics at the University of Minnesota in 1885.[1]

Figure 1 Edward Hartley Angle

Angle distinguished orthodontics from general dentistry, not only in its teaching but also in its practice. He consistently tried to standardize orthodontic devices in order to produce them industrially. Therefore, the orthodontist stopped laboratory works. His book[2] was edited seven times from 1887 to 1907. Each outlined the

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[1] Julien Philippe, *Histoire de l'orthodontie* [*The history of orthodontics*], S.I.D. (éd), Paris, 2003.
[2] Edward H Angle, *Treatment of malocclusion of teeth and fractures of the maxillae. Angle's system*, Philadelphia, U.S.A., 6th edition, 1900, 315 pages.

progress of his technique. In 1897, Angle graduated with a Doctorate in Medicine. In 1899, he classified malocclusions meticulously.

On the eve of the 20th century, he opposed extractions which, according to him, could harm the completeness of the occlusions. In 1900, Edward opened a school of orthodontia in Saint Louis, Missouri. His preserving precept was explained in his main work, the 7th edition of his 1907 book entitled *Treatment of malocclusion of teeth*, which consisted of 628 pages and 641 illustrations. Thus, Angle's system with his *expansion arch* spread worldwide. However he was not satisfied with his system. Angle was looking for a device able to control the position of the roots. He succeeded in 1925 when he introduced the *edgewise* to the world. This system, published in 1928 and 1929, is still used and taught today. Each tooth wears a bracket into which is inserted an arch of a corresponding section. It thereby controls the position and orientation of the tooth. Angle died in 1930, in Pasadena.[3]

Angle's classification (1899)

This classification is still an essential tool for the preparation of a treatment. It lists and classifies all the diagnoses concerning malocclusions in three categories, divisions and subdivisions in order to help choose the appropriate treatment for the patient [I, II(1), II(2), III].

I: 1st lower molar showing a deviation of ½ cusp in comparison with the upper one (likewise for the canine).

II1: the middle upper incisors move forward

II2: disocclusion of the lower molar

III: mesiocclusion of the lower molar. A reverse occlusion may occur.

In 1907, the author never generalized his study to the whole population but only to patients who consulted him. He said:[4]

The classes are based on the mesiodistal relations of the teeth, of the dental and maxillary arcs which, depend on the mesiodistal position of the first molars during their eruption and on the arcade. Hence, in the diagnosis of malocclusion cases, we should firstly pay attention to the mesiodental relation between the dental and maxillary arcs as indicated by the relation between the first lower molar and the upper one (keys of occlusion) and secondly, on the positions of each tooth carefully observing their relations with the occlusion line.

Of the few thousand examined cases of malocclusions, the proportion of each class is shown in Fig 2.

In the USA, from 1898 to 1902, this classification was definitely ahead of its time due to its static conscious and voluntary juxtaposition of plaster models from Angle's patients, the latter only having at his disposal some maxillary models that he would mesh with one another.

[3] Ibid.

[4] Edward H Angle, *Treatment of malocclusion of teeth. Angle's system*, 7th edition, 1907, 628 pp.

Figure 2 Percentage of each class of malocclusion[5]

Class I		69.2
Class II		
	Division 1	9.0
	Subdivision	3.4
	Division 2	4.2
	Subdivision	10.0
Class III		
	Division	3.4
	Subdivision	0.8
		100%

Angle's goals

A therapeutic protocol was born out of this classification. It aims at choosing a type of treatment resulting in a faultless line of occlusion, and harmonizing the lines of the face with this ideal occlusion and at correcting growth deficiencies.

However, Angle never specified the duration of contact between the two arcades.[6] He always saw them closed. This protocol primarily focused on the meshing of the first four molars, the others being fixed by the goodwill of Mother Nature. According to him, this connection defined the distance between the jawbones and determined the harmonious aspect of the face which distinguished an individual from another, a human being from a primate. He never dwelt on the opening and closing of the jaws, neither on the lingual function he often quoted. In his defense, neurophysiologic and molecular mechanisms of the masticatory function, notably with its characteristics of dento-dental reflexes or with the position of physiological postural rest, were known much later.[7]

To sum up, the determination of Angle's classification emerged from the examination of intimate dento-dental connections and from a transversal angle, or from a horizontal angle when dental arcades are in voluntary occlusion, upper teeth against lower teeth.

This method of classification, taken by Angle from plant life and that of the 19th century's animal kingdom, gave no scientific contribution on the tridimensional dento-

[5] Ibid.

[6] A Jeanmonod, *Occlusodontologie, applications cliniques* [*Occlusodontology, clinical applications*], CdP (éd), Paris, 1998.

[7] Guy Cotton, Le diagnostic de la classification d'E H Angle [Diagnosis of E H Angle's classification], in *http://occlusion.be/*, Ans, Bruxelles, Belgique, 2004, pp 1-15.

dental relation, neither on the vertical dimension of physiological occlusion or of its rest, nor on the lingual function and the infantile salivary swallowing.[8]

The occlusion according to 'Mother Nature'

In 1899, the occlusion of two jawbones was only guided by 'Mother Nature' and Angle's classification did not take the manducator muscles into account, neither their functions, nor the reflexes they control and the physiological rest of the fibres which they are made up of. In 1900, Angle specified the goal of this classification, which was to help to clarify the diagnosis of a natural dento-dental malocclusion (which he said should now be called "the voluntary dento-dental occlusion of the patient", under "the patient's order" of the dentist, the orthodontist or of the radiotherapist (with regards to lateral teleradiographs)). Its main goal was the perfect harmony of the outlines of the face. His personal reference was Adonis's face.[9] "All the lines [of the face] are entirely incompatible with mutilations or malocclusions."

Angle never required his orthodontic treatments to be included in class I for the latter was described as an unequivocal malocclusion which concerned 69.2% of the patients consulting him.

Yet, his treatments were put into question by the recurrences for the former never took the lingual or maxillary dysfunctions into account. Besides, the American orthodontist offered 50% of his salary to those who agreed with continuing dental care after the end of his treatments.[10]

Physiology or Medicine Nobel Prize

The awarding of some early Nobel Prizes in 'Physiology or Medicine' suggest that Angle would not have known in 1899 about the physiology of muscles, nor that of neurons.[11]

1901: The first Nobel Prize in Physiology or Medicine was awarded to Edmil Adolf von Behring (1854-1917) for the use of a serum against diphtheria. Angle was 46 at that time.

1904: Ivan Petrovitch Pavlov (1849-1936) for his work on the physiology of digestion, and notably his discovery of the induced salivation reflex.

1906: Camillo Golgi (1843-1926) and Santiago Ramón y Cajal (1852-1934) for their discovery of the components of the nervous system.

1922: Archibald Vivian Hill (1886-1977) and Fritz Meyerhof (1884-1951) for their discovery of energizing mechanisms within the muscles.

1932: Sir Charles Scott Sherrington (1857-1952) and Edgar Douglas Adrian (1889-1977) for their discovery of the neuromuscular reflex. Sherrington notably studied the manducator reflexes on a decerebrated cat in 1917.[12] (Sherrington, 1917).

[8] Ibid.
[9] Angle, op cit., fn 2.
[10] Cotton, op cit., fn 5.
[11] Nobelprize.org, 2008.
[12] C S Sherrington, Reflexes elicitable in the cat from pinna vibrissae and jaws, *J Physiol*, 1917; 51: 404-431.

1953: Hans Adolf Krebs (1900-1981) for his discovery of the cycle of the citric acid which today bears his name.[13] (Nobelprize.org, 2008). It was the starting point for the comprehension of the intracellular mechanism of muscular cramps (lactic acid).

Discussion about Angle's personality

Angle had an anatomistic, almost mechanistic vision about dental occlusion. According to him, the occlusion of the first molar pair was the centre of the morphogenesis of the face. Angle lived in the USA whereas Sherrington and Krebs were in England. Communication was not as easy then as they are today so when Angle died in 1930 he may not have heard about all the English medical discoveries. According to his titles, 'Former professor of histology, orthodontia, and comparative anatomy of the teeth (...) former surgeon for treatment of fractures of the maxillae (...)' and the chapter 'Part II. Fractures of the maxillae' of the 6th edition of his book published in 1900 (p.285-305[14]) and the insertion of unitary dental splints of retention in the same edition, Angle was a dentist and even surgeon sometimes, but above all was trained in oral anatomy.[15]

We must remember that at the beginning of the 20th century, Léon Frédéricq (1851-1935), a physiologist from Liège, tasted toads' spittle to determine the saltiness of saliva from different species. Therefore, during Angle's time, physiology and biochemistry, such as we know them today, did not exist.

Conclusion

Epistemology is the study of science in its cultural and historical context. The word comes from the Greek *epistēmē* meaning 'knowledge, understanding' and logos which means the 'study of'. It is the branch of philosophy concerned with the nature and scope (limitations) of knowledge. The term was introduced by the Scottish philosopher James Frederick Ferrier (1808–1864).[16] It allows us to appreciate the worth of Angle's classification and to measure its flaws. It is indisputable that a historical approach to the odontological subjects would allow many people to better understand the content and limits. If that approach would be performed in its historical context, it would allow a better understanding of its importance and its strength.[17]

Auguste Comte (1798-1857), a positivist philosopher considered as the 'father of sociology' in France was not mistaken when he claimed: "We do not know a science completely as long as we do not know its history."

[13] Nobelprize.org, 2008.
[14] Xavier Riaud, *Plaidoyer pour un enseignement historique de l'art dentaire* [*For the defense of the historical teaching of the dental art*], L'Harmattan (éd), Collection Ethique et Pratique médicale [Ethics and medical practice Collection], Paris, 2008, pp 285-305.
[15] Guy Cotton, Brussels, Belgium, 2008, Personal communication.
[16] http://en.wikipedia.org/wiki/Epistemology.
[17] Riaud, op cit., fn 12.

PHILIP P BLAIBERG, DENTIST OF HEART TRANSPLANT FAME

Stanley Gelbier

Introduction

Some dental history involves the invention and utilisation of equipment or materials, or perhaps the use of a new treatment by a general practitioner or specialist. However this paper is different. It is about a dentist as a patient.

Philip Blaiberg wrote in 1968.[1]

Only a few months ago I lay in the hospital, a dying man with a stricken heart. It had deteriorated until it scarcely beat. I gasped for breath. I could barely lift a hand or foot. The nurses wondered how soon my bed would be ready for the next patient.

He went on:

Then came the miracle: i was given a new heart, a new lease of life. Today I am the second man since the Creation to live with the heart of a dead man beating in his breast, able to declare that a heart is not the seat of the emotions, of love and hate, good and evil, greed and generosity; to prove it is a pump that can wear out or be damaged and, like a car part, be replaced to continue the task of powering the engine of the body."

Cyril Adler, honorary director of the Museum of the History of Medicine in Johannesburg, said his friend Blaiberg lived with him in 1928 for a year when a first year dental student at the University of Witwatersrand.[2] With increasing illness Blaiberg found it necessary to dispose of his practice. Knowing Adler's interest in the history of medicine he donated a foot operated drill to the Museum.

Blaiberg's father

His parents were Jacob and Gertrude Blaiberg. Father Jacob Woolf Blaiberg was born in 1870 in the Polish town Crajevo, just inside the Polish border. His early education was in Prussia whilst living with his grandfather. In his youth he was called up for military service in the army of the Czar, Poland then being under Russian rule.[3] Jacob managed to be spirited away whilst marching to the station on the way to a troop camp. From Germany he travelled to England

[1] Philip Blaiberg, *Looking at my heart*, London : Heinemann, 1969, 138pp. p 1.
[2] Cyril Adler, honorary Director of the Museum of the History of Medicine, Johannesburg, May 1968, Foreword to Blaiberg, op cit., fn 1.
[3] Blaiberg, op cit., fn 1, p 2.

where members of his family were in the furniture trade, working with them for 12 years.

The Boer war led him to emigrate to South Africa in spite of relatives who lived in Salt Lake City urging him to go America, the "land of opportunity", instead of the "wilds of Africa". Blaiberg had heard of gold and diamonds, of quick fortunes to be made in South Africa, as well as its warm sunshine and wonderful climate. Before leaving he invested his money to buy some family-made furniture and took it to Africa, selling it at a profit. Blaiberg travelled thousands of miles by train to Johannesburg with £600 in his pocket, a considerable sum in the early 1900s. However he found no gold, only wood and iron structures, dirty streets and a coarse mining town atmosphere, so he returned to the Cape. Blaiberg bought a tiny country store at Uniondale Road, a railway station about 50 miles from Oudtshoorn in the Eastern Cape.[4] Unfortunately he played a lot of cards with railway workers and policemen so he went into the red. So it was good when he met his shrewd, hard working, bold and assertive future wife.

His mother

Gertrude Leah Portnoi was born in 1890 in a small Lithuanian town. Her father died whilst she was still in her early teens. By then her mother had four daughters and a son to support. Son Isaac was conscripted into army and became a sharp shooter. On discharge he made for South Africa and became a speculator in the Eastern Province. Unfortunately he sent few letters home so his mother was extremely worried, especially as Africa was such a primitive land. Most people would just have worried but she sent her second daughter, Gertrude, to investigate. The latter was aged 18 years, only knowing Lithuanian and Yiddish. A letter to him ensured Isaac met her in Port Elizabeth and took her to a farm to stay. She soon learned Afrikaans. Elizabeth told her mother he had money but was too extavagant.

On a visit to an agricultural show in Port Elizabeth Gertrude was introduced by Isaac to Jacob, then aged 37 years. They were soon married in a synagogue. Isaac left for the USA and settled in Pittsburg, becoming lost to the family. Seeing her new living quarters made Gertrude realise she needed to take things in hand; and the same applied to the shop as her husband was "too easy going and lackadaisical to make a success of it".[5] An attempt to make him insolvent gave her the chance to take charge. Within the given 3 months allowed to her by his debtors she had paid off the debts, but laid down conditions: a useless employee had to go, card playing had to stop and his monthly order of a barrel of brandy had to be cancelled. From then on she had to approve the accounts and supervised the store. Jacob had to keep the books and handle any correspondance. A barrel of brandy still arrived: she split it with an axe and he became a teetotaler. With sales to locals and selling food and drink to

[4] Ibid., p 3.
[5] Ibid., p 5.

passengers on the trains which stopped there she made a profit of £40 per month. She then managed to get a contract to carry Royal Mail from Uniondale Road to the little town of Uniondale, 15 miles away, delivered by a cart and four horses. There was also room for three passengers.

Gertrude was a strictly orthodox Jew. She observed all the dietary laws, kept a Kosher kitchen and received Kosher[6] meat from Uniondale. But perhaps surprisingly she opened the store on Saturdays (the Sabbath). She accepted cash for articles bought but would not cut dress materials, so customers used the scissors themselves. Gertrude would also not write so she memorised what customers had bought and not paid for items so Jacob could write it down to her dictation in the evening.

The arrival of Philip Blaiberg

Philip (Phil to his friends) was delivered into the world on 24 May 1909 by an old Scottish doctor at the home of Jewish friends in Uniondale but grew up in the Klein Karoo capital town, Oudtshoorn,[7] half way between Cape Town and Port Elizabeth. It was a good place to grow up; a town with the most sunny days per year in the whole country, 365 sunshine days, 4 summers and sunny, dry winters. It was world famous for the ostrich industry: an ostrich boom peaked in 1913, with its feathers exported throughout the world for ladies' hats. But the trade collapsed in 1914. This was often blamed on Henry Ford's invention of the motor car. From then, large hats with ostrich plumes were unsuitable, being blown off during car journeys. It ruined the region's economy, but it later revived. There are still some 400 ostrich farms.

Until the age of 6 years Blaiberg went to the local farm school. The teacher, Miss Maria Terblanche, taught all the subjects to the 15-16 children, including the '3 Rs' and the song 'The blue bells of Scotland'. The latter could might as well have been Greek to young Phil as he only knew Africaans. English didn't follow until about 9 years of age, although his parents spoke English as well as Yiddish to discuss their private affairs.

He was told fairy stories by his father. His mother decided they needed a new home so one was built for them. Meanwhile brother Sammy was born.

Phil Blaiberg acquired a vivid vocabulary from the railway workers so his mother decided it was time to go where he would avois such influences, as well as have a Jewish and Hebrew education. He was thus sent to Oudtshoorn to live with a private Jewiah family and was assured of Kosher meals.

[6] Kosher means food conforming to Jewish dietary laws; ritually pure. From Hebrew for fitting or proper. The Free Dictionary, http://www.thefreedictionary.com/kosher

[7] See http://www.sahistory.org.za/pages/people/bios/Blaaiberg-p.htm

Blaiberg's schooling

Phil attended the Government School which uniquely set aside a period each school day for Hebrew tuition. He soon became good at rugby. Phil was at the school when WWI ended. Eventually Gertrude handed the business to relatives and moved to Oudtshoorn, where she took up growing and selling seeds.

Phil passed the Junior certificate exams and started the two-year matriculation course. Blaiberg then thought of becoming a pharmacist. He told his father that he wanted to start work in the local pharmacy straight away and assured him he was "never more certain of anything in my life. So his father arranged indentures with the pharmacist, possible as he had passed the Junior certificate. But young Ohil was soon disillusioned by during menial tasks so within three days he left (with his dad's permission) and went back to school. Phil matriculated at the Oudtshoorn Boys' High School in 1927.

In the following year Blaiberg went to the big city, to the University of the Witwatersrand in Johannesburg. By then he was leaning towards engineering. However, believing he would need a first class maths brain so decided against engineering. After spending a year there he decided to study dentistry. It was the year the Dental faculty produced its first crop of finalists. Blaiberg uprooted himself and sailed from Durban to Southampton, arriving on 22 April 1929. He then enrolled for a four-year course at the London School of Dental Surgery of the Royal Dental Hospital, Leicester Square, in the heart of London's theatre-land. Blaiberg did well and was regarded by one of his instructors, Mr Maurice Allman who taught him to make his first set of dentures, as one of his brighter students, "always inspired by new ideas".[8] He said later Blaiberg was " full of bravado and fond of a joke".

Blaiberg said he was happy at the hospital and loved London. He played much rugby, trained hard and was as tough as nails. After matches he was "eager for an evening's entertainment and gallivanting". Blaiberg was captain of the 1931-32 RDH team when it reached the first round of the inter-hospital cup competition for the first time in twelve years. In summer he played cricket although he prefered the associated social life, His annual holidays were spent cheaply on the Continent.

To the pride of his parents Phil Blaiberg passed the examinations for the Licence in Dental Surgery from the Royal College of Surgeons of England in June 1933. He then sailed for Cape Town.

A new life

Blaiberg met Eileen Abel, daughter of Israel Harris Abel a hotel proprietor in Oudtshoorn, a shorthand typist-bookkeeper. But he then moved away to start a practice in Robertson, in the Cape province, 150 miles from Oudtshoorn.

[8] Blaiberg, op cit., fn 1, p 14.

Several months later Blaiberg returned home for *Yom Kippur*[9]. In the synagoue he saw Eileen eyeing him and walked her home.

After 32 years of married life Eileen told the story.[10] From that night their romance blossomed. She said: "I lived from one weekend to the next. We wrote love letters and telephoned each other regularly." The courtship lasted two years. In August 1935 Eileen's father died. Phil proposed and they married on 5 april 1936 at the Oudtshoorn synagogue. A wedding photograph was in the *Cape Times*. The couple occupied the best room at the Commercial Hotel for 18 months. They eventually rented a house.

In 1938 a son Israel Harris, was born. He eventually followed his father's original dream and studied engineering at the University of the Cape.

Blaiberg practised for six years in Robertson but just before World War II started he moved to Cape Town, practising in the suburb of Woodstock. His last practice was on the 5th Floor at the Cape Medical Centre. Mervyn Drouin, a dentist who later became a leading dentist in London, England, qualified in South Africa. He joined a practice that operated out of Blaiberg's old premises in Cape Town. He wasn't highly academic but did publish a paper on dental practice.[11]

In 1940 Blaiberg enlisted in the South African Medical Corp as a dental officer. For three years he treated troops in different camps. In 1943 he went north with the SA 6th Armoured division as second in command of the dental section. He then transfered to a mobile dental unit serving the railway construction engineers and tunnelling companies. Blaiberg supported the troops in Egypt and Italy.

After the war Blaiberg returned to Eileen and their son. However in 1961 Israel died tragically, aged 23. On 14 September 1947 a daughter, Jill, had been born. In later life nothing could replace Harris but Blaiberg said the " love, devotion and understanding Jill showed us somehow helped us to fill the void".

Phil and Eileen bought a house in one of Cape Town's loveliest suburbs, Rondebosch.

A troubled heart

In 1955 Blaiberg was climbing with son Israel when he felt a sharp pain in his chest. Two weeks later Blaiberg experienced a major coronary attack. There was some family history, his mother having died in her sleep from a heart attack. His father lived to the age of 73 without such an attack but his brother Sammy died in Israel in 1966 from a heart attack. So at the age of forty-five, in 1954 Blaiberg ceased dental practice. In March 1967 his heart failed. It was apparent within months that Blaiberg would die if nothing were done.

[9] The Day of Atonement, the major day in the Jewish calendar.
[10] Blaiberg, op cit., fn 1, p 17.
[11] P B Blaiberg, A departure from the conventional method of lining cavities, S Afr Dent J 1948; 22: 52.

Scientific background to transplants

From the late 1700s until the early 1900s scientific research in the field of immunology evolved, including Ehrlich's discovery of antibodies and antigens, Lansteiner's blood typing and Metchnikoff's theory of host resistance.[12] By the end of the 19th century better suturing techniques enabled surgeons to transplant organs in the laboratory. By the 20th century it was known that xenographic (cross species) transplants invariably failed, allogenic transplants (between individuals of same species) usually failed, but autografts (within the same individual, generally skin grafts) usually succeeded. Repeated transplants between the same donor and recipient experienced accelerated rejection. Success was greater when the donor and recipient were blood relatives.

Alexis Carrel, a French surgeon whose experiments involved sustaining life in animal organs outside the body, received the 1912 Nobel Prize in Medicine or Physiology for his technique for suturing blood vessels. In the 1930s he and the aviator Charles Lindbergh invented a mechanical heart that circulated vital fluids through excised organs to keep various organs and animal tissues alive for many years.

Throughout the 1940s and 1950s significant advances were made. In 1958 Dickinson Richards MD, chairman of the Columbia University Medical Division, and Andre Cournaud shared a Nobel Prize for their work leading to a better understanding of the physiology of the human heart using cardiac catheterization. Also in 1958 Keith Reemtsma MD, of Tulane University, showed that immunosuppressive agents prolong heart transplant survival in the laboratory setting.

At this time, Norman Shumway MD, Richard Lower MD and colleagues at Stanford University Medical School developed heart-lung machines, solved perfusion issues and pioneered surgical procedures to correct heart valve defects. A key to their success was 'topical hypothermia'. The localized hypercooling of the heart allowed the interruption of blood flow and gave the surgeons the proper blood-free environment and adequate time to perform the repairs. Next came 'autotransplantation', where the heart was excised and resutured in place.

By the mid-1960s the Shumway group was convinced that immunologic rejection was the only remaining obstacle to successful clinical heart transplantation. In 1967 Michael DeBakey MD implanted a artificial left ventricle device of his design into a patient at Baylor College of Medicine, Houston.

[12] Department of Surgery, University of Columbia, A brief history of heart transplantation, http://www.cumc.columbia.edu/dept/cs/pat/hearttx/history.html

In 1967, a human heart from one person was transplanted into the body of another by Dr Christiaan Barnard in Cape Town. Barnard had learned much of his technique by studying with the Stanford group. This first clinical heart transplantation quickly stimulated others to copy him but many patients died soon after the operation. As a result the number of heart transplants dropped from 100 in 1968, to just 18 in 1970. The major problem was the body's natural tendency to reject the new tissues.

Over the next 20 years advances in tissue typing and immunosuppressant drugs allowed more transplants to take place and increased patients' survival rates. The most notable development was Jean Borel's discovery of cyclosporine, an immunosuppressant drug derived from soil fungus in the mid 1970s.

Dr Christiaan Neethling Bernard (1922–2001)

Christiaan Barnard was born on 8 November 1922. He attended the Beaufort West High School and then the University of Cape Town's Medical School, gaining the MB ChB in 1946. An MD followed in1953. There was also a MMed.[13] Barnardtthen got a scholarship to study at the University of Minnesota in North America, gaining an MS and later a PhD in 1958.

Upon his return to South Africa in 1958 Barnard was appointed cardiothoracic surgeon at the Groote Schuur Hospital, establishing the hospital's first heart unit. He was promoted to full-time lecturer and Director of Surgical Research at the University of Cape Town. Three years later he was appointed Head of the Division of Cardiothoracic Surgery at the teaching hospitals of the University of Cape Town. Barnard became Associate Professor in the Department of Surgery at the University of Cape Town in 1962. From 1968 to 1983 Barnard was Professor of Surgical Science in Cape; 1984, Professor Emeritus; 1985, Senior Consultant and Scientist in Residence, Oklahoma Heart Center, Baptist Medical Center. His younger brother Marius was eventually Barnard's right-hand man at the department of Cardiac Surgery. Barnard died on 2 September 2001.

The world's first human heart transplant operation was performed on 3 December 1967 by Barnard. With the assistance of Marius and a team of thirty other people - cardiologists, radiologists, anaesthetists, technicians, nurses, immunologists, pathologists, and in particular, Professor Val Schrire, head of the Cardiac Clinic - Barnard performed a nine-hour operation at Grootes Schuur

[13] 'BARNARD, Prof. Christiaan Neethling', *Who Was Who*, A & C Black, 1920–2008; online edn, Oxford University Press, Dec 2007 [http://www.ukwhoswho.com/view/article/oupww/whowaswho/U6524, accessed 14 June 2012]

Hospital on Louis Washkansky, a 55-year-old man suffering from diabetes and heart disease. He transplanted a heart from 20-year-old Denise Darvall who had been hit by a car and suffered severe brain damage. Although a unique procedure her father readily gave permission to donate her organs. Washkansky survived the actual operation and lived for a further eighteen days before dying of pneumonia.

A transplant for Blaiberg

It opened the way for Blaiberg to be treated. On 2 January 1968 the 59-year-old received the heart of a 24-year-old donor, Clive Haupt, a multiracial black man who had collapsed on a beach the day before. The operation was performed by Barnard in the same hospital. It is sad that in the then-deeply divided apartheid South Africa racism reared its ugly head. Controversy arose because the donor patient was coloured and the recipient white. This caused some strange statements from right-wingers: "The relief of suffering knows no colour bar. The heart is merely a blood-pumping machine and whether it comes from a white, black or coloured man - or a baboon or giraffe, for that matter – has no relevance to the issue of race relations in the political or ideological context. The question of colour is not at issue here."[14] As stated in the UK's *The Times*[15] "the fact that the recipient was a Jew and the donor a "Coloured" man by South African standards was of course irrelevant except to the political troublemakers".

With careful surgery and stringent post-operative sterile conditions Blaiberg recovered without the resultant infection which led to the death of Washkansky. He made a smooth recovery and within days was in good spirits, with no serious complications from the transplant. Barnard's team of doctors treated him for any minor problems which occurred and reduced his dosage of immunosuppressive drugs. Blaiberg returned to a reasonably normal lifestyle and his wife, Eileen, said Philip "was running around like a machine."[16] He displayed a zest for life: less than three months after the operation he was able to drive his car and he went swimming on the first anniversary of his operation. By the end of the year Blaiberg wrote a book on his experiences.[17].

Unfortunately, Blaiberg eventually suffered some long-term complications of the transplant and had some relapses. Nineteen months and fifteen days after the operation, on 17 August 1969 he died peacefully in the Grootes Schuur Hospital from heart complications and chronic organ rejection. These 594 days were far longer than any other heart transplant patient had survived. An autopsy showed severe and widespread coronary artery disease.

[14] Marais Malan, *Heart transplant: the story of Barnard and the "ultimate in cardiac surgery"*, Johannesburg: Voortrekkers, 1968, pp 115.
[15] The Times, 18 August 1969.
[16] http://www.answers.com/topic/philip-blaiberg
[17] Blaiberg, op cit., fn 1.

The current situation

The success of Blaiberg's transplant launched an immediate world-wide response, with doctors performing heart transplants in many countries. By the end of August 1968, 34 heart transplants had been performed; and by December 1968, 100 hearts had been transplanted into 98 patients. As of 2001, more than 100,000 people had undergone heart transplants and the success rates of the operation were close to one hundred per cent.

Britain's first heart transplant was successfully carried out on 3 May 1968 by a team of 18 doctors and nurses at the National Heart Hospital in Marylebone, London. Led by another South African-born surgeon, Donald Ross, this operation on an unnamed 45-year-old man took more than seven hours to complete.

In 2009 there were 121 heart transplants and 5 heart and lung transplants at seven hospitals around the UK.

CUNNINGHAM'S CAMERA: THE DAWN OF DENTAL FILMS*

Melanie Parker*

The year 2012 marked not only the Lindsay Society's golden anniversary but also the centenary of the first film made in Britain, and quite possibly in the world, about dentistry. The film was commissioned by George Cunningham (1852-1919) (No 1 in Fig 1) a pioneer in preventative dentistry and oral hygiene, particularly for children. He was born in Edinburgh and later studied medicine at the university. He moved to France to continue his medical studies and was awarded the *Bachelier ès Lettres et ès Sciences* of the University of Paris in 1874.

Keen to further develop his knowledge he attended the 1875-6 session at the newly opened Harvard School of Dental Medicine, qualifying DMD (Doctor of Dental Medicine) with honours. Perhaps Cunningham chose Harvard as it was the first dental school to be affiliated with a medical school; certainly he believed that dentistry was a special branch of medicine. It was undoubtedly a fortunate choice as two years later, upon the passing of the Dentists Act, the DMD became one of only two American qualifications acceptable to the General Medical Council for registration (the other being the DDS from the University of Michigan). Cunningham spent some time touring the United States before returning to Britain where he joined his brother in practice in Wisbech. In 1883 Cunningham established his own practice in Cambridge, his brother having left to study at the University of Michigan's College of Dental Surgery.

George Cunningham was a man of many interests. In addition to his medical and dental qualifications he read for a degree in natural sciences, culminating in an MA degree, in 1888, from Downing College, Cambridge. He authored many papers on prosthetics and orthodontics; and co-authored a report to the Home Secretary on the use of phosphorous in the manufacture of lucifer matches[1].

Cunningham was one of the founding members of the British Dental Association (BDA) in 1880. The following year he also helped form the Eastern Counties Dental Association which in 1883 became the Eastern Counties branch of the BDA. He eventually became President and an honorary member of that branch.

Cunningham's interest in paediatric dentistry manifested itself as early as 1890 when he was appointed by the BDA Representative Body to the Committee for the Investigation of School Children's Teeth. This committee produced seven

* Based on a presentation to the Lindsay Society annual conference in Cardiff, 7 October 2012.

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[1] T E. Thorpe, T Oliver and G Cunningham, *Reports to the Secretary of State for the Home Department on the use of phosphorus in the manufacture of lucifer matches*, London: HMSO, 1899.

reports between 1891 and 1897[2] to give an overview of the state of the teeth of the nation's children.

Reports were not enough for Cunningham. He was determined to establish his own clinic for children. Cunningham must have been influenced by his international travels and contact with foreign colleagues. He was an active member of the International Hygiene Commission and took busman's holidays, for example in 1902 visiting children's clinics in Strasbourg. Cunningham's idea of a publicly funded clinic solely for children wasn't entirely new. William McPherson Fisher of Dundee had called for the compulsory inspection of school children's teeth through the co-operation of dentists and the state in the 1880s. Some individual schools had paid heed and appointed their own dentists. However nothing had been done on a town-wide basis nor had a separate clinic been set up.

Cunningham persuaded the town of Cambridge to appoint a school dentist but the Education Committee was only empowered to spend £50 on this venture. Sedley Taylor, Fellow of Trinity College and one of Cunningham's patients, was an ardent supporter and made up the rest of the £300 salary for the dentist. Initially a Mr Simpson was employed and then Arthur William Gant, LDSRCS Eng (No 2). They also employed a surgery maid (3), a novelty at this time.

Figure 1 George Cunningham (1) and his colleagues in the Cambridge Dental Institute

[2] *Reprint of the seven reports of the committee appointed by the representative board of the British Dental Association to conduct the collective investigation as to the condition of the teeth of school children*, London: John Bale & Sons, 1897.

The Cambridge Dental Institute, as the clinic was named, began its work in July 1907 with an inspection of children from East Road Infants' School, Cambridge. Preliminary inspections were undertaken in the elementary schools. Children requiring extractions were referred to Addenbrooke's Hospital. This left the clinic to focus on conservation work. The clinic was equipped with dental chairs designed with booster seats for children (4), spittoons (5) and treadle drills (6).

Cunningham's clinic was also innovative because it provided a play room rather than a waiting room plus a garden. The 1907 Education Act empowered other local education authorities to provide dental inspections in elementary schools. In October 1908 Cambridge Council took over the scheme with the consent of the Board of Education.

For Cunningham more still needed to be done to spread his message of preventative dentistry for children. He commissioned a film to demonstrate the techniques to his fellow dentists. The new medium of film no doubt appealed to Cunningham's theatrical streak. He had also already experimented with magic lanterns, for example hiring the Old Vic Theatre in 1899 to give an illustrated lecture, 'Our Teeth – How they Come and Why They Go', attended by an audience of a thousand people.

Charles and Emile Pathé had founded Pathé Frères in France in 1896 to sell phonographs. They soon began putting kinetoscopes in theatres throughout France to show early films. The brothers weren't content to just install the viewing equipment but began filming short fictional films. In 1909 they shot their first 'long film', and started the famous newsreel. They had already opened London premises seven years earlier.

Cunningham commissioned the Pathé brothers to produce his film. It was shown at the meeting of the International Dental Federation (of which he was a founder) held in Stockholm from 28-29 August 1912. Alongside the film there were four short papers on the subjects of public dental hygiene. These showed that Cunningham's efforts in developing a school dental service were mirrored in many other countries.

Cunningham's film was described as the "the first of its kind as yet given before a scientific gathering"[3]. Sadly most of the 40 minute film has been lost. The missing sequences showed the anatomical appearances and articulations of the temporary and permanent teeth and an ingenious device which illustrated the growth and movement of the first permanent molars into position. Another device illustrated the commencement of caries and the ultimate dissolution of the tooth.

The eight minutes of film which remain contain a variety of scenes including the clinic dentist providing a dental examination for two young girls, children in the garden at the clinic in Cambridge, mothers breast feeding and another of Cunningham's favourite subjects, the dental condition of army recruits.

[3] From an address given by W B Paterson (President of the FDI), *British Dental Journal* 1912; 33: 1053.

Cunningham went on to produce at least two more films, 'The new dentistry: how to save nation's teeth' and 'Caries conquered' but unfortunately there is no trace of these films.

The Cunningham film is the earliest cinematograph artefact held in the BDA museum in London and visitors to the museum are welcome to view this pioneering film in preventative dentistry for children.

FRANÇOIS-JOSEPH TALMA (1763-1826): DENTIST AND NAPOLEON'S FAVORITE ACTOR

Xavier Riaud* +

Talma's career

François-Joseph Talma (Fig 1) was born in Paris on 15 January 1763. From the age of ten years he was fascinated by the stage. When Talma went to see a tragedy filled with unspeakable emotion he burst into tears.[1] In 1776, he went to England to see his father who had moved to London to practise dentistry. His uncle and brother also practised dentistry in London; and then in Paris.[2] Despite the influence of his family's profession he was drawn more by the discovery of Elizabethan theatre, so in England Talma became an amateur actor.

From 1782 to 1785 he travelled backwards and forwards between France and England, living with his uncle when he was in Paris. Talma settled in France in 1785 and became a dentist but only practised for a short time.[3] From 1785 to 1786 he lived with his uncle on *rue Mauconseil*.[4]

In 1786 Talma renounced dentistry and registered at the *l'Ecole royale de declamation* [the Royal School of Declamation & Song],. He made his debut at the *Comédie-Française* on 27 November 1787 and became one of its members in 1789.[5] There, he played *Brutus* and Voltaire's (1694-1778) *La Mort de César.* He created the theatrical performance of the Chenier's (1764-1811) *Charles IX*, Chenier being a French politician and writer. The play was a huge a success, so much so that the Church forbade the thirty-third performance of the play. On 21 July 1790 the play was performed again despite the ban. The company of the *Comédie-Française* became divided, split between the revolutionaries and the other members who refused to play with Talma. He became more and more politically involved - having no great affinity to Robespierre but befriending a young serviceman named Bonaparte. He was excluded from the *Comédie-Française* in 1791 and took refuge in a new theatre on *rue Richelieu.* The group soon took the name *Theatre de la*

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+ Dental Surgeon, Doctor in Epistemology, History of Sciences and Techniques, Laureate and member of the National Academy of Dental Surgery.

[1] Jules Janin, *Talma and Lekain*, 1826.

[2] Pierre Baron, 'Dental Practice in Paris' in *Dental practice in Europe at the end of the 18th century* (an investigation conducted by Christine Hillam), Rodopi (ed.), Amsterdam, 2003.

[3] Henri Lamendin, *Praticiens de l'art dentaire du XIV^{ème} au XX^{ème} siècle* [Practitioners of the dental art from the 14th to 20th centuries], L'Harmattan (ed.), Collection Médecine à travers les siècles ['Medicine throughout the centuries' Collection], Paris: 2007.

[4] Baron, op cit., fn 2.

[5] Janin, op cit., fn 1.

République. When the members of the *Comédie-Française* were imprisoned in September 1793 Talma was accused of having plotted against his former partners.[6] As he was included in the circle of Mirabeau's friends and that of the Girondins, Talma just escaped the guillotine.[7]

Fig 1 François-Joseph Talma

Talma was subsequently sent back to the theatre, where his efforts and talent soon won unanimous approval. He showed innovation in his approach to costumes by proposing to play characters according to the dress code of their time.[8] In 1792, for example, when playing Proculus in Voltaire's *Brutus* (written by Voltaire in 1730), Talma dressed like a Roman rather than in contemporary fashion.

He returned to the *Comédie Française* in 1799 and officially became "Napoleon's favourite actor", notably thanks to his role in Cinna (1643), a play written by French playwright Corneille (1606-1684), in which Napoleon noticed his performance. In 1799 the theatre in *rue Richelieu* became the home of the *Théâtre-Français*.[9]

When it reopened Talma played Rodrigue's role in Corneille's *Le Cid*. In 1807 he was appointed professor at the Conservatory. At the end of the same year he became seriously ill and nearly died. In March 1808 Talma tried acting in comedies. He played in *Plaute* or the Latin Comedy, written by Louis-Jean Lemercier (1771-

[6] http://fr.wikipedia.org, 2010
[7] Janin, op cit, fn 1.
[8] http://fr.wikipedia.org, *François-Joseph Talma*, 2010, pp 1-2.
[9] http://fr.wikipedia.org, 2010

1840), a French author.[10] In September 1808, on the Emperor's demand, he went to Erfurt to play in front of European crowned heads with other members of the *Comédie-Française*. He fascinated Europe with his great presence.[11] From 1809 to 1810 he became ill again and did not peform much. In 1812 he had a love affair with Princess Pauline Bonaparte (1780-1825).[12] Talma reformed entirely the idea of costumes by following the advice of the French neoclassic painter David (1748-1825). He visited museums, consulted ancient manuscripts, sculptures and various monuments (Janin, 1826).[13] Pioneer of an aesthetic revolution Talma adapted political revolution to his theatrical ideas. He appeared on stage without his wig, without declaiming the tragic verse. He shook up conventions of tragic performances so much so that tragedy took on another shape: historical and political drama. The success of his performance in December 1821 in the tragedy Sylla (1824), written by French dramatic author Etienne de Jouy, should be particularly noted. His disguise as well as his wig allowed him to revive Napoleon, who had died a few months before.

A year before his death in 1825, Talma wrote about his revolutionary vision of theatre in his *Memoirs on Lekain and drama*. Lekain (1729-1778) was a great French tragedian.[14]

The death of Talma

Talma died on 19 October 1826. On 21 October many Parisians attended his funeral which was without religious ceremony. Gérard de Nerval (1808-1855), a French writer, wrote a eulogy entitled 'Talma's death'. Alexandre Dumas (1802-1870), another French writer, gathered the tragedian's papers and wrote the *Memoirs of J F Talma*, which was published in 1850.[15]

Talma was the faithful friend of Louise Desgarcins (1769-1797), a French actress whom he helped enter the *Conservatoire*. He married Charlotte Vanhove (1771-1860), an actress and the daughter of actor parents. His tomb is in the *Père-Lachaise* cemetery in Paris. His grave can be found in the 724 P A concession of 1827, 12th division, under the number 143 in the land registry, in the first rank of tombs at the back of the 11th division; it is the 11th from the Donon track.[16]

Cabanès (1928) said:[17] "Talma had a big mouth, thick and very regular lips and had in one word the profile of heroes and Caesars that he revived and made talk again on stage."

[10] Janin, op cit, fn 1.
[11] Janin, op cit, fn 1.
[12] http://fr.wikipedia.org, 2010
[13] Janin, op cit, fn 1.
[14] Lamendin, op cit., fn 3.
[15] http://fr.wikipedia.org, 2010
[16] Lamendin, op cit., fn 3.
[17] A Cabanès., *Dents et dentistes à travers l'Histoire*. [Teeth and dentists throughout history] Laboratoire Bottu (ed.), Paris, 1928.

Napoleon's favorite actor

In the Memorial of Saint Helena (1822), Napoleon (1769-1821) said on 6 November 1817 of Talma:[18]

I met Talma when I was First Consul. I always treated him with the distinction he deserved and as a man of superior talent, the first of his profession and of all aspects. I demanded him to be picked up every morning, and lunched together. Libellists had concluded that Talma was teaching me how to play my role of Emperor. Upon my return on Elba, I said to Talma during lunchtime and among several learned men: 'Talma, they say that you taught me to have a good posture on the throne. Am I good at it?'

Las Cases (1766-1842), a French historian and the Emperor's confident, remarked: "Talma refuted all these tales with nobility. He remained full of gratefulness and respect for the great man who had appreciated his personality and rewarded his superior talent with dazzling manner." Yet, as he was staying at the *Château de Malmaison* for holidays, he was often a guest at the First Consul's table where he was fond of talking about drama with his host. From Talma's accounts on theatrical needs and reforms, orders were issued in 1802 and 1803 which reorganized *la Comédie-Française* and allowed him to obtain subsidies from the government.[19] Napoleon's interest in the Comédie-Française was indisputable even during the Russian campaign and on 7 August 1812 he signed the popular "order of Moscow" relating to the organization of the famous institution.[20]

When Bonaparte became Napoleon in December 1804 Talma thought he would have to give up seeing him regularly. However a note from the first chamberlain Remusat (1797-1875) proved the contrary:

My dear Talma, I have much pleasure announcing you that our Majesty would be pleased to receive you in the morning during his breakfast. In that respect, you will have to present yourself in the Emperor's apartment around half past nine in the morning and while our Majesty will have his breakfast, the palace's prefect will follow the orders to make you enter.

From that moment Talma went once a week to the Tuileries during breakfast time.[21]

Napoleon never hesitated to criticize and advise Talma and the actor always tried to apply his advice. As far as his performance of Caesar was concerned in Corneille's Death of Pompey (1643), Napoleon shared with him his dissatisfaction:

[18] Emmanuel De Las Cases, *Mémorial de Sainte-Hélène* [Memorial of Saint Helena], Le Grand Livre du Mois (ed.), 4 tomes, Paris, 1999 (republication of the first version of 1822).
[19] B.M., Napoléon amateur de théâtre et admirateur de Talma, [Napoleon amateur of theatre and admirer of Talma] in *Hist pour tous [History for all[* (Dir. A Decaux) 1968 ; 96 : 570-571.
[20] M Kovadchévitch, *Le sort des artistes français et russes en 1812. Le décret de Moscou [The fate of French and Russian artists in 1812. The order of Moscow]*, Montlouis (ed.), 1941.
[21] B. M., op cit, fn 19.

"You tire your arms too much. Empire chiefs are less lavish with movements; they know that a gesture is an order, that a look is death; therefore, they handle carefully gestures and looks." Talma had brought some sobriety to drama that Napoleon admired and encouraged.[22]

In autumn 1808, during the Erfurt negotiation, Napoleon, who wanted to apply to this meeting amazing celebrations and sumptuous entertainments, asked Talma to "come with us! You will meet a great number of kings". The actor was indeed acclaimed by Alexander I of Russia.[23]

Napoleon was extremely generous and Talma benefited greatly from his gratification and gifts. The tragedian, who valued the great man's friendship over his generosity, remained faithful to the Emperor even when the latter was in exile. Moreover, he wrote to him:

Sire, your kindness and the distinction with which you honoured me will never be forgotten by my heart. My memory will remain faithful to you and never, no never, will I be part of the range of ingrates you know.

The actor kept his promise. He never hid his pro-Bonaparte feelings. Each year on 5 May - the anniversary of the Emperor's death - he wore mourning clothes. The actor was never worried despite the return of the monarchy.[24] Louis the XVIII liked him and let him act in the way he wished.

[22] Ibid.
[23] Ibid.
[24] Ibid.

LINDSAY SOCIETY FOR THE HISTORY OF DENTISTRY, 50TH ANNIVERSARY MEETING CARDIFF, WALES, 5-7 OCTOBER 2012

Stanley Gelbier

Thirty-seven people attended the Society's golden anniversary meeting in the capital of Wales. They included the president of the British Dental Association (Dr Frank Holloway), five past presidents (Dr Roger Bettles, Dr John Craig, Dr Sue Greening, Dr David Lloyd, and Dr Stuart Robson), one dental dean (Dr Mike Lewis), two past UK deans (Prof Davis McGowan and Prof Nairn Wilson) and one of Malta (Prof George Camilleri).

Some guests arrived at the excellent Copthorne Hotel, conveniently situated close to the M4 motorway, on the previous afternoon. It allowed some people to have a swim or use the gym before joining friends for a convivial meal.

Figure 1 In the viewing gallery at the Senedd

The main meeting started on the following day with a trip to Cardiff Bay, the renamed historic Tiger Bay. First came a visit to the Senedd. The magnificent building was opened on St David's Day, 1 March 2006. The flooring both inside and outside the building are made of Welsh slate. Much of the heat comes from out of the ground. Pipes were drilled 100m below ground: In cold spells water is pumped through the pipes, heated to 14°C by geothermal (natural) energy and then pumped back up to warm the building; in warm weather the same system helps to keep the building cool. The building houses the Welsh Assembly. An excellent guide explained the workings of this national Parliament. The group then walked across the road for an early dinner at the Wales Millenium Centre. Next came an evening with the Cenedlaethol Cymru or Welsh National Opera at its performance of La Boheme. it took place in the magnificent - further use of superlatives is well justified - theatre.

Next day saw the opening of the lecture programme. The society's chairman, Stuart Robson (Fig 2), gave a fascinating review of the history of the Lindsay Society which was founded in 1962, two years following the death of Lilian Lindsay after whom it is named.

Next came 'From Boston to Beast: early anaesthesia in Wales', a fascinating resume of the development of anaesthetics by Danielle Huckle (Fig 3).

Stuart Geddes (Fig 4), the BDA's Director for Wales, then gave an interesting talk on stamps and covers with a dental theme, illustrating it with some samples from his collection. It is hoped that he might treat readers to an account of a number of these in future issues.

Melanie Parker (Fig 5), Education Officer at the BDA Museum, gave a talk entitled 'Lilian's ladies: a global perspective'.

Figure 2 Dr Stuart Robson with his wife Lalage

Figure 3 Dr Danielle Huckle

In the afternoon many of us went to St Fagans National History Museum, said to be one of Europe's leading open-air museums and Wales's most popular heritage attraction. It houses a number of buildings transfered from other parts of Wales and saved for the nation. The museum stands in the grounds of St Fagans Castle, a late 16th-century manor house donated to the people of Wales by the Earl of Plymouth. Together they demonstrate how people, rich and poor, used to live.

Figure 4 Dr Stuart Geddes

Later came a formal Black tie dinner for 47 members and guests. Dr Stuart Robson welcomed the guests, which included Dr Frank Holloway, president of the British Dental Association, Professor Martin Lewis, dean of Cardiff Dental School and Dr Danielle Huckle. Dr Holloway replied on behalf of the guest's, reminding everyone of Lilian Lindsay's and the society's histories.

Sunday morning saw more lectures. First Nairn and Margaret Wilson spoke about how light revolutionised the practice of dentistry. Nairn told of his personal involvement in some of the important early research programmes, academia and industry working closely together.

Stanley Gelbier (Fig 6) gave an account of the life of Geoffrey Layton Slack CBE, 'father' of dental public health. Included were his contributions to children's, community and public health dentistry; his military triumphs especially as right hand man to General Montgomery, for whom he organised the transport system for D-Day and the advances through France to Berlin; and finally about the human side of this very private man.

Figure 5 Melanie Parker

Melanie Parker then spoke on 'Cunningham's camera: the dawn of dental films'. She described how George Cunningham produced some early dental health education films. Some of this material has been saved and is preserved in the BDA Museum. Some fascinating extracts were shown.

The morning ended with the society's annual general meeting.

Figure 6 Prof Stanley Gelbier Fig 7 Dr Frank Holloway Fig 8 Prof Mark Lewis

Figure 8 Prof Nairn Wilson

Figure 9 Dr Margaret Wilson

Some photographic memories of the dinner

Mrs Gabrielle Stanley and Dr Stuart Geddes

Dr John Craig

Prof Roger and Mrs Heather Bettles

Mr Roland Hopwood

Dr John Bradley

Dr Stuart Geddes, Ms Melanie Parker and Dr Peter Frost

Dr Michael Trenouth and Dr Marilyn Gelbier

Dr David Lloyd

Dr Sue Greening and Professor Roger Bettles

(rear) Dr Sue Greening, Prof Roger Bettles, Mrs Heather Bettles (front) Mrs Rachel Bairsto and Dr Margaret Wilson

Prof Robin Basker

50TH ANNUAL GENERAL MEETING

Brian Williams, Hon Secretary

Lindsay Society
The History of Dentistry

Dr Stuart Robson (chairman, Fig 1) and 35 members were present. Dr Robson reported on another successful year for the Society. Referring back to our joint meeting last year with the Henry Noble Research Group in Dumfries and our good liaison with David McGowan in the run up to the event, the Chairman expressed his wish for more joint meetings in the future.

Figure 1 Dr Stuart Robson, chairman of the Lindsay Society

He reported that the 2012 Lilian Lindsay Memorial Lecture was given, to great acclaim, by Professor Nairn Wilson, immediate Past Dean of King's College London Dental Institute, to a packed lecture room during the BDA Annual Conference in Manchester. Following the lecture, Honorary Life Membership was presented by the Chairman to Professor Stanley Gelbier in recognition of his outstanding contribution as editor of Dental Historian and his longstanding commitment to the Society.

Finally, the chairman thanked the committee members for their hard work in supporting him during his very enjoyable two years as chair of the Society.

Dr Peter Frost (Fig 2), the honorary treasurer, presented the annual accounts. He pointed out that the Society's assets had reduced over the last two years. However this was due to exceptional circumstances including a £1000 donation towards the purchase of the painting 'The Dentist' by Sir John Lavery. After ten years as Treasurer Dr Frost is standing down and Dr Mary McFarlane will take over in the New Year. He thanked John Vesty, the Honorary Auditor, for all his help over the years.

The acting editor, Prof Stanley Gelbier, reported that he had produced issue No 56 of the Dental Historian. He and Dr Margaret Wilson were elected as co-Editors. She will fully take over the sole editorship for the January 2014 issue.

The hon secretary, Dr Brian Williams (Fig 3), reported that the 2013 Lilian Lindsay Memorial Lecture will be given by Dr Mike Butterworth of the Dental Protection Society at the BDA's annual conference at the Excel Centre in London on 27 April. The title is 'Professional Indemnity why did we ever need it?'.

Suggestions of a venue for the Society's 2013 annual conference included Cambridge, Canterbury and Maidstone. The provisional dates are Friday 4-Sunday 6 October.

Figure 2 Dr Peter Frost Figure 3 Dr Brian Williams

Rachel Bairsto reported some progress towards the erection of a Blue Plaque to commemorate the life of Lilian Lindsay but the process is ongoing.

Election of Officers & Committee

Dr Stuart Geddes was elected as chairman for the next two years.
Dr Stuart Robson becomes the immediate past-chairman.
Dr McFarlane was elected as honorary treasurer for three years.
Prof Gelbier has two years remaining as a committee member.
Dr Wilson and Dr Frost were elected as members for three years.
Dr Williams remains secretary for two further years of his five year term.
Mrs Rachel Bairsto (Head of the BDA's Museum Services) and Dr Rufus Ross (Chairman of the Henry Noble History of Dentistry Research Group) remain ex-officio members of the committee.
Mr John Vesty was re-elected as honorary auditor for the Society's accounts.

Professor Robin Basker retired from the committee which acknowledged the loss of a very experienced wise counsel. He was thanked for all the time and effort he had unstintingly given to the Society over many years.

Professor Nairn Wilson informed the Conference that the 150th anniversary of the Royal Odontochirurgical Society of Scotland will take place in the third week of March 2017. It was agreed that the Lindsay Society will be delighted to give any necessary support. The Society will have to decide whether to make this meeting our annual conference or still have the traditional meeting in the October.

HENRY NOBLE HISTORY OF DENTISTRY RESEARCH GROUP

Rufus M Ross*

After much misgiving Audrey Noble has resigned as secretary of the group. She has been delaying the move for some time but the travel to and from Largs is proving too trying. Audrey has served us for just over seven years and an appreciation will appear in the next issue of our *Dental History Magazine*. However, we are not losing her services altogether as she will continue as minutes secretary *pro tem*. We are pleased that Dr Robin Orchardson has taken over as secretary and we look forward to utilising his many talents.

The treasurer, Dr Marie Watt, reported that our finances are satisfactory. With membership at nearly seventy paid-up members and various bodies providing support no increase in membership subscription is planned.

Our Website has been re-modelled and can be accessed at *www.historyof dentistry.co.uk*. This is a well used method of contacting the group and has proved most beneficial.

On 23 October the group was addressed by Dr Paul Riley on 'The role of science in the development of oral care products.' This meeting was combined with the Menzies Campbell Memorial Lecture: the talk was similar to that given previously to the Lindsay Society. After an absorbing talk Dr Riley and his wife were entertained to dinner by members of the executive committee.

We have arranged our next speaker for the Spring lecture. Dr Mike Gow willl talk on the 'History of Hypnosis' at the Royal College of Physicians and Surgeons of Glasgow in March 2013.

We were very pleased to learn that a dental student has decided to undertake an elective on the subject of Art and Dentistry. We look forward to reporting further on this topic.

Our editor, Dr Jo Cummins, continues to produce a brilliant magazine. The autumn issue will be issued shortly with some breathtaking art.

FRENCH SURGICAL ACADEMY

After becoming an Associate Member of the French Dental Academy in 2010 Dr Xavier Riaud has now become an Honorary Member of the French Surgical Academy. This is in recognition of his well-known historical work. He is the first dentist to be a member of two medical academies in France.

* Chairman, Henry Noble Group.

JACOB 'JACK' KARAWANSKI/ GRAHAM (1885-1955)

Philip Graham*

LIFE AND DENTAL TRAINING IN GERMANY

My father, Jacob (known as 'Jack') Karawanski, was born on 14 December 1885 in Königsberg, then in the east of Germany. He was the youngest of three children. His father, Philip, after whom I am named, was a 'shochet' or ritual slaughterer for meat. His poor Jewish parents had migrated from Russia shortly before his birth, probably because after the assassination of Tsar Alexander II in 1881 there were numerous pogroms and many Jews had to flee westward. His father died before 'Jack' was a year old and he was brought up in considerable poverty. In Germany at that time bright students even if from humble backgrounds, could continue their education and be funded entirely by the State. Jack was successful in his examinations and, on leaving school at the age of seventeen, he entered a course of professional study at the Dental Institute in Königsberg. During his course Jack was attached or apprenticed to a preceptor dentist, Max Voigt. He completed his course in July 1906, when he was twenty years old. The occasion of the completion of his training was marked by a photograph (Fig 1). He was presented with a copy on which were inscribed the dates of the start and end of his course or apprenticeship.

At that time training to be a dentist in Germany involved a three-year course, beginning with physics, chemistry, anatomy and physiology. They were followed by lectures in prosthetics and training in metal working, carving in ivory, metal plate work and the simpler techniques of vulcanite.[1] Students had to pass a final examination. It is notable that bright students like my father could, before the age of twenty-one years, have acquired a considerable amount of relevant knowledge as well as sufficient operative ability and mechanical skills to practise as a dentist.

In marked contrast to later developments in Germany, being Jewish was then no bar to professional training. The Jewish community in Königsberg was particularly favoured in this respect. Although anti-semitism was present, especially in the higher social classes, the relationships between the Jewish and Gentile sections of society were especially favourable. The city's mayor, speaking on the occasion of the opening of a new synagogue in 1896, claimed:[2] "Here in Königsberg, adherents to all religions and persuasions live

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Emeritus Professor of Child Psychiatry, Institute of Child Health, London.

[1] N S Jenkins, Modern Dentistry in Germany, *The Dental Cosmos* 1912; 54: 1225-30.
[2] S Schüler-Springorum, Assimilation and community reconsidered: The Jewish Community in Königsberg, 1871-1914, *Jewish Social Studies* 1999; 5:104-13.

next to each other and live together in peace and harmony. To this the Jewish population has contributed to no small extent."

Figure 1 Jack Karawanski at the time of qualification

MOVES TO SOUTH AFRICA AND BRITAIN

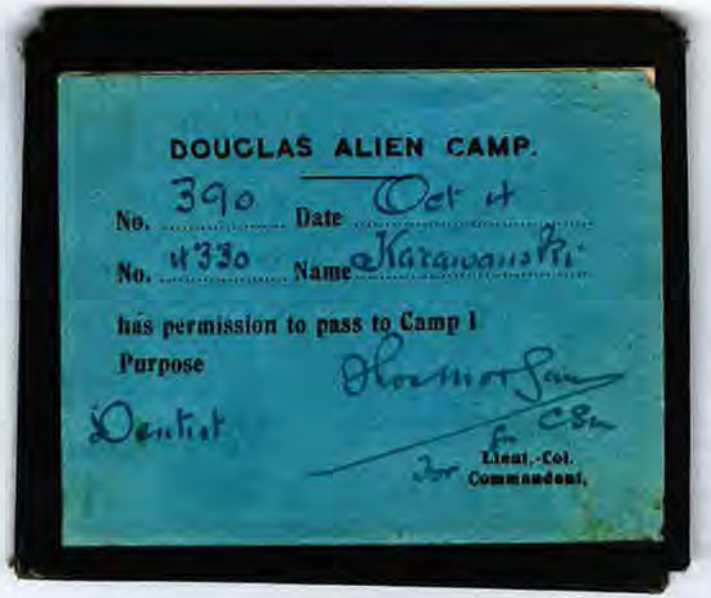
After completing his training Jack Karawanski almost immediately migrated to South Africa, where he worked for a year as an assistant to a Jewish dentist in Johannesburg. He probably went to South Africa both to further his career and to join his older brother who was one of tens of thousands of Jews from eastern Europe who made this move. He did not get on with either his employer or his family and left for Britain in about 1908. On arrival he went to Scotland. He attempted to re-qualify as a dentist in Glasgow but stayed there for only a year. It is not clear why he abandoned this course, but probably his lack of fluency in English (which was never very good), and financial considerations both played a part.

THE LUTON PRACTICE

In about 1909 Karawanski moved to Luton, Bedfordshire, where he worked as an assistant to Mr Rex Graham, who had a well-publicised dental practice in Park Square in the centre of the town. In 1914, at the outbreak of war, on the assumption he was of German nationality Karawanski was

interned as an enemy alien on the Isle of Man. He needed a pass to move between the various camps (Fig 2).

Figure 2 Pass which enabled Karawanski to travel around the camps



Karawanski worked as the camp dentist. The facilities were limited. Because of the absence of gas anaesthesia he resorted, successfully according to his own account, to the services of a fellow internee who was a hypnotist. Karawanski appealed against his detention on the grounds that he was not of German nationality. He claimed that because his parents were Russian, he himself was of Russian nationality. Eventually his appeal was successful and in May 1917 he was able to return to Luton to practise dentistry. He was required to sign an 'Undertaking of Neutrality' in which he promised that he would "neither directly or indirectly take any action prejudicial to the safety of the British Empire or to the safety of her allies during the present war". However he still had to register as an alien and report regularly to a local police station. In 1918 he lost exemption from military service and joined the British Army, a couple of months before the Armistice in November.

After demobilisation, Karawanski returned to the Luton Practice (Fig 3). In August 1918 Rex Graham had needed to give up his practice to look after his

sick wife. Karawanski bought the goodwill of the practice for £120 together with a further £80 for fixtures and fittings.

At the time there was a great deal of worry throughout the country about the harm being done to patients when treated by people without any training in dentistry. The Privy Council thus appointed a committee to see if the situation could be improved. It was chaired by Francis Dyke Acland MP. The committee's 1919 report[3] on the horrifying situation recommended that only registered dentists should be able to practise in future. As a result Parliament passed the 1921 Dentists Act which made dentistry into a closed profession.

Karawanski's name was placed on the Dentists Register in 1922, one of the majority of dentists who, at that time, did not have a professional qualification (known as dentists-1921). Karawanski became a naturalised British citizen in 1923 (Fig 4) and bought the practice of his employer in about 1925 for £25. Rex Graham had told Karawanski he would find it easier to earn a living in Luton under another (less foreign-sounding) name so, for the sake of simplicity. he changed his surname in 1923 to that of his employer. He kept his first name but, to keep continuity with Rex, he retained a second name beginning with R. He chose Rackham, this being the first name under R in the telephone directory.

Jack Rackham Graham practised as a dentist in Luton until his death in 1955. He was a strong supporter of the National Health Service which was introduced in 1948. Graham greatly welcomed the changes in professional practice it brought about. His professional reputation locally was outstanding and many of the local doctors and dentists sent their family members to him for dental treatment. Particularly competent in the mechanical aspects of his work, Graham was able to supervise the dental mechanic he employed in all aspects of his work until shortly before he died.

Once a week he motored out to Welwyn, then a tiny village in Hertfordshire, where he spent the afternoon practising dentistry in the front room of a cottage. George Bernard Shaw lived in the nearby village of Ayot St Lawrence. On one occasion Graham was asked to attempt to make the celebrated Nobel prize-winning playwright's dentures more comfortable. It is not clear if he was successful.

Graham was active in the local Jewish community and later in the United Synagogue[4] in London, for which he served as a representative on the Board of Deputies.[5] There he took a particular interest in education. When Jewish victims of Nazi persecution arrived as refugees in England in the 1930s he played an active part in helping those people who came to live locally.

Jacob 'Jack' Graham (formerly Karawanski) died on 19 October 1955 and was buried at Bushey Cemetery on 21 October.

[3] Report of the Committee (chairman F Dyke Acland) on The extent and gravity of the evils of dental practice of dentistry by persons not qualified under the Dentists Act. London: His Majesty's Stationery Officer, 1919,

[4] The major Jewish organisation in the UK, (headed by the Chief Rabbi)

[5] Which represents the UK Jewish community.

Figure 3 The Park Square practice, 1910/11[6]

[6] Dated by Gillian Tindall, an urban historian, as having been taken about 1910-11.

Figure 3 Certificate of registration as an alien

Serial No. X0 855

METROPOLITAN POLICE.

Certificate of Registration of an Alien. Russian

Jacob KARAWANSKI of 6 Carlton Mansions Portsdown Rd. Paddington age 31 has been registered at the Registration Office named below.

Signature of Alien Karawansk

(If the Alien is unable to write the left thumb-print should be taken on the back of this form.)

Registration Office

HARROW ROAD

Date 31st May 1917

This certificate should be carried by the Alien for production when required; if it is lost, notice should immediately be given to the Police.

Acknowledgements

I am grateful to Richard Lansdown for assistance with photography and to my sister, Sara Graham-Mackenzie, for additional biographical information. Gillian Tindall, an urban historian, helped to date Figure 2.

National Service dentist (1956-1958)*

Laurence Oldham*

Having qualified BDS after study at Birmingham Dental School and undertaken two hospital house posts it was now time for me to complete National Service. Whilst at Ashby School I had joined the Air Training Corps and worked up to the dizzy rank of sergeant, learning Morse code and protocol for the Air Force on the way. It was thus natural that I should opt for the Royal Air Force (Fig 1) as the service in which to work out my commitment to the state. I would have liked to have joined the Royal Navy but they only took recruits for four years and I thought that this was too long a period to be out of the professional advancement stakes in civilian life. The army was never considered!

I remember my parents going with me to Nuneaton Rail Station so I could take the train to Blackpool in Lancashire, where my intake was to muster. During our farewells I realised I had no belt for my trousers. Then and there at the station father took off his trouser braces and handed them over to me. I was grateful and used them all through my service period, the Air Force blue issue of trousers and the waist measurements were never accurate but so I had no worry about dropping the trousers on parade due to inadequate support.

On arrival at RAF Warton, outside Blackpool, I met the 13 other dental graduands as the new intake to the RAF Dental Branch. We had enormous privileges, joining as officer class rather than as enlisted men. My rank was Pilot Officer. I was billeted for the two weeks at Warton in a Nissen hut with one other colleague. He was unforgettable as a 'first impressions' man. John Rayne,[1] a graduate of the Royal Dental Hospital in London, turned up to Warton with a tightly furled black umbrella, pin striped black suit, immaculately polished shoes and a bowler hat: quite the 'city slicker'. I had never met his type before. He thought I was a north country hack because of my accent, which still had traces of my parental Mancunian background. I kept in touch with him over many years in the British Association of Oral Surgeons where we both attended meetings, until his accidental death in 1995.

Our introductory spell at Warton consisted of lectures by Air Force personnel on a variety of subjects such as management of a dental centre on an RAF base, from how to look after inventories and manage equipment and to how to recognise rank and uniforms of senior officers in order to salute properly. All aspects of service life were covered so we would not be out of place when posted to our definitive work situations.

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We had some local leave in Blackpool in the two weeks. I remember going in a group to ride on the big dipper at the Blackpool funfair, something that I would not normally do, but group pressure made me conform. The speed and hurling round the track up and down made me hold on with a grip of iron, for it really was incredibly fast. I was very glad to get off the infernal machine and go to try out the candy floss.

Figure 1 Pilot Officer Oldham In RAF uniform in his first week in the service

After two weeks we were posted to RAF Halton, near Aylesbury, Buckinghamshire. Halton was the headquarters of the RAF Medical and Dental Branches as well as disciplines of engineering. Here we lived in the lap of luxury ensconced in a mansion formerly owned by a member of the Rothschild family. It was a stately home in a magnificent setting with beautiful grounds,. The standard of catering in the officers' mess was outstanding and I learned how well the services looked after their personnel. Tennis courts and all manner of sporting facilities were available. I lived with my colleagues in an upstairs bedroom with about six to a dormitory.

I was at Halton for about four weeks. Here we consolidated our RAF academic knowledge, honed up our protocol, but most of all our marching skills. The dentists were considered so bad that we were always taken to do our drill training or 'square bashing' as it was called, in an enclosed area, the former ice rink in the Rothschild estate. High hedges, nine feet tall, surrounded the large ice rink which had a concrete base and no ice. Here for the entire month we had marching practice from 8 until 9 am every day of the week except Sunday.

What amazed me was how fit we became, just with this simple training out in the open air each day, immediately after a very substantial breakfast. John Rayne was six feet and three inches tall so he was always right marker, and myself next in height was second right hand marker.

At the end of our four weeks the time came to pass out and secure our

postings to begin work in earnest for the Royal Air Force. We had a passing out dinner and the drinking was pretty serious. I can remember coming down the stairs, there was a marvellous set of stair banisters, and individuals somehow sliding down these on trays. There was billiard cue fighting and all sorts of things. I went up to the dormitory at one stage as I had had enough of the celebrations and it was very late, only to find one of my contemporaries flat on his back vomiting. I remember giving him first aid otherwise he might have inhaled his vomit and been subject to Mendleson's syndrome - severe life threatening pneumonia. He was so far gone that he did not even know that I had saved his life. He later went into practice in one of the Northern mill towns in Lancashire.

As our intake was comparatively small in number the senior officer in charge at Halton decided to give the entire contingent our definitive postings upside down on slips of paper, so we could draw lots. I was number three or four in the stakes and having my turn. To my astonishment I picked the Air Ministry Dental Centre in London, situated in Harley Street, the Mecca of medical and dental practice in the capital. Others had postings to Aden in the Gulf, Singapore, Cyprus and at UK bases dotted around the country. Many were envious of my luck in picking London and as it turned out it was an advantageous posting for me from a career point of view.

I knew nothing about London apart from sitting my basic qualifying examination twelve months previously at hospitals and examination halls in the city. The first job was to find accommodation. My commanding officer at the dental centre suggested a service officers club at Barons Court. I took the Circle underground line to see what it was like and stayed for about a week, but it never felt like home. I then heard about the Salvation Army bed and breakfast hotel Radnor House in Sussex Gardens. It had four floors with many single and double bedrooms and to my great delight many other service personnel in London from all three services were there during the week. Most of them were married and went home at the weekends so then I had to share the dining room and facilities with London visitors from all over the world, many of whom had Salvation Army connections.

Radnor House was very convenient as I could walk to work in Harley Street. The route was along Marylebone High Street, past Madame Tussaud's but not as far as Regents Park. The day was a continual change of clothes because the order came not to wear uniform in the city during lunch time or arriving or leaving from work because of terrorist threats. So I walked in civilian clothing to the centre at 114a Harley Street. On arrival I changed into uniform to treat patients, changed back into civilian clothes for lunch at a restaurant in Marylebone; repeated this cycle after lunch and at the end of the day.

My commanding officer was Wing Commander Temple-Tait (parodied as 'Dental Plate'). He was a very nice man who lived in Gerard's Cross. Temple-Tait was a sort of benign uncle figure, tall and distinguished looking with white hair and a nice uniform. He had the most palatial surgery on the ground floor. I can't remember him treating any patient below the rank of Group Captain so he had a pretty exotic clientele with Air Vice Marshals and Air Marshals. On the first floor were two other dental surgeries. Being the last to arrive I was on the second floor with my surgery under the roof. This was a happy time both in work and play. David Forman, a graduate from Guys, ran a very successful practice on the first floor. On the second floor, the most exalted rank I ever treated was squadron leader; mostly I treated ranks below.. I enjoyed the work, mainly basic restorative work, amalgams and

silicates. I remembered my strict Birmingham teaching and took quite a pride in it.

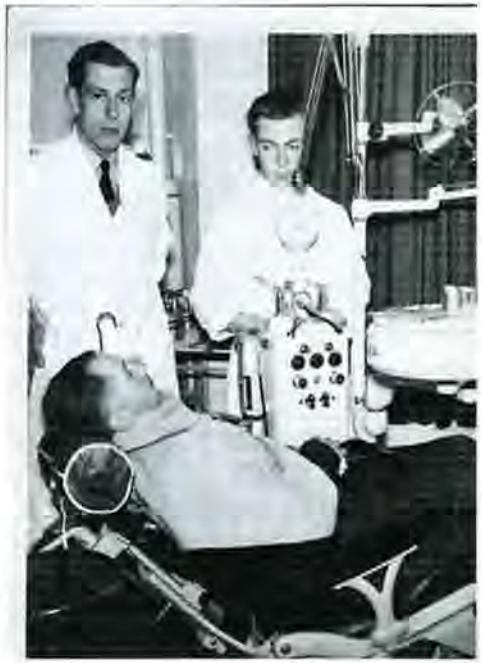
At weekends I used to visit something new in London, a museum or exhibition, or market such as Portobello Road, and went to the French Institute in South Kensington. Here they had good cultural events with piano recitals, speakers on international affairs, and I could practise my spoken French. I also used to attend the Protestant French Church on Sunday mornings in Soho, prior to having my midday meal at one of the cheaper restaurants there.

Major Tremain was the Salvation Army supervisor at Radnor House. Because I stayed there at weekends I came to know him and his wife well.

A move to Cambridge

Life passed by very pleasantly until one day I heard that I was to be posted away from London. The bottom dropped out of my world. A senior officer was returning from service overseas to work at the Air Ministry and I had to make way for him by working elsewhere. So it was that after a year in London I was sent to Cambridge and RAF Oakington as dental officer to the base there (Fig 2). Round about then I was promoted to Flight Lieutenant.

Figure 2 In the dental surgery at RAF Oakington with DSA, about early in 1958. Patient seated is a sergeant from the Engineering branch who fabricated a new x-ray viewing box from scratch with just a design drawn on paper. This new box was very useful as none existed in the surgery



The new posting was to be very helpful in the overall maturation of a young and inexperienced dental officer. First I was responsible for all dental treatment on the station. This meant that all ranks, from leading aircraft men to the station commander and his family, were potential patients, some 1,200 souls in all. This was my first taste of continuous care for a community.

I learned very early on that it was not always easy to live and work in the same environment. I had to operate on colleagues one day and then eat in the officers' mess with them the following day when they might have presented with facial swelling, sometimes the inevitable consequence of my interceptive surgery. Teasing was inevitable and I just had to get used to it.

I had my own dental surgery in

the medical centre. Squadron Leader Dr Des Fanning was in charge of the whole unit. The first thing I did was to get the linoleum floor polished and raised the standard of the whole room so that it looked very clean and neat; that was how I approached the whole job. It became known on the station for the cleanest place in the service, but when we were inspected by a group captain who came from somewhere, he said: "This is dangerous, have you had anybody slip on this floor?"

At Oakington I followed a most competent dental surgeon, David Brow. He had an excellent reputation and my first patients on the station were obviously going to compare me with him. I was able to institute some changes and soon made a mark for reliability and keenness.

With one or two very successful treatments on personnel the word got round that the new man was not so bad after all. Life on the station was enjoyable. From early morning breakfast in the officers' mess I could walk to the surgery across the station perimeter in the most lovely countryside seven miles from Cambridge. The mess was excellent, sports facilities were available, and I did more cross country running. With fellow officers we got to know Cambridge well, and at weekends would enjoy the local pubs before going for a Saturday night curry at the local Indian restaurant where we were served by a tuberculous looking Indian called Harry. My first car, a black Morris Minor, gave me mobility between Oakington and Cambridge.

After some weeks I was given educational help with a grant to start a postal correspondence course for the Primary Examination in Dental Surgery at the Royal College of Surgeons in London. At the same time I had permission to use the Medical School library in the University of Cambridge. With this I was able to keep up to some extent the quest for postgraduate qualifications.

Whilst at Oakington I was approached by the Adjutant (who found out about my interest in French) who wanted my help in translating for a group of visitors from the former French Resistance movement. Two French ladies came to Oakington for three days as guests of the RAF, as an acknowledgement for the help they had given to British Airmen shot down over France. These two women of late middle age had rescued some of our airmen and sheltered them before passing them on to their chain of Maquis agents prior to return to the UK.

With my modest translating skills I suddenly became accepted by the senior flying instructors, some of whom were South African, as we all had to entertain these French women together; and I was the only man on the station who could help.

Other jobs I was given was to be in charge of the administrative wing and make up a team for competition on the station sports day. This meant my going round the entire station looking for and trying to sign up unwilling recruits for sports events. I even got one recruit special dispensation from 'jankers' - the station punishment block - in order to run in the mile race. He had to go back inside after the race!

The station was No 5 Flying Training School which trained new pilots to fly vampire jet aircraft. There were several wings of planes about eighty in all and the station always had the constant roar of jet engines revving up to take off or land. Outside my surgery was the decompression chamber. Every new recruit had to undergo decompression and then have the oxygen switched off, so that he could experience the effects of anoxia whilst doing some simple mathematical adding task. This always demonstrated how at 30,000 feet altitude oxygen was absolutely necessary to maintain correct navigation and avoid accidents due to false calculations.

One morning a new recruit underwent decompression only to experience the

most appalling toothache. He was rushed from the chamber to my surgery and I got a local anaesthetic into him prior to taking out a dental filling. Air or gas from unrecognised tooth decay had become trapped under an amalgam filling in one of his molar teeth. With decompression the trapped gas expanded and the filling failed to allow escape of the gas. The full pressure was directed to the dental pulp of the tooth, causing aerodontalgia, one of the most severe pains known to man.

One day I was given the opportunity to go into the decompression chamber with my dental chairside assistant, a man of about 20 years old. We were given tick sheets on hard back folders to do the subtracting: take away 3 from 999 was the task. The oxygen went off (unknown to us) at 30,000 feet equivalent, and then the order came through the intercom to start the maths. After about 2 minutes I noticed on my pad that I had more than 999 although I had been subtracting all that time. This is all that I did notice before my assistant started to become disorientated. I called for the decompression to end when his pencil scored a deep diagonal line across his tick sheet, as he slumped forwards. The point of the exercise had been made.

I had one really embarrassing experience at Oakington. Following my success at organising the sports team I somehow was given the job of organising some ladies to attend our officers' mess party several months later. This proved well-nigh impossible as my contacts did not extend to the necessary hospitals for nurses or indeed any other female establishments. In a blind panic and at the last minute I managed to get about six girls from the other ranks' mess on the station. They duly arrived on the night but I was made to realise that I had committed the biggest faux pas in service life, by mixing up officers and non-commissioned ranks. My senior brother officers took one look at the girls I had secured, realised that they were not officer material by their dress and demeanour, turned to me and said get them out! This was the one occasion when I literally wanted the ground to open up and swallow me. Somehow I got them all out, but lost face with all concerned. Such an experience is never mirrored in civilian life.

Back to London

After nine months I asked for, and was granted, a move back to the Air Ministry in London. This was to pursue my Primary postgraduate study work, which would be easier from the city. I was fortunate to return to the centre and was given one of the main surgeries on the first floor. Harley Street was again my clinical home but I had to move, by official edict, into service accommodation at Kidbrooke in South East London, a combined army and air force base. From Kidbrooke my daily journey took almost 50 minutes to Harley Street so I became very used to commuting daily in London. The officers' mess at Kidbrook did however have advantages, I played tennis with other service men on the shale courts outside the mess and joined in all aspect of mess life. My batman was aged about 60 years and was very good at pressing my uniform and looking after me, bringing tea early in the morning etc. I had my car Morris minor with me at Kidbrooke and I became very adept at driving round London at weekends and at night time. It was a happy time and I soon worked out my remaining months in the Royal Air Force before demobilisation. I had been in the RAF for just over two years altogether.

It was time to return to civilian life. In later years I was chairman of a health authority (Fig 3).

Figure 3 Laurence Oldham in later civilian life

RAF DENTAL HYGIENE IN WARTIME INDIA

Leslie John Cheeseman

When the Second World War broke out in September 1939 many young people wanted to enrol in the services but were prevented by an age barrier. In 1944, at the age of 17 years and at the height of the War, I decided to volunteer for service in the Royal Air Force. At first I was going to be trained as an aircrew member. However, in 1945 I was redirected into the RAF Dental Branch, founded in July 1930. Initially I trained as a dental clerk/orderly (DCO) but then received further training as a dental hygienist at RAF Halton camp in Buckinghamshire. At that time there were no hygienists in British civilian practice as they were illegal. It reflected longstanding animosity from the dental profession.

Pressures against hygienists

In the early 20th century massive caries in children and a shortage of dentists led to the employment of 'dental dressers' in the school dental service, an action seen as *dilution*, unacceptable to the profession which was outspoken in its opposition.[1] These "young women of good character"[2] were trained and employed by their dentists to "clean, fill and extract teeth for school children". To some extent dressers were based on the existing American dental hygienists but with the addition of "filling in those cavities without pulpal involvement". They assisted dentists by doing "minor dental work" under their "close supervision" but in the 1920s anxiety about their employment in school clinics was voiced by the British Dental Association. The Dental Board of the United Kingdom[3] was also anxious about "the insidious dangers" associated with the employment of dressers. However a number of local education authorities disagreed with the profession and went ahead with their employment. For example, Sheffield's clinics looked after 74,000 children and the LEA claimed its three dental dressers were essential for their care.

World War II saw a comparable problem. There was a high incidence of terrible dental disease in RAF personnel. So in spite of a lack of permissive legislation in civilian life it was decided to do something about it. William [Later Sir William] Kelsey Fry, a civilian consultant to the RAF, suggested to its Director of Dental Services that hygienists should be trained to help with the severe problem of acute periodontal disease in neglected mouths. Although such workers were unknown in the United Kingdom the first hygienists had been trained in America in 1913, in Bridgeport, Connecticut. Dr Alfred Fones

[1] R Weaver, 'Note on the history of dental nurses (or dental dressers)', 22 October 1942, in Public Records Office file PRO/MH 58/48, 'Dental Board; relations with Ministry of Health, disciplinary enquiries, counsels' and solicitors' opinions'.

[2] S Gelbier, Dental dressers: 1920-1942, *Dental Historian* 2006; 42: 27-46.

[3] Forerunner of the GDC.

trained dental assistants to scale and polish teeth and to educate patients. As a result of Kelsey Fry's suggestions a hygienist school was started at RAF Sidmouth in 1943, by James Smith. Gerald Leatherman, later secretary-general of the International Dental Federation, played a major role in setting it up. Each course took specially selected clerk-orderlies (dental chairside assistants) and trained them for 16 weeks to scale and polish teeth and to educate servicemen in how to look after their mouths. As with many forward-looking people Leatherman received a great deal of abuse from colleagues about "dilution of the profession".[4]

Egypt and the Suez Canal

Once trained as a hygienist I was posted to the South-east Asia Command. I went out to India in December 1945 (Fig 1), where I remained for two-and-a-half years, well past the end of World War II. Both outward and return journeys to and from Bombay (now Mumbai) were made by boat; the 'Corfu' and the 'Otranto' respectively. Each trip took about three weeks. We had fascinating voyages through the Suez Canal and Red Sea.

Figure 1 An 18-year-old Leading Aircrafsman Cheeseman on leave prior to embarkation for S E Asia Command. He is wearing the Dental Branch badge on his right collar

I travelled to India on the 'Corfu' with about 17 other DCOs. Conditions on board were terrible. In fact they were so bad on a previous voyage that a number of service personnel mutinied. I was greatly troubled by sea sickness in the Bay of Biscay and if I could have made it to the side of the boat I would have happily fallen over the side. The bunks and hammocks provided for us were grossly overcrowded and most of us elected to 'kip-down' on the hard unrelenting deck surface since it was cooler and fresher outside. The journey was neither 'easy' nor 'dangerous' but in retrospect absolutely fascinating. We were one of the first boats to negotiate the Suez Canal since the Mediterranean was 'no-go' for passage during the war years in Europe. Formerly they were obliged to take the longer trip to India and the Far-East via the Cape of Good Hope and thence across the Indian Ocean. Passage through the Suez was very slow on account of 'dredging' vessels having to clear a passage through the silt which had accumulated from the

[4] J O Forrest, 'Appreciation', annotation to Obituary: Gerald Hubert Leatherman, *British Dental Journal* 1992; 172: 126.

sand blown in off the adjacent desert in the time that the canal had been closed.

. We called in - not sure why - to Port Sudan in the Red Sea where I was amazed to see the local *fuzzy-wasses* lining the docks. At the time they appeared to be the dirtiest, dusty *homo sapiens* imaginable on the planet. All carried spears. I was glad we did not have to make a landing there: the reception seemed very unsafe for any visitors.

Service in India

I was stationed principally at Agra, home of the Taj Mahal (Fig 2), and Delhi at the time of the last two Viceroys: Field Marshal Wavell was succeeded by Lord Louis Mountbatten. The partition of India into two parts, officially on 15 August 1947, led to the creation of a new Hindu India and Muslim Pakistan (later part of the latter split away to become Bangladesh); and to the slaughter by both major parties of Sikhs in the Punjab. Pandit Nehru became Prime Minister on that day.

Figure 2 The Taj Mahal

By the time I reached India WW2 had finished. Most of the dental personnel who had been there before me had served for three or more years so if their demob (release) date came up, the emphasis was on their immediate repatriation. Thus the dental workforce in my time was grossly undermanned with no more than about a dozen dental officers to service the whole of India Command with periodic attachments from hitherto 'permanent' dental centres at Agra, Ambala, Delhi, Palam, Cawnpore, Lucknow, Allahabad, Rawalpindi, Karachi, Mauripur, Peshawar, Calcutta, Dum Dum, Avadi (Madras) Bombay, Poona, Bangalore and two stations in the Himalayan foothills (places for respite leave away from 'prickly heat') at Chaubattia and Nani Tal. So we were spread very thinly across the country. Figure 3 shows some of my colleagues.

On Good Friday 1946 I was stationed at Cawnpore (now Kanpur) when a devastating fire ravaged our thatched billets (Fig 4). Within half-an-hour the camp was totally destroyed, making it necessary for us to live in the open for several weeks.

Apart from the 'up-market' Dental Centres at Agra and New Delhi we only had mobile equipment which we had to lug around with us in panniers from one place to another. In Agra and Delhi we had the luxury of electric dental engines and pump chairs, but this was only because they were formerly centres equipped by the American Forces who abandoned everything as soon as the war finished and returned home.

Figure 3 With some of my colleagues at RAF Station Worli, Bombay (left to right: Norman Gulley (from Newport, Mon), Ken Cornish (N London) and me

Figure 4 The billets burning down

Apart from Agra and Delhi - the headquarters and base for the administrative IDO (Inspecting Dental Officer), Wing Commander Harold Keggin - each dental location had only one dental officer (DO) and one dental clerk/orderly (DCO). My dentist was better off than others since I could help him out in my supplementary hygienist role.

The only dental laboratories (with only one technician at each) were at Bombay, Delhi and Bangalore. For any prosthetic work, we DCOs had to cast models from Zelex (alginate) impressions, make bite blocks and then send them away, via unreliable forces mail, to the labs for the try-in stages and finishes. There was no facility for inlays or ceramics; only amalgam and 'Petralit' and silicates for the anterior teeth.

The dental officers

The dentists during my time in India were generally only recently qualified with not a great deal of experience. They had to attempt anything that turned up as best as they could, without any more professional help or advice if difficulties were met - a great self- learning opportunity!

The only maxillofacial work done that I personally know about was by my Flight Lieutenant Fooks who, of his own accord, wired up a fractured mandible. He and I visited a local hospital in Jodhpur for him to gain experience in treating poor unfortunate babies and infants who presented with varying degrees of cleft palate for which we constructed simple obturators. This 'unofficial' care was provided by him on account of his personal interest in the pathology and for his desire to gain experience in this special field. This 'unofficial' service was exceptional rather than routine. The results were pretty primative. Officially we only treated service men and women (mostly Anglo-Indians). However we would also do the odd emergency extraction for such folk as our *bisti-wallah* who would spray water around from a leather bag in an effort to lay the dust and cool things down in our 'surgery' (Fig 5).

Figure 5 A *bisti-wallah* carrying a leather bag water spray

The thing I remember most about my time in Jodhpur, was being obliged to consume dark goat meat, stewed with lashings of curry powder every day for the main meal. This was because neither beef nor pork were allowed into the State (even for service personnel) because of religious intolerances. Neither did I like having to take a daily tablespoonful of salt at this meal under the surveillance of a duty sergeant on joining the queue in the dining area. I have never since been able to face curry in an Indian restaurant.

Some national events

I was in Delhi at the time of the assassination of Mahatma [Mohandas Karamchand] Gandhi on 30 January 1948, shot at point blank range (Fig 6). His cremation next day coincided with my 'day-off' so I joined the countless thousands of people attending it at the site of the nearby Holy River Yamuna.

I was also stationed for three months at Jodhpur in the Sind desert, another fascinating place.

I should have left India by the end of 1947 but when my demob instructions came through my departure from Delhi was unwantedly delayed as I first had to accompany a batch of dental equipment from a closed down dental centre to its final destination at a dump in the United Provinces. There were associated problems with discrepancies identified between what was listed on the 'ledger' and what in fact was being handed over. This was made worse as there was no administrative dental officer left in charge - he had already made it onto the boat. This resulted in a considerable delay before I could get away to the Personnel Disposal Centre[5] at Bombay.

Early in 1948 I returned to England, as Leading Aircraftsman Cheeseman, and was demobbed (ie demobilised) from the RAF.

I would love to return to India if only to see how the population is currently accommodated. There was hardly room to move anywhere in my time there and I understand that it has more than doubled since I left more than 60 years ago.

[5] A transit camp to which airmen were posted whilst awaiting redirection either overseas or back to the UK.

Figure 6 The Memorial at the spot in Delhi where Mahatma Gandhi was shot

And so to dental studies

In that year I applied to train as a dental student at Guy's Hospital. At the opposite side of the green-baised interview table sat an impressive individual whose prolonged questioning revolved entirely around my experiences in India as an RAF dental orderly. He seemed interested and inspired by my descriptions. I wondered later if he was, in fact, Sir William Kelsey Fry. My experience clearly helped. Out of eighteen people interviewed I was the only one to be accepted to start in the following October.

And so began the next phase of my long dental career. But that is another story.

LESLIE JOHN CHEESEMAN BEM: DENTIST AND CRICKET UMPIRE

Stanley Gelbier*

Introduction

Many dentists lead interesting professional lives but we tend to know less about any parallel lives. This paper is about someone who had a highly successful dental career but was equally successful in cricket. I was reminded of that when looking across the room and seeing some medals worn on Leslie Cheeseman's dress jacket at the Lindsay Society's celebration dinner.

Leslie (Les to his friends) Cheeseman was born on 24 May 1927 in Carshalton, Surrey. At the age of 17 years he volunteered for wartime service in the Royal Air Force, ending up in the RAF Dental Branch. He was first a dental clerk/orderly but was then retrained as a dental hygienist. Although illegal in civilian practice they were trained by the RAF because of the terrible incidence of dental disease and a shortage of dentists. He was then posted to India but the story of his duties there are told by Cheeseman in another paper. In early 1948 he was demobbed back into civilian life.

Cheeseman the dentist

Cheeseman's wartime experiences stimulated his interest in dentistry. In October 1948 he became a first year dental student at Guy's Hospital Dental School, studying the 1st MB subjects of physics, chemistry and biology. He qualified BDS and LDS in 1953.

Whilst at Guy's he approached the BDA to consider the introduction of 'student membership' of the association and for students to receive copies of the *British Dental Journal*, a moved approved by the Representative Board. This interest in the BDA has continued throughout his life, both at a local section level and through the Public Dental Officers (later Community Dental Services) Group.

After a house post in the Children's Department he joined Surrey County County as a school dental officer, the first of many public dental service posts. In 1954 he opened a general dental practice in Carshalton but retained a part-time link with the Surrey service – a connection which he maintained for the rest of his career. He pioneered a local domiciliary dental service.

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In 1957 Cheeseman became honorary dental surgeon to the Carshalton Memorial and to Queen Mary's Hospitals for Children.

Following the reorganisation of the National Health Service in 1974 Cheeseman was appointed by Croydon Health Authority as Senior Dental Officer for the care fo 'special needs' patients, one of the earliest such appointments. This led him to a special interest in the administration of general anaesthetics and later relative analgesia (giving 20,000 over his whole career). As a result he lectured on these subjects throughout the United Kingdom. In 1977 he became tutor and coordinator of the SW Thames Regional Training Consortium and tutor to the vocational training scheme. Cheeseman was a founder member of the British Society of Dentistry for the Handicapped.

In 1958 Cheeseman was elected as a member of the Surrey Local Dental Committee, which represented local dentists in their dealings with health authorities. This interest in dental politics continued when, in 1977, he joined the South West Thames Regional Dental Committee.

Also in 1977 he decided it was time for some postgraduate education so he joined the course organised by the dental schools of London, then tutored by Dr John Bulman. At the end of the academic year he passed the examinations for the Diploma in Dental Public Health (DDPH) of the Royal College of Surgeons of England. This served him in good stead, being appointed as district dental officer to the Mid Surrey Health Authority (later the Epsom Health Care Trust) in 1983, extended in the following year to Merton and Sutton HA. In 1985 he became acting consultant in DPH to these authorities.

In 1991 Cheeseman was elected as president of the Community Dental Services Group of the British Dental Association. In 1992 he became an honorary life member of the BDA.

Cheeseman retired on his 66th birthday, the end of a fulfilling professional life. But he had other interests.

Cheeseman the cricketing umpire

He developed a passionate interest in the game from an early age, whilst at school. It was in 1954 that he took up umpiring seriously with his Old Boys Association. From 1963 he undertook duties at some top clubs and was appointed for representative matches with the MCC,[1] the National Cricket Association, to stand in two 'Young England' versus 'Young West Indies' test matches, two national Final Knock-out Competitions (the 'Village' and the Club Championship), the 'Cricketer Cup' Final for the Public Schools Old Boys and as a member of the County 2nd XL Championship and the Minor County Panels of Cricket Officials.

Cheeseman (Fig 1) was the youngest person to be appointed to the Association of Cricket Umpires (ACU) Executive, membership of which continued for 32 years.

[1] The Marylebone Cricket Club.

In 1964 Cheeseman was appointed as Official Instructor and Secretary to the Examination Board and in the 1960s and '70s he alone was responsible for the arrangements for countless examinations.[2] As such he guided hundreds of budding umpires. As an instructor he was involved in the design of the visual aid kit for 'leg before wicket' demonstrations which is now routinely used by the Training Board.

Figure 1 That's out. Leslie Cheeseman umpiring in 1990

In 1969 Cheeseman was appointed as General Secretary of the ACU, liaising with the Test and County Cricket Board. Retirement from that post came in 1995, aged 68 years. He was the only existing member to have been elected as an honorary member, the highest award the Association could bestow. In 2008 the ACU was disbanded to be replaced by the Association of Cricket Officials of the England and Wales Cricket Board, which recognised his longstanding contribution to the game by the award of its honorary membership.

British Empire Medal

In 1990 Leslie Cheeseman was awarded a British Empire Medal[3] in the Queen's Birthday Honours List (Fig 2). According to the official citation:[4]

Mr Cheeseman has been an inspirational figure in the development of ACU as an international rather than a U.K. only body for umpires. All this has involved him in a monumental volume of honorary work, carried out in the precious spare time afforded to him by his demanding work as a dental surgeon in which he has also distinguished himself.

[2] See Citation for the award of his British Empire Medal.
[3] The British Empire Medal, first established in 1922, is awarded for meritorious civil or military service worthy of recognition by the Crown. It is divided into civil and military divisions. Its motto is 'For God and the Empire'.
[4] Citation, op cit, fn 2.

Figure 2 Leslie Cheeseman receiving the BEM from the Queen's representative, Richard Thornton, the Lord Lieutenant of Surrey

As the Citation suggests, Cheeseman's contribution to what was virtually a second career is truly remarkable sitting alongside his primary profession of dentistry.

Figure 3 and 4 show both sides of the medal.

Figure 3 The front aspect of the BEM. It indicates that the Medal was first introduced by King George V. The civil ribbon is as shown. The military one is divided into two by a vertical thin stripe

Figure 4 The reverse side indicate for God and the Empire. For meritorious service

BRITISH DENTAL EDITORS' AWARD 2012

The British Dental Editors' Forum recently held a reception at which were presented the Young Dental Writers of the Year awards sponsored by the British Dental Trade Association. During the evening the BDEF chairman, Professor Ken Eaton, announced the two award winners. They were presented with their cheques and certificates by Simon Tucker, president of the BDTA (Fig 1). First prize went to Laura Hatton; second was Alexander Holden.[1]

Figure 1 From left to right Ken Eaton, Laura Hatton, Tony Reed (chief executive of BDTA) and Simon Tucker (Director Medenta Finance Ltd)

Laura Hatton's moving article, 'The truth from the trenches', was published by *Dental Tribune* as a three-part series in 2011.[2] Amongst other things she had researched and written on the role of the noteworthy dentist Sir Harry Baldwin CVO MRCS LDS in the First World War, for which he was knighted. The judges were "impressed by her vivid account of the horrific facial injuries suffered by thousands of soldiers fighting in France". After visiting the French *Service de Stomatologie de Lyon* he fought for similar units in British hospitals to provide treatment for wounded soldiers. Also dealt with were his role as Queen Victoria's dentist in her final years and dentist to King George V and Queen Mary; he was a partner of Sir Charles Tomes. In addition Baldwin was a fighter for improved oral hygiene and better diet (he wanted the government to tax white bread, then the staple diet of poor people!) and his pioneering use of Plaster of Paris for impressions. In 1912 Baldwin was elected as president of the British Society for the Study of Orthodontics; in 1915 president of the Metropolitan Branch of the BDA and of the Odontological section of the Royal Society of Medicine. As a student Baldwin was a Saunders Scholar at the Royal Dental Hospital of London at which his wife endowed a Baldwin Prize after his death for excellence in porcelain restorations. Hatton explained that her research arose out of a meeting with Richard Fowler, godson of Mary Baldwin, who was Sir Harry's only child.

[1] Report by Mary Newing (marynewing@uwclub.net).
[2] *Dental Tribune* (UK edition) 2011, Nov 19-25, pp 8-10; Nov 14-20, pp 7-8; Dec 12-18, pp 12-13.

BOOK REVIEWS

MERGER TO GLOBAL LEADER: KING'S COLLEGE DENTAL INSTITUTE 1998-2011, by Nairn Wilson, Stanley Gelbier and Stephen Challacombe (eds), London: Stephen Hancocks Ltd, 2012, 152pp, price £20, can be bought on line via the KCL website. Review by Roger M Watson.*

Potentially beneficial changes to modern living are clearly apparent: The mobile phone, Internet, Twitter, Blogging etc. Each has been created from careful planning and development, but not all are welcomed by those comfortable with the status quo. So it is with modern dentistry, expressed clearly in an excellent publication "Merger To Global Leader". An earlier Nuffield report to reduce dental manpower by closing three dental schools in the UK together with strategies to strengthen medical education across London, fostered a decision to merge the dental schools of Guy's (United Medical and Dental Schools of Guy's and St Thomas' Hospitals) and King's College, as well as instigate a merger of their medical schools.

The complexity of uniting two groups of staff and students on two sites was immense while simultaneously ensuring high quality in learning and teaching, provision of patient services and oral and dental research. Under the charismatic vision and determined leadership of Frank Ashley as dean with Alex Inglis as his vice-dean, they set about restructuring and gaining support of the staff in this task. Within 3 years the essential foundation had been laid with the School attaining top marks in all six areas of the national Teaching Quality and Assessment while three separate curricula were running. Subsequently there was a 5* rating in the Higher Education Funding Council of England Research Assessment Exercise (RAE). These were unique achievements.

With the untimely death of its first dean and forthcoming retirements of several senior staff King's College selected an experienced proven leader, Nairn Wilson to be the next Head of School. Two years of consultation and planning followed by seven to eight years of implementation were required to meet his goal: To achieve continuous enhancement of quality in pursuit of excellence among the leading dental clinical academic centres. His success is readily understood from reading the thirteen chapters that describe the Dental Institute.

The "Merged 5-year (undergraduate) Curriculum" selected the best aspects of two existing curricula by introducing vertical and horizontal integration of Basic Medical Sciences and Applied Dental Science with reorganisation of courses leading to a new Finals examination. This was succeeded by a GKT curriculum for 2003-2004 and then by a King's curriculum. The former aimed to develop individuals for team leadership using specific educational strands in each year, plus the development of conscious sedation and an opportunity for a 4-year education for those with a graduate science degree. The subsequent King's programme improved the diversity of entry to add a 3-year Dental Programme for Medical Graduates and a UK Clinical Aptitude Test to widen student selection.

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The programme of integrated Biomedical Sciences and Applied Dental Sciences also increased the experience of Community Dental Practice with, in the final year, opportunities in Outreach Practice at the specially developed University of Portsmouth's Dental Academy, originally formed from the University's Professions Complimentary to Dentistry School.

Advances in postgraduate education have led to increased demand for good quality dental postgraduate qualifications. KCL offers a well-structured and closely supervised PhD programme within its Graduate School. Eight Dental Institute in-house clinically intensive master's degree courses are available together with a rapidly expanding blended learning programme which uses a mix of distance and in-house experience. In 2011 more than 250 students enrolled for this study from the world's largest provider of blended dental postgraduate education. On-line content is a blend of text with images, video, web links, access to the King's e-Library, streamed lectures and on-line tutorials. Innovative technology is used to teach clinical skills that benefit busy practitioners.

Support for Continuing Professional Development has also greatly benefitted from the construction of the £2.4 million London Dental Education Centre (LonDEC) in King's College. This provides a "state of the art" simulation training environment comprising seminar room with operating microscopes, Prep Assistant Scanner, medical emergency training mannequin and a decontamination training room.

Two successive top awards in the RAE's of 2001 and 2008 gained since merger, have clearly signalled the international standing of the Dental Institute. Such remarkable success has been achieved by the ability to develop research groups and then restructure them to reform and take advantage of expansion into new areas of investigation. Physical integration, necessary to encourage an interactive environment, was supported by development of high quality research space, e.g. the laboratories of Craniofacial Development. Appropriate local and national grants were sought and won to facilitate extensive rebuilding, the recruitment of international experts and the promotion of home grown talent. One such example is research led by the first Director, Paul Sharp, where his department has involved 12 principal investigators leading research teams with a total of more than eighty staff.

The recent new challenge of reorganisation has been stimulated by the Research Excellence Framework in place of the RAE to oversee national research and by the Government award of an Academic Health Sciences Centre to King's Health Partners (the College and 3 Trusts of the three hospital groups). This demand has been met by a change from specific topic–related areas to multi-disciplinary oriented themes (Discovery, Translation, Clinical, Education/Outcomes and Environment).

The last twelve years have seen the transformation of most clinical areas, clinical ways of working and the development of new clinical services in Guy's Tower, the Dental Centre at St Thomas' Hospital, King's College Hospital Dental Hospital with Community Special Care dentistry and its twelve community clinics in local boroughs. This is the result of substantial capital investment. Among the

many benefits of development are the establishment of regional centres: The management of adolescent and adult cleft palate patients at Guy's and the major trauma centre for South London for paediatric and restorative dentistry with oral and maxillofacial surgery within the overall KCHT's trauma service.

A lively description of the activities of the Dental Society is provided by past and present staff and student presidents since merger. The students have created an effective organisation, which with the support of staff encourages a sense of belonging to the Dental Institute and King's College London.

The formation of an active Alumni Association has been an important goal, of especial benefit to newly qualified students and the Institute itself. An increasingly well supported annual Dental Dinner and Clinical Day offers renewed friendship and worthwhile continuing professional development. Many former students and staff also contribute financial support, including members of the Dental Circle. These funds enable many new projects to be initiated and provide travel bursaries for staff and students etc.

The most recent development is a History Unit supported by a mix of past distinguished members of the profession and those with a strong interest in dental history, enabling a full record to be made of the founding schools and the Dental Institute.

The importance of the Institute's standing and impact around the world has been encouraged by the determination of Nairn Wilson and his Vice Dean Stephen Challacombe. Their aim has been to formalise external links for the development of international relationships, to promote staff sabbaticals and student elective study and secure both national and international partnerships.

As the new Dean Diane Rekow states in her vision for the future of the Dental Institute, shifts in fundamental science are likely to come from multi-disciplinary teams integrating researchers from many backgrounds. The translation of fundamental discovery and practice- based research impact our future. These and other valuable assets will help to shape the Dental Institute's evolution into a world leading dental clinical academic centre.

The editors, Nairn Wilson, Stanley Gelbier and Stephen Challacombe and their many contributors are to be congratulated on creating an attractively illustrated and easily read product that demonstrates the highly significant facets of the King's College London Dental Institute.

HOT SPOTS AND HOT SEATS by John Bradley, Lincoln: Sorejaw Publications, 2011, 108pp, price £7.99. Review by Stanley Gelbier.[+]

This publication comes from the pen of a longstanding member of the Lindsay Society for the History of Dentistry. Bradley has already published a book on the Oral Surgery Club[1] of which he was the archivist. This widens the

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[1] Book Review: J Bradley, History of the Oral Surgery Cub, *Dental Historian* 2012; 55: 103.

subject, examining his personal experience in the field of oral and maxillofacial surgery. The 14 chapters begin with his birth in Wimborne. Bradley's father was a dentist, as was the latter's cousin Lesley Boness, first chairman of the Dental Estimates Board. It was thus not surprising that Bradley took up dental studies, but at Guy's Dental School – avoiding his father's alma mata, University College Hospital. His chapter on study at Guy's mentions some of the great names who taught there, many on a part-time basis, including Professor Martin Rushton, Professor Herbert, (later Professor) Jack Rowe and Alan Thompson.

There followed house posts at St Thomas' (with John Hovell, consultant oral and maxillofacial surgeon at St Thomas' but consultant orthodontist at the Royal Dental Hospital; and later dean of the dental faculty at the Royal College of Surgeons of England). Together with Hovell, Donald Winstock the senior registrar and Richard Battle the plastic surgeon, Bradley was part of the team to carry out possibly the first mid-facial osteotomy in the UK. Next came a senior house officer post at the Westminster Hospital with Rupert Sutton Taylor. In 1936 Taylor had founded the Oral Surery Club of GB, with an invitation-only membership; and 26 years later helped to form the British Association of Oral Surgeons. Then came a registrar post at Odstock Hospital, Salisbury.with Eric Dalling and Colin Wishart. There he gained much experience of treating facial injuries: it was the era before the compulsory use of seat belts.

Bradley then returned to the Westminster, by then merged wih Queen Mary's Hospital, Roehampton. There he met Norman Rowe, regarded by some as the top oral surgeon of his day. He had worked with Sir Harold Gillies at Rooksdown House, Basingstoke during World War II. Ian Hislop was the other otal surgeon at Roehampton. Bradley said he was "back in the world of professional rivalry", but what enormous knowledge and experience he drew upon. Westminster was a major cancer centre, with Sir Stanford Cade as the top surgeon. Bradley had the opportunity to assist Cade, a wonderful learning experience.

Both Taylor and Rowe were presidents of the BAOS whilst he was working with them, which helped to introduce Bradley to many other leading lights and gave him excellent experience of organisation. Bradley describes an interesting argument he had with Princess Margaret at an International Conference on Corneoplastic Surgery.

He then joined Frederick Monks in Bolton. They also covered Burnley, Blackburn and Bury. He obviously made a very favourable mark because after retirement he was appointed as chairman of the Bury Health Authority. Few dentists attained that level of achievement.

I enjoyed reading this book. It tells a well-written story of John Bradley's professional progress, interlinked with some famous names in the world of oral and maxillofacial surgery.

PROF DR GUILLERMO CARLOS TRIGO, Dip Dent, PhD

Diana Daich de Eidelsztein*

Dr Trigo and his family history

Dr Trigo (Fig 1) is currently vice-Dean of the Health Sciences Faculty and Dean of the Department of Dentistry at Maimonides University, Buenos Aires. It was decided to interview him to draw upon his experience and knowledge.

Figure 1 Dr Guillermo Trigo

Both of Trigo's parents were dentists. He has two brothers who are also dentists; and two others work in other health areas. A cousin is also a dentist. Trigo is also a physician, the only doubly qualified member of the family. His maternal grandfather, Alejandro Mattía, was a dentist. Mattía was one of a group of Argentines who created the Faculty of Dentistry in Bolivia. When Trigo's grandfather-to-be formed a couple with his grandmother-to-be he already had two children; one male, one female, both now deceased. Trigo doesn't know if his grandfather was a widower at the time or if he was divorced. The male child - also called Alejandro - became a dentist in Montevideo, Uruguay. Then Alejandro Mattía had two daughters with Trigo's grandmother. Finally, when quite elderly, he went away with a very much younger than him woman to Cipoletti, a city in the province of Rio Negro, some 700 miles in the South-West of Buenos Aires. That is the last thing the family know about him. Trigo knows this part of the story thanks to Norma Mattia, Alejandro Mattía's daughter from the first marriage: now deceased.[1]

Alejandro Mattia and the Faculty of Dentistry in Bolivia

On 18 May 1911 the first teaching course of the National School of Dentistry within the Faculty of Medicine began in a house at Camero Street (nowadays Liceo La Paz- La Paz High School), La Paz, Bolivia.

In the beginning of the 20th century dentists usually travelled to work from Cochabamba to Oruro and from Oruro to La Paz. In the 20th century most of the dentists were Bolivian but in the previous century they were mostly French or American. An exception was Dr Hugo Zalles, the first Bolivian dentist

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[1] Dr Guillermo Trigo, Personal communication, 7 October 2012.

established permanently since 1887. In 1910, during the Presidential period of Eliodoro Villazón, a decision was made that dentistry should be studied for three years. It was really advanced for the time, as were Chile (began 1892) and Argentina (1892).

In 1911 Dr Néstor Morales Villazón, dean of the Faculty of Medicine, developed a project and Faculty of Dentistry was created. Four professors were designated, all honorary as there was not enough money to pay them. They were Drs Néstor Morales (ie the medical Faculty dean), José Domitilo Tapia, Alejandro Sardón and Alejandro Mattia.

The inauguration was on 18 May (Fig 2). Dr Alejandro Mattia, the Argentine dentist, was very important in the opening of the School of Dentistry. He lent it modern dental equipment and instruments. They began to treat patients: mostly extractions under nitrous oxide for very poor patients as well as elderly people, orphans and indigents. They also performed restorations with gold, bridges, gold crowns, vulcanite complete dentures, gum treatments and so on. The first students were: Agustín Pío García, a pharmacist, Braulio Tejada, a school teacher, Carlos Pérez, Sergio Arduz, Enrique Monasterios and Fernando Veintemillas, the youngest who was only 20 years old. All six students qualified. In the second year ladies were among the new students.[2]

Mattia had his practice at Rivadavia Avenue and Pueyrredon Avenue, 2786. Buenos Aires (a very commercial area then and now) (Figures 3 and 4).

At that time Trigo's grandmother (Alejandro Mattia's second wife)) took over the practice, later to be replaced by Trigo's mother. Afterwards she married Trigo's father and the latter joined her.

Trigo's early life

Trigo was born in Buenos Aires at his grandmother's home, on 14 April 1951. He became a dentist in 1973. His family always backed him. Trigo began to study French when he wanted to travel in order to go on studying in France.

He then met the woman who was to be his wife; María Cristina Alonso his French teacher in Tandil. Their relationship ended when he said he was going to France. Unfortunately Trigo did not pass his exam for a scholarship. However Maria did and went to France. He sold his small car and travelled to Paris, but she was in Nancy. So he stayed in France between 1977 and 1981.

They came together in 1981 and married on 2 April 1982, the day the Malvinas/Falklands war began. In that year Trigo obtained a PhD in dentistry for a thesis on 'Pharyngeal Chokes'. His brother helped them with a deposit for a home. By then she was pregnant: they finally had 4 children. On Sundays Trigo studied in a cafeteria whilst she walked by with the children, taking them to play at a playground square.

[2] Tendencias, Bolivian digital paper, Gualberto Ochoa, teacher at the Faculty of Dentistry, 8 August 2010

Figure 2 Inauguration School of Dentistry, La Paz, Bolivia. Dean Dr Morales Villazón and Director and Founder Dr Mattia.

Figure 3 Dr Mattia at his practice in Rivadavia Avenue

Figure 4 Dr Mattia at his practice

Sometimes Trigo regrets not having spent more time with his children. They are María Cecilia (born 13 February 1983) currently a psychologist with a Master's degree from Barcelona; Juan Ignacio (18 June 1984), a physician who studied at Buenos Aires, now specialising in traumatology in Mar del Plata –a very touristic city by the sea some 200 miles South of Buenos Aires; Guillermo (9 April 1986) studying to be an electronic engineer at the Catholic University- UCA Universidad Católica Argentina; and Francisco (8 April 1990), a third year medical student at Maimonides University.

At home there were no arguments. He very strict and made them study hard. The children saw the parents were always very active. Trigo recalls Darwin's thought: the one who survives is not the strongest one but the one who can adapt the best to the surroundings. It was sometimes very difficult.

María was also active. She wrote a thesis on linguistics and the passed the DALF(Diplôme Approfondi de la Langue Francaise). She now helps Trigo at his practice.

Trigo and dentistry

Trigo studied at the Faculty of Dentistry of the University of Buenos Aires in Argentina.

His miltary service began after his studies so he was a reservist lieutenant at the Military Central Hospital, but he had to serve at the Cavalry in Tandil (a city in the Province of Buenos Aires some 250 miles to the South).

Then he moved to France, to the Salpêtrière Hospital in Paris. There he could study with stomatologists and well-known specialists in maxillofacial surgery. The chief there for 45 years was Dr Deschamp. The other

important person was Dr Pierre Sernea. Near to this hospital they created a new Salpêtrière, to be called Pitié- Salpêtrière Hospital. It had been an hospice where Charcot and Freud had worked for some time.

Trigo stayed there for 4 years. After studying stomatologie he took up surgery. In France medicine had to be studied for three years, from general to the particular. On his return to he had to re-adapt and be open-minded. Thus began his studies in medicine. At that time there was a dictatorship in Argentina. Trigo felt many pressures from the changing society, with big demonstrations. In the Faculty of Medicine the authority was General Dones. Although Trigo had presented a thesis and had papers and publications, Dones did not accept him as a student, so he had to begin his studies with the subjects of a preparatory course. Hoowever a friend of his father spoke to the Rector and he was then able to study without that course.

The medicine course was hard but Trigo finished it. At that time Dr de la Serna (the person who created the Museo y Centro de estudios históricos of the Faculty of Dentistry, UBA - where the author works on an honorary basis as well as the one founded by Dr Orestes Walter Siutti 30 years ago) was the Dean of the Faculty of Dentistry. There was a programme of repatriation and Trigo got his return ticket paid by the government: there was a plan to bring back to Argentina scientists and specialists.

Trigo wanted to work. De la Serna and Trigo hugged and cried. Trigo gained an honorary post as assistant professor at the On-call service. To get the specialist degree there has been usually a way of getting it by serving at the Faculty for 5 years and then the Public Health Department used to hand in the diploma. But at that time there was no such agreement: to get a specialist degree many times a dentist works at a service or hospital or faculty for 5 years and the Public Health Department considers him a specialist. At that time it was not possible to do that so he could not get his diploma this way. Trigo worked as a professor in dentistry while being a medical student. His family was with him. Some professors doubted him, asking why he needed to study medicine, including one who made him study again the subject he taught. Trigo failed this exam for a second time. He then told them he was a professor and they let him pass. When Trigo arrived at his practice his friend, Dr Fabio Sturla, a plastic surgeon, told him "maybe you hadn't studied enough". The question was about the vitamins contained in a nut. He finally passed this subject after a summer course with a mark of 10 - the highest qualification.

Before this course the main professor asked Trigo to come to him at 3pm but only saw him at 5pm. He asked him why he studied medicine while looking into a microscope: pathology was his subject. After this chat Trigo was authorized to attend the summer course. He graduated as a physician in 1990.

At the Faculty Trigo worked with his father, for many years the main professor in maxillofacial surgery. When his father and then Dr Arienza retired there was a possibilty of Trigo becoming the main professor. There was political illegal compromise –since the University of Buenos Aires is supported by the government there are many political interferences-at that time there was one of those. The candidates were initially Ferrería, Rascovich and Trigo. Then Ferrería retired from the scene. Regarding

Trigo's resumé the jury decided he was not bad but they were not looking for a physician. Trigo did not accept its decision. He went to a lawyer and finally defeated this "mafia".

Once Trigo was appointed Sturla accepted him and began researching and practising facial growing techniques. It was preferable to work together instead of quarreling again and again .

The move to Maimonides University

Then Dr Elías Feldman, the first Dean of the new Faculty, called Trigo to Maimonides University to teach anatomy. There was nothing in place: they had to prepare programmes. Once the professors were appointed they had to name other teachers, including Arienza's son, Lombardi.

Trigo became the coordinator of the surgery programme, taught over several years of the course. When Feldman died he was followed by his widow, Delia Arrigó. From 2005 Trigo took charge. An on-call service was created. Teaching was by the PBL (Problem Based Learning) system, where students are presented with a problematic situation and they have to search for possible solutions. It is used in different universities around the world.[3]

Trigo says he is fond of challenges and likes adrenaline rushes. As an example, he recalls he and his father worked in maxillofacial prosthodontics.

Trigo began to write a book with his father based on his own experiences in France and then with his father in Argentina. An uncle helped out but there had to be too many drafts and the text was getting out of date. Finally an edition of 1,000 copies was published in 1987 with the title *Prótesis restauratriz máxilo-facial* (*Maxillo-facial restorative prosthodontics*).

In Buenos Aires Trigo and his father Juan Carlos worked together in repairing prosthodontics and treating congenital disorders.

Trigo's current area of expertise is maxillofacial surgery. He takes part in congresses, meetings, videos and presentations and has published papers and articles in Argentina and abroad.

Appendix A Specialist Titles

- SPECIALIST IN MAXILLO FACIAL SURGERY
  Granted by the Ministry of Health and Social Action of Argentina (Year 1982)
- SPECIALIST IN MAXILLO FACIAL RESTAURATRIZ PHROTESIS
  Granted by the Ministry of Health and Social Action of Argentina (Year 1982)
- SPECIALIST IN PLASTIC RECONSTRUCTIVE SURGERY
  Granted by the Ministry of Health and Social Action of Argentina (Year 1999)

[3] http://en.wikipedia.org/wiki/Problem-based_learning

- SPECIALIST IN HEAD AND NECK SURGERY
  Granted by the Ministry of Health and Social Action of Argentina (January 1999)

Appendix B Honours and Awards

- RETURN TO THE COUNTRY FOR THE PROGRAM OF SELECTIVE MIGRATION.
  Section Planning. Presidency of the Nation through the Buenos Aires University. File N° º1066403/80.
- HONORARY MEMBER AND REPRESENTATIVE BEFORE THE CONFEDERATION ARGENTINEAN REPUBLIC ODONTOLOGY
  Granted by the Peru Odontology Federation. November 1987.
- MEDAL TO THE GROUPER "SIR ALEXANDER FLEMING"
  Granted jointly by the Academy Gaucho of Dentistry, Brazilian Association of General Surgery, Brazilian Association of Palatine Fissures, among others. San Pablo. BRAZIL 1991
- HOMAGE BADGE OF THE PIERRE FAUCHARD ACADEMY.
  Section Brazil. President Prof. Dr. J. J. ACNES. San Pablo. BRAZIL. 1991
- MERITORIOUS AND HONORARY PARTNER OF THE BRAZILIAN ASSOCIATION OF ORAL SURGERY.
  Porto Alegre. BRAZIL. September of 1991.
- MERITORIOUS PARTNER OF THE BRAZILIAN ASSOCIATION OF DENTISTRY
  Section Mines Gerais, Regional Porto Alegre, BRAZIL September of 1991.

Trigo was proposed as an Academician by Dr Siutti.[4] In September 2000 he was elected.

Acknowledgements

I wish to thank Professor Trigo for supplying photographs and for his help in answering my questions. Acknowledgement is due to Professor Stanley Gelbier for his constant encouragement and helpful advice.

[4] Diana Clara Daich de Eidelsztein, Prof Orestes Walter Siutti, *Dental Historian* 2009; 50: 102-8.