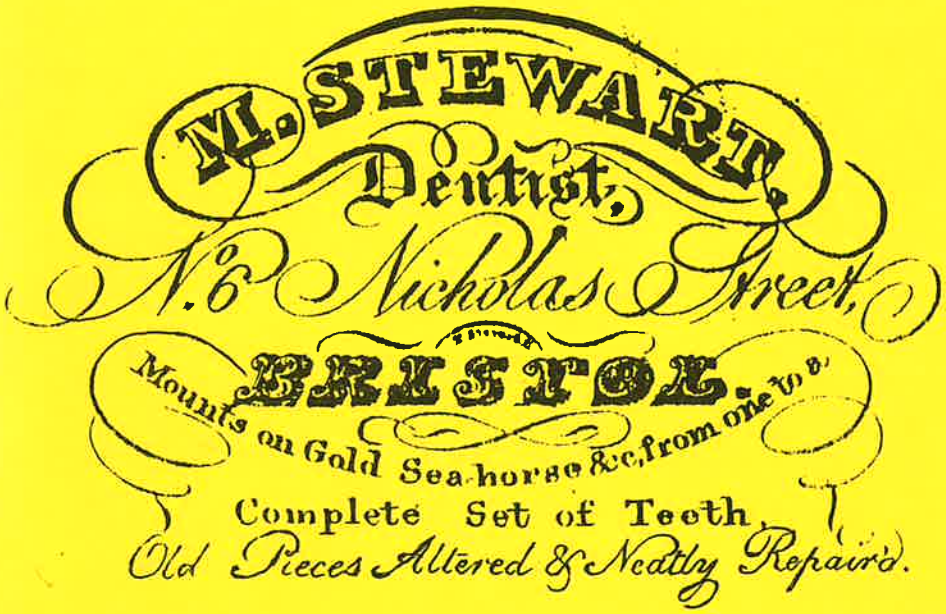
DENTAL HISTORIAN



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Cover illustration

Trade directory advertisement for Mark Stewart, at this addfess c.1828-36. Supplied by F.H.Rawlings, FRPharmSoc.

DENTAL HISTORIAN

NUMBER 32

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EMERSON C. ANGELL
(1822-1903)

FOUNDING FATHER OF RAPID MAXILLARY EXPANSION †

Donald J. Timms *

Background and entry into dentistry

As a seventh generation member of one of Rhode Island's esteemed families, Emerson Colon Angell (Fig. 1) traced his descent from Thomas Angell (1618-1694) who was born in England (Fig. 2) and went to work for the Rev Roger Williams (1603-1682). In 1631 Williams emigrated to New England taking young Thomas with him but Williams's ideas on certain church matters conflicted with the Puritan Establishment there and he was forced to leave Massachusetts. With a group of like-thinking pioneers he founded, in 1636, the Providence Plantation (later the capital of Rhode Island), an egalitarian community where Thomas soon joined him and was granted a six acre house plot, in common with others, on coming of age.[1]

This was frontier territory and farms were being carved out of the wilderness by successive generations. One of Thomas's grandchildren, also called Thomas, moved a few miles West to Scituate and built the Angell Tavern in 1710. This hostelry was to become well-known in the State and under its roof, Generals Washington and Lafayette were to sojourn during stages of the Revolutionary War. Remaining in the Angell family until burnt down in 1862, the inn bore witness to the birth of Emerson Angell's grandfather, Job Sr. His father, Job Jr, was a man of many parts. Although he was primarily concerned with farming, land surveying engaged much of his time and as well as being something of a lawyer, he also served for a few years as a Deputy Sheriff and as a Justice of the Peace.[2]

Our man was born at Scituate on 12 December 1822, number six in a family of nine children with five brothers and three sisters. With his background, Angell

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† Based on a paper delivered to the Chester Conference of the Lindsay Society for the History of Dentistry, September 1996.

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1 A.F.Angell, *Genealogy of the descendants of Thomas Angell who settled in Providence in 1636* (Providence: A.C.Greene, 1872), p. 10.

2 *Ibid.*, p. 97.

Fig. 1: Emerson C. Angell, about 1880 (by courtesy of T.C.Devenny)

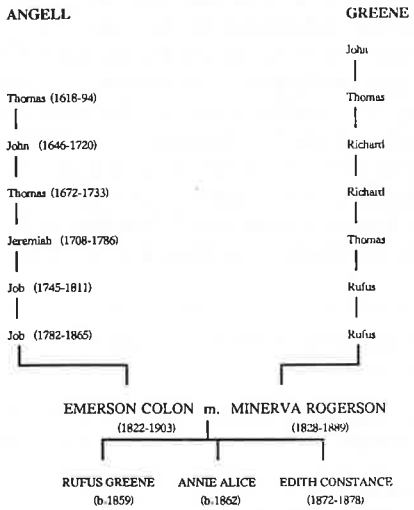

Fig. 2: Family trees of E.C.Angell and M.R.Greene

would expect a broad-based upbringing but nothing is known of his early life other than what his brother tells us:[3]

> .... he was brought up to industrious habits in agriculture and mechanics.

A traditional *curriculum vitae* in pre-industrial Revolution America; but with the quickening pulse of a developing nation, opportunities were improving for those with ability and determination and Emerson entered the dental profession in 1846 after a short spell as a teacher. It is not known what or who influenced him in this decision; the era was marked by considerable advances and improved career prospects in dentistry which may have been brought to his attention. Some preceptor training may be assumed but the instructor remains unidentified. Angell's early years in practice were divided between Woonsocket, on Main Street[4] and Providence, at the Mansion House.[5] While working at Woonsocket, he took an interest in the cultural life of the community and was instrumental in bringing Ralph Waldo Emerson (1803-1882), the giant of American letters, to address the township on 15 January 1850.[6]

Despite economic expansion in Rhode Island, greater opportunities must have been sensed in New York City for he moved there in late 1852 or early 1853 and opened his surgery at 17 Amity Street.[7] However it was not long before he was again on the move. Following the famous 'Go West' dictum of Horace Greely, in 1855 Angell went to San Francisco where he was to make his seminal contribution to dental science. Since the war of 1846-48, California had become part of the United States and there was an influx of people, initiated by the 1849 Gold Rush. The gold fever soon petered out but San Francisco was still a wild place with plenty of money about; despite some notorious bankruptcies, there were many opportunities. Horace Angell Jr, a nephew of Emerson's, had gone out in 1852 and as one who achieved success, his letters home can be assumed to have contained encouraging comments. Later, four more nephews were to migrate to California.

The opening of the Trans-Panama Railroad in January 1855 greatly eased the journey between East and West coasts. It was probably used by Angell as he was to return to Providence later in the year for a very important appointment — his marriage to Minerva Rogerson Greene on the 15 October 1855. His bride was the eldest daughter of Rufus Greene Jr, one of the city's prominent business men with interests in shipping and in Zanzibar in East Africa. (The Greene pedigree is comparable to Angell's; Minerva's great-great-great-great grandfather had been a surgeon in

3 *Ibid.*, p. 161.

4 Advertisement, *Woonsocket Patriot*, 7 May 1847.

5 *Directory of Providence* (1847-48).

6 Personal letter: R.W.Emerson to E.C.Angell, 27 November 1849.

7 *Directory of New York City* (1853-54; 1854-55).

Salisbury before emigrating and was with Roger Williams in founding the Providence Plantation). The wedding took place in the beautiful Congregational Church (now Unitarian) on Benefit Street, the work of one of the city's most illustrious architects, John Holden Greene, a distant relative of the bride's. Angell needed to assure not only his bride-to-be and her family that a safe and prosperous future lay ahead for them in San Francisco, but also his father because Maria Louisa, his youngest sister, wished to accompany them. At first Job was against this but later gave her both his permission and a token silver dollar which Maria wore from a chain around her neck; today it is in the possession of one of her granddaughters.

Back in San Francisco, Angell twice moved his surgery before locating in 1858 at the corner of Clay and Kearney Streets opposite the Plaza.[8] He and his family lived there until 1860 when he purchased 656 Folsom Street for his private residence.[9] With Rufus, their first child, born on 14 December 1859 and their combined wealth recorded at $7,000,[10] Emerson now appeared as an accomplished dentist fully settled in that City on the Bay. Fate however, decreed otherwise; he was about to keep a date with history that the orthodontic world would ever remember and suffer an illness that would change his life irrevocably.

The fortuitous breakthrough

The first issue of the *San Francisco Medical Press* appeared in January 1860 and contained an article by Angell on the deciduous teeth.[11] This was followed in the second and third numbers (April and July) with a split publication entitled 'The Permanent or Adult Teeth'.[12] The first part covered the eruption of the permanent dentition and the significance of the first molars in the development of the occlusion:

> ... Nature in her munificent wisdom, provided a sure and unerring guide to the correct occlusion of jaws, despite the loss of the deciduous set ...

The second described an orthodontic case history involving the expansion of the upper dental arch with a double action jack screw. By this process, Angell claimed to have separated the maxillary bones along their common median palatine suture. This mode of expansion had never been described before. No doubt Angell felt it merited a wider dissemination, especially among dentists, for he sent proof copies to the prestigious *Dental Cosmos*, published in Philadelphia.

Any expectations of credit he might have harboured were soon dashed as the

8 Advertisement, *California Mail*, 21 July 1855.

9 *Directory of San Francisco* (1860-61).

10 United States Federal Census, 1860 (State of California, City of San Francisco).

11 E.C.Angell, *San Francisco Medical Press* (hereafter *S.F.M.P.*), 1(1860), 22-25.

12 E.C.Angell, 'The permanent or adult teeth', *ibid.*, 1(1860), 83-93 and 145-50.

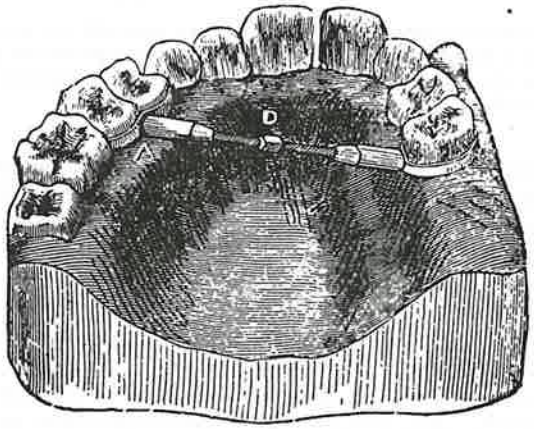

Fig. 3a: Illustration from *San Francisco Medical Press,* showing diastema

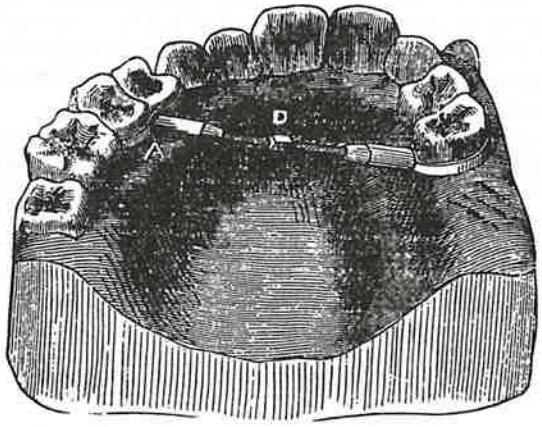

Fig. 3b: Illustration from *Dental Cosmos,* without diastema

editor (in this case probably John DeHaven White (1815-1895), who wrote the editorials for these numbers) did not share his interpretation, publishing the article in May and June issues accompanied by a strong disclaimer:[13]

> ... with no disposition to assert that such a thing is *utterly impossible*, yet, when taking into consideration the anatomical relations existing between the right and left superior maxilla and the other bones of the face with which they articulate, such a result appears *exceedingly doubtful*.

Angell could hardly remain indifferent to this denigration of his credibility and retaliated with a further article in the July number of the *San Francisco Medical Press*, in which he endeavoured to vindicate himself, pointing out the *Cosmos*'s failure to depict the superior median diastema in the illustration (Fig. 3) and giving more facts from the case history.[14] Originally, only the time involved in active expansion had been given — two weeks; now a 0.25 in. increase in arch width was revealed, together with the rate of expansion and such details as the transient loosening of the central incisors and the spontaneous closure of the median diastema. Furthermore, he correctly perceived that the split bony palate would re-form by calcification. It would have been utterly impossible for Angell to concoct these facts; they could only have been the fruit of clinical observation and examination of expansion with separation of the maxillary bones.

One might have thought this evidence would clinch matters but this important article was not reproduced in the *Dental Cosmos* and very few have read it. The editorial board were still unconvinced and one of their members, John H. McQuillen (1826-1879), president of the Dental Association in 1864-65, entered the debate with an article review in the October edition.[15] After apologising for the error in the illustration — blaming the poor quality of the proof copies — he tried to sway the reader to his way of thinking by force of argument, making comparisons with other anatomical and physiological situations and maintaining that if the maxillae were separated, they would become loose.

With hindsight, the balance of probability is very much in favour of Angell's having separated the maxillae by dental expansion (although only radiographs, thirty-five years in the future, would have removed all doubt). His articles are definite statements and he is meticulous and clear in his descriptions. One might ask whether Angell made a conscious and deliberate attempt to expand the dental arch by separating the maxillary bones; probably not, as the instructions given to the patient were:

13 E.C.Angell, 'Treatment of irregularity of the permanent or adult teeth', *Dent. Cosm.*, 1(1860), 540-44 and 599-600.

14 E.C.Angell, *S.F.M.P.*, 1(1860), 181-85.

15 J.H.McQuillen, 'Review of dental literature and art: separation of the superior maxilla in the correction of irregularity of the teeth', *Dent. Cosm.*, 2(1860), 170-73.

> ... keep the appliance tight by turning the screw.

This is not a detraction; the essential thing is that he recorded precisely and interpreted correctly what he had seen happen. (It should be remembered that chance has been responsible for many of the greatest scientific discoveries ever made). Clinical experience suggests that Angell may have been lucky with the undercuts of the crowns, as it is difficult to avoid dislodgement of an uncemented or uncribbed appliance.

Angell's paper also contains the first mention of three other discoveries and techniques which are now generally recognised and employed:

(i) the relevance of the first permanent molars in the development of the occlusion[16]

(ii) the use of a double action jack-screw with right and left threads

(iii) the fitting of a retention plate after active orthodontic treatment

The criticism meted out in 1860 may have acted as a clinical moratorium, for another thirty-three years were to elapse before the technique appeared again in the literature.

Medicine and hygiene

Nothing more was heard of the technique from Angell himself and the reason may be found in one of his own publications of 1875:[17]

> ... close attention to the health of others and little to my own ... had crippled me in health and rendered me little better than a confirmed invalid ... my medical colleagues ... exhausted all the resources of the pharmacopoeia when they strongly commended me to the alluring attraction of hygiene.
> ... my condition was deemed so critical that I disposed of my practice and residence at a sacrifice.

No mention is made of a diagnosis of Emerson's illness, signs or symptoms but his brother Avery maintained that the climate did not suit him.[18] 'Hygiene' therapy was not available in San Francisco and so Emerson Angell and family[19] set out on 11

16 Edward H. Angle was to refer to this factor in his classification of malocclusions.

17 E.C.Angell, *Hot air bathing, its philosophy and advantages in health* (New York: the author, 1875). New York Academy of Medicine Library, 4484.

18 The present writer wonders whether the fogs which periodically sweep in from the Pacific had anything to do with it.

19 His second child, Annie Alice, would have been only two months old.

December 1862 for New York,[20] where their arrival coincided with the opening of the first Turkish bath by Dr Shepard on Brooklyn Heights. The results of the treatment Angell received there were so beneficial that he resolved to devote the remainder of his professional life to this therapy. If the decision was taken at that time, it was not immediately put into effect, for there is a letter dated 23 July 1863 from Rufus Greene to Minerva (then living in Essex, Connecticut) containing the sentence:

> I learn the Doc has gone to NY on his way West.

If 'the Doc' refers to his son-in-law, then perhaps Angell considered returning to the West. Moreover, in 1864 he entered Bellevue Hospital Medical College (where two of his nephews had previously graduated), qualifying MD in 1866, and while a medical student, continued practising dentistry (presumably part-time) from 1128 Broadway.[21] Angell's inaugural thesis, understandably entitled 'Hygiene', asserts that the way to health is a clean environment and a wholesome diet with an abstinence from alcohol and tobacco. If he steadfastly held to these laudable directives, it is a vivid pointer to his character.

Immediately following his medical qualification, Angell opened his own Turkish bath at 16 Lexington Avenue on the corner of 25th Street, New York City, an enterprise he was to pursue until retirement. He strove to advance his baths by study and application; in 1871 he made an extensive European tour, visiting baths in England, Ireland, France, Germany, Hungary, Italy and Turkey and holding discussions with leaders in the field. On his return, changes were made and various adjuncts introduced to improve the therapy. Nine articles were published by Angell in the *Sanitarian* between 1878 and 1902, mostly on the virtues of bathing and massage, sometimes larded with successful case histories and quoting physicians who sent him patients. Only once did he patient name drop, and that was in connection with Mark Twain who attended for a cold — although Angell maintained it was acute bronchitis which he cured after a few courses. It must also be said that his papers displayed a wide reading not only of the medical literature but literature in general.

Today it is easy to discount any medical value of his bathing therapy but it is only relatively recently that powerful drugs have been available for the treatment of specific diseases; in the past, curing sickness depended to a large extent on physician and nurse rallying the patient's own defence mechanisms, or, as Angell himself once succinctly put it: 'the elimination of a resting place for disease'.[22] It could be said that he was an early practitioner in preventive medicine.

By the early 1880s, Angell was at the peak of his medical career. His financial success may be measured by his purchase in 1883 of a most attractive colonial style

20 G.S.Greene, *The Greenes of Rhode Island* (New York: L.B.Clarke, 1903), p. 671.

21 *Directory of New York City* (1864-65; 1865-66).

22 E.C.Angell, *Sanitarian*, 6(1878), 529-38.

property, 88 Paulding Avenue, Tarrytown, NY, facing the Hudson River. This delightful area, some miles north of New York City, had been made famous by Washington Irving in his *Sleepy Hollow Legend* and other stories. By now such wealthy industrialists as Jay Gould and William Rockefeller had established homes nearby. This happy phase did not last long, for on 31 March 1889 he lost his wife Minerva. This must have hurt him deeply as he put the house on the market. It can only assumed that the asking price of $35,000 ('or an acceptable offer') was not reached because Angell continued to live there with his son and daughter for several years more. It was eventually sold in 1911.

Some time before the end of the nineteenth century, Angell retired from his practice at the baths on Lexington Avenue and early this century moved back to New York City taking up residence at 42 New York Avenue, Brooklyn. The circumstances of his death, officially recorded as from apoplexy, at a polling station on 3 November 1903 make interesting reading:[23]

> Dr Angell had become extremely feeble since the day he registered and his physician declared that it would be suicidal for him to attempt to leave his house to vote. Despite appeals and orders, the aged man ... who had been a life long supporter of the principles of the Republican Party, ordered a carriage and was driven to the polling place. The ballot had been handed to him and he had taken three or four steps toward the booth when he threw up his hands and dropped to the floor. A doctor said death had been instantaneous.

Four days later, his mortal remains were reunited with those of his wife and baby daughter (Edith Constance, aged five years) in that beautiful cemetery, Sleepy Hollow at Tarrytown, occupying a prime position in the summit plot.

There is a paucity of information on Emerson Angell the man; the only obituary so far discovered appeared in the *Tarrytown Argus* and is as bland as it is short. However, anyone who has followed his movements and examined his publications should have no difficulty in drawing the necessary impressions for a vignette of his character. He was an opportunist and achiever, ready to seek advantages in new pastures and would probably have been equally adept in other walks of life. He thoroughly studied his chosen profession and was prepared to deliver the ever changing patterns of treatment that the development of medical and dental science demanded. He was technologically imaginative to design an entirely new expansion appliance and clinically perceptive to appreciate the anatomical and physiological concepts involved in the new technique of rapid maxillary expansion. Angell held to his conclusions even when the leaders of the profession asserted otherwise. Weinberger, in his wide ranging history of orthodontics, placed his work as an opening of an epoch.[24]

23 *New York Times*, 4 November 1903.

24 B.W.Weinberger, *Orthodontics: an historical review ...*, 2 vols (St Louis: C.V.Mosby, 1926), vol. 1, p. 424.

Attempting to get closer to the man, we are on even more difficult ground. In his publications he eschews alcohol and tobacco, which suggests that he was a teetotaller and non-smoker. The scenario of his death and some other occasions in his life demonstrate a strong will to the point of stubbornness and dogmatism; one may wonder whether this extended to Angell the family man and what his relationship with his children was like. His daughter, at 32, married the son of a friend of his. The union ended in separation ten years later, but she did present Angell with his only grandchild (Greta, born 24 August 1894). Angell's son-in-law (Percy Wallian) may have been a difficult man with whom to live, for at the age of ten he had killed his own mother in a shooting accident which left him mentally scarred. The status of Angell's son is enigmatic. One might have expected Angell, in his financial position, to have seen Rufus through college into a profession. However, he is on one occasion described as an electrician and on another as an assistant accountant (a euphemism for an office clerk).[25] He married late in life, at the age of 41, the widow who kept the house where he lodged. She was to die within two years and Rufus remarried in 1908. In the absence of more positive information, we must draw a veil over the influence of the personality of Emerson Angell.

Chance may have been responsible for indelibly marking the place of Angell in dental history, while those who gainsaid him are largely forgotten. He would have been 70 years old when the conclusion of Professor Clark Goddard (1849-1905) that expansion can be achieved by separation of the maxillary bones was roundly accepted.[26] This time the technique had been conceived on the campus of a university, while Angell's thesis was the product of the market place. If word did reach him, did he say, 'I told them so, but they never believed me'?

25 *N.Y. & Hudson River Railroad Directory* (1892); United States Federal Census, 1900 (State of New York, Brooklyn, Queens County).

26 C.L.Goddard, *Dent.Cosm.*, 33(1893), 880-84.

MARIE DELPEUCH, WOMAN DENTIST

Xavier Deltombe *

Marie Delpeuch was born in 1787 at Montpassier, in the French department of Dordogne. Her father and grandfather were both dentists. 'I am neither an adventuress nor a newcomer,' she said. 'My father and grandfather were successful dentists, I was trained by them, have learned from them and have been a practising dentist from the age of twelve.' Her husband was also a dentist and after his death Marie continued his practice by taking out a *patente*, so that from 1816 she was practising dentistry by the 'authorisation of the prefects of Lot and Corrèze'. Marie finally settled in rue Haute Vienne, in Limoges with 'the agreement of the Commissioner of Police'; it was only thirteen months later that she encountered problems.

Her situation brought to a head the relationship between dentists with only a licence to practise (the *dentistes patentés*) and those with a medical diploma (the *dentistes diplômés*). The Revolution had made the healing professions completely open, as a result of which medical practice had fallen into complete anarchy. Fourcroy, commenting on this state of affairs, wrote on 20 Fructidor of Year X, 'Many prefects have sought to banish this anarchy, for empiricism and charlatanism are universal'. With the support of the mayors, these prefects issued official permits to practise to practitioners of recognised competence who were not in possession of a diploma; one such recipient was Marie Delpeuch. It must be remembered that only the 'expert dentists' of the Old Regime in France underwent examination by the local guilds of surgeons, in charge of the training and regulation of their profession. It was in order to clarify the post-revolutionary situation that Article 26 of the Law of 19 Ventôse of Year XI ordered a census to be taken of all the health professions. It was this same desire to reform the existing state of affairs that led to the establishment in 1791 and 1792, without parliamentary prompting, of schools of health in the departments. These schools gave a basic training to 'health officers' (the *officiers de santé*), semi-educated in both medicine and surgery according to some but nevertheless possessing 'sufficient knowledge to combat the ravages of charlatanism'. One may well wonder what the difference was between a recognised licensed practitioner without a diploma (such as Marie Delpeuch) and a graduate of a departmental school of health, who might have the legality of his diploma but only questionable competence; a good deal of jealousy, no doubt.

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On 23 March 1821 the Count of Casteja, Prefect of Haute-Vienne, instructed the medical commission [*jury médical*] to check Marie Delpeuch's diplomas, as he was obliged to do since she had been reported as practising illegally. Whilst it is a fact that the Law of 19 Ventôse of Year XI prohibited 'the practice of medicine and surgery by those without a diploma or a certificate of admission [*lettre de réception*]', no mention whatsoever is made of the practice of dentistry, which, by design or otherwise, had been excluded from the legislation. The medical commission summoned Marie Delpeuch, who demonstrated her competence to practise but could provide no diplomas. The commission's reply to the Prefect dated 28 March speaks for itself: Marie Delpeuch, widow of Audemard, had no diploma but 'her sex alone makes it impossible for the commission to give her official recognition'. The commission applied to the letter Article 23 of the Law of 19 Ventôse of Year XI as expounded in the circular of 13 Fructidor:

> In order to prevent abuse, authorisation of practice by women, empirics, those engaged in another profession or in side-shows, by those guilty of unprofessional conduct or those wanted by the law, is expressly and absolutely prohibited.

Its report to the Prefect continued: 'The commission leaves to your discretion the decision as to what measures you consider the most appropriate in the case of this woman'.

The Prefect issued a decree dated 4 April: 'The woman Delpeuch is forbidden to practise any branch of the healing professions on pain of prosecution'. By this statement the Prefect was including dentistry as part of medicine, which the law most certainly did not.

Marie Delpeuch reacted swiftly with a long letter to the Prefect explaining her professional training and reminding him of the authorisation she had received from the offices of both the prefect and the municipality. She recounted in some detail the nature of her practice:

> I am increasingly devoted to extending my formal knowledge of my profession, which consists solely of treatment of the teeth and of the provision of artificial ones with such skill that it is impossible to distinguish them from natural teeth. My sex is in itself a recommendation to ladies and young girls who would be fearful of entrusting the care of their teeth to a man. It has never occurred to anyone in any of the places in which I have lived that the law prevents me from practising my profession ... The Prefect of Lot issued me with authorisation to practise in his department on 26 June 1816. I have practised in the department of Corrèze with the permission of the local authorities ... I was in Tulle when Monsieur Labussière, professor of philosophy at Limoges, encouraged me to set up practice in his city; I acceded to his invitation and I have had no reason to regret my decision. I have lived here peaceably for thirteen months, encouraged by my success; I have won the confidence of several distinguished persons and of several establishments for young ladies. I have taken out a licence as a tax collector and have received authorisation to practise from the Commissioner of Police. I believe I have been of service to the community and have not sought to do harm to anyone.

Marie Delpeuch used the terms of the law to refute the complaint which had been made against her:

> If I were in contravention of the law, I feel it would be only benevolent tolerance which could permit me to practise my profession. It would be very surprising if it were only in Limoges that the law was invoked against me; this is nothing but a misapprehension and a misapplication of the law. Moreover, I will prove it to you. If the law applies only to doctors, surgeons or health officers, then it is a simple matter to show, from the law itself, that a mistake has been made ... To practise surgery one must be examined in anatomy and physiology, pathology and nosology, on materia medica, chemistry, pharmacy, hygiene and medical law, on internal and external medicines. None of this knowledge is necessary for a dentist; he needs to have a specialist knowledge of the laws of prosthetics and to know how to work metals to make artificial teeth.

She rounds off her argument by reference to midwifery, pointing out that one article of the Law of Year XI states that this is an important part of surgery,

> yet separate from it, for it is possible to be a good accoucheur without being a surgeon, and dentistry is even more separate from surgery. The law should leave the practice of dentistry completely unregulated. Before the revolution, and in accordance with the letters patent of 1768, it was not necessary to be a surgeon to practise dentistry, which had its own training.

Finally, Marie Delpeuch tackles the argument put forward by the medical commission that she is prevented from practising because she is a woman: 'They wish to prevent me from practising my profession because I am a woman, but they will find no such prohibition anywhere in the law'. She states that 'she sells no kind of medicine and in no way contravenes the laws governing pharmacy'. She concludes in the hope that this letter to the Prefect 'will lift the ban which you have been urged to impose on me and that should the recommendation be repeated with the intention of harming me, you will be willing to make use of the arguments contained in this letter'.

The Prefect's decree of 4 April was not enforced, which provoked the righteous indignation of the local medical fraternity, as is witnessed by an extract from the letter dated 15 September 1822 addressed to the Prefect by Monsieur Daudy the younger:

> Despite the decree which upheld the law and protected the rights of the individual, Madame Delpeuch, who calls herself a dentist whilst unable to justify her claim by any certificate or diploma vouching for her competence or her right to use the title, practises dentistry in circumstances which do harm to the reputation and honour of my father, to the explicit edict of the law, and, I venture to add, to the interests of humanity itself. On the strongest of grounds, I venture to entreat you, Monsieur Le Comte, to take effective measures to ensure that your decree is fully and entirely enforced.

Monsieur Daudy (fils) was a very young diploma holder who had obtained his permit to practise as a dentist on 6 August 1821.

In a letter dated 18 October 1822, the medical commission insisted on the new Prefect, de Wismes, enforcing the law. They drew up an alarming catalogue of disasters to force the Prefect's hand:

Although the Law of 19 Ventôse of Year XI speaks only of doctors, surgeons, health officers and midwives, and makes no mention as such of dentists, it is not considered that the practice of the same can be open to all-comers bearing in mind the potential complications consequent on the extraction of teeth:

1. Dislocation of the jaw during the extraction of a tooth.

2. Undesirable and alarming haemorrhage when, the gum adhering firmly to the tooth, laceration occurs.

3. Severing of the sublingual artery when a stump is being removed with an elevator, occasioning serious haemorrhage.

4. Haemorrhage during the extraction of a tooth can cause death within two hours in a patient of a scorbutic disposition.

5. Extraction of the third lower molar can cause damage and accidents which are life-threatening to the patient.

6. The choice of inappropriate instruments and their incorrect use can give rise to accidents the consequences of which the untutored are incapable of preventing.

For these reasons they [the ignorant] are seen breaking teeth, fracturing the mandible and dislodging adjacent teeth. Fracture of the maxillary sinus may occur, bringing away with it part of the dental arch; from this usually result haemorrhage, swelling and intercommunication between the mouth and that cavity which is an extension of the nostrils.

A week later, on 26 October, the Prefect reacted by writing to the Mayor of Limoges:

I have issued a decree forbidding the woman Delpeuch, self-styled dentist, from practising any branch of medicine; I have been informed that she continues to practise and that she has even hung out a sign. May I ask you, Monsieur le Maire, to have this woman summonsed so that there may be a renewal of my prohibition on her practising a profession which requires specialist learning and which can only be practised by those in possession of a diploma issued by a medical commission.

Marie Delpeuch was not one to be overawed; she smoked a pipe and wore trousers in order 'to be respected by the stronger sex' — the Georges Sand of dentistry. Therefore, she wrote to the prefect on 8 June 1824 a letter designed to stave off new attacks:

Monsieur le Baron de Wismes
Prefect of Haute-Vienne

Monsieur le Préfet,

The writer of this letter has the honour to inform you that for the last five years she has been practising as a dentist in Limoges, restricting herself to the extraction of teeth, the provision of artificial replacements and all the operations performed in the mouth; that her conduct and behaviour in the capital city of your department as well as

in the neighbouring districts of Corrèze, Lot and Lot and Garonne, always above reproach, have won her the respect and confidence of the public, and that this widespread regard indicating to her that her work and talent are of no little service to society, she is desirous, Monsieur le Préfet, of obtaining your permission to hang out her sign, having particularly in mind the aid this would render to strangers, country folk and the poor whom she always treats and serves gratis; that, as she has for several years paid personal and property tax in Limoges in order to practise her profession, as well as licence fees [*patentes*] (receipts enclosed), she would appear to be entitled to request, Monsieur le Préfet, the right of hanging out a sign; this would nevertheless be to her a signal favour, for which the suppliant, Monsieur le Préfet, would never cease to offer up to heaven the most fervent prayers for a long life for yourself and your benevolent administration.

Your most humble and obedient servant,
Widow Adhemar (née Delpeuch).

Our heroine kept strictly within the law. She addressed only the relevant questions: her competence, her conduct and her social role. Her *patente* — that is, the local tax on her business — and her legal right to practise were both perfectly in order. This was a trumped up charge, and she knew it.

The medical commission was obdurate and reminded Wismes on 9 July 1824:

In March 1821 the members of the Medical Commission of the Department of Haute-Vienne, having ascertained that the woman Delpeuch, self-styled dentist, had obtained no certificate entitling her to practise that branch of medicine, reported this contravention of the law to Monsieur le Comte de Casteja (then Prefect of this Department), who, in a decree of 4 April 1821, forbade the same woman Delpeuch to practise any branch of medicine, under pain of prosecution. There was every reason to believe that this decision would be respected, however in sheer defiance the woman Delpeuch continued to practise the same profession in the said town; in actual fact the police made her take down her sign, but she distributed printed cards on which she described herself as holding a certificate from His Majesty to practise dentistry; a similar act on her part can be tolerated no longer. In the public interest, the Law of 19 Ventôse of Year 11 must be enforced, since it would be too dangerous for medicine to be practised by persons whose competence is not legally assured.

We hereby inform you, Monsieur le Préfet, of the contravention of the decree of 4 April 1821 by the woman Delpeuch so that there may be taken against her the necessary measures to put the decree into effect. The proof of the offence which we report to you is public knowledge, and is derived from advertising cards which she distributed to the public and the treatment which she regularly performed and which can easily be verified.

On 11 December 1824, Joubert, president of the medical commission, wrote a further strong letter:

Monsieur le Préfet,

On 24 July last, I had the honour to present to your predecessor, Baron de Wismes, in the name of the commission, a complaint designed to forbid to Madame Delpeuch, self-styled dentist, the right she has taken upon herself to practise this profession. The decree of Monsieur le Comte de Casteja, dated 4 April 1821, was not enforced and the above-mentioned Madame Delpeuch continued to practise regardless the said profession for which she is not trained.

It is in the interests of the public that we have the honour to remind you of our request, entreating you to issue whatever orders you consider appropriate in this regard
We remain, Sir, etc

So, Marie Delpeuch set about defending her legitimacy in the face of the jealousy of the local dental community before a third prefect. She was fully aware of the ambiguity of the legislation concerning dental practice at the beginning of the nineteenth century:

Monsieur le Préfet,

The woman Delpeuch (widow of Sieur Audemard) has the honour to inform you of the following:

For many years now the suppliant has been in successful practice as a dentist; she has received all the education necessary for the practice of this specific profession and is in this regard ready to submit herself to any examination which might establish her degree of knowledge and skill.

Over the years she has been able to devote her attention to the relief of suffering humanity unimpeded; she was issued with a licence to practise dentistry (on which she has not yet been allowed tax relief) and her absence of formal qualifications is compensated for by her long years of practice and the numerous services which she performed.

The interests of individuals, ever jealous and watchful, made her enemies who denounced her to you. You were outraged and called down on her the rigour of the law, which you would not perhaps have done had you known that the man who denounced her was not acting in the interests of the public but in the interests of himself.

She is well aware that you have no other intention than to uphold and enforce the law ... If it is true that long practice of her profession cannot be considered the equivalent of a diploma or certificate, then she will make her practice legal by obtaining what she lacks, under the provision of the Letters Patent of 1768, not repealed in this respect by the Law of 19 Ventôse of Year X1. Those who wish to practise as dentists need only a certificate of competence as such, and under current legislation, it is the medical commission who have the right to issue such a certificate.

Consequently, Monsieur le Préfet, she entreats you to instruct the medical commission of the department to convene at a day and hour to suit yourself to examine the suppliant on that part of medicine which she claims to practise in order to investigate and establish her competence if necessary.

This was a clever move, bringing out into the open all aspects of the practice of dentistry and demonstrating the legislative vagueness which surrounded it.

Marie Delpeuch was brought before the magistrates court in Limoges under Article 35 of the Law of 19 Ventôse of Year X1. By a verdict of 16 August 1826 the court declared itself unable to deal with the case. This verdict was quashed, for an appeal was lodged by the Procurator General. A new decision from the Supreme Court of Appeal [*Cour de Cassation*] found in Marie Delpeuch's favour, admitting the gap in the legislation and the absence of legal regulation of the practice of dentistry. The Court recognised that the practice of dentistry was not dependent on the possession of any diploma, since dentists were not mentioned in the Law of 19 Ventôse of Year X1. The Court, like Marie Delpeuch in her letters, made no reference to the ancient right of widows to continue the practice of a deceased spouse. It took no account of the Letters Patent of 1755 which prohibited women from the practice of

any form of surgery except midwifery. What it did assert was that dentistry was open to all, that *dentistes patentés* might practise on the same terms as *dentistes diplômés* and that women might practise as dentists.

Thus Marie Delpeuch, after six years of legal proceedings, was able to continue to practise in peace.

The last that is heard of her is in the register of births, marriages and deaths for Limoges:

Today, 18 July 1834, there appeared before the Registrar Messrs Victor Baudet, aged 33, of rue du Clocher, and André Daplier Pesson Labry, secretary in the Mayor's office, aged 37, of the suburb of Boucherie, who declared that Marie Delpeuch, dentist, aged 47, born in Monpazier, in the district of Bergerac (Dordogne), a resident of this town, of rue du Mûrier, widow of Audemar, ... died last night at one o'clock.

SOURCES

Archives départementales de la Haute-Vienne, 5M6.

François Vidal (ed.), *Histoire d'un diplôme* (Paris: *Le Chirurgien Dentiste de France*, 1992).

Registre d'état civil de Limoges, 1834.

Matthew Ramsey, *Professional and popular medicine in France, 1770-1830* (Cambridge: CUP, 1988), p. 405.

THE APPOINTMENT OF THOMAS TALMAGE READ AS BRITAIN'S SECOND PROFESSOR OF DENTISTRY

Alan Stanley *

The man appointed to the Leeds Chair of Clinical Dental Surgery, only the second such chair in Great Britain, needed to possess exceptional academic and personal credentials, both in his own right and to match the qualities Leeds was seeking. Competition for the Chair was keen: it was eleven years since the only other chair in dentistry had been filled, by internal appointment, at Liverpool.[1] Twenty applications were received and four candidates selected for interview. Two were already on the Leeds staff (Holland Child and Mawer),[2] a third was Thomas Talmage Read — and feelings were running high in the School.[3]

Talmage Read was born in Glasgow on 22 November 1893.[4] His father was a Company Director and his mother a Highlander from the Macmillan clan. There were nine children in the family, the majority of whom followed professional careers. Talmage's sister Florence became a consultant in obstetrics and gynaecology in London and three of his brothers, David, William and Charles (who like Talmage was also medically qualified) became dentists. Talmage was educated at Shawlands Academy and Glasgow High School. He received his medical and dental education at Glasgow University and Royal Infirmary and at the Middlesex Hospital, with a period in Dublin studying gynaecology. He proved to be an outstanding medical student and was awarded prizes in obstetrics and gynaecology, medicine, surgery, pharmacology, pathology and bacteriology. During his dental studies he was a prize winner in dental anatomy, bacteriology and pathology, dental surgery and pathology, mechanics, prosthetics, metallurgy and dental bacteriology. Read qualified Licentiate of the Royal College of Surgeons and Physicians of Glasgow, Licentiate in Dental

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1 G.E.M.Hallett, 'Remembering "Gillie"', *University of Liverpool Recorder*, no.101, February 1986, 18-23.

2 Committee on the Chair of Clinical Dental Surgery, Leeds University Committee Book 17, p. 391 (University of Leeds Archives).

3 Personal recollection of Talmage Read's widow, in conversation with the author.

4 Obituary, *Brit.dent.J.*, 136(1974), 172.

Surgery of the University of Glasgow and was elected a Fellow of the Faculty of Physicians and Surgeons of Glasgow. After qualification he broadened his medical knowledge with appointments at the Glasgow Royal Infirmary, the Eye Hospital and the Royal Samaritan Hospital.[5]

Read's dental career included a period of private practice with his three brothers in Glasgow. He was appointed Visiting Dental Surgeon and Assistant Lecturer in Pathology and Bacteriology at Glasgow Dental Hospital. His interest in the relationship of medicine to dentistry is seen in three of his publications: 'The relation between ocular and oral affections' (1921),[6] 'The bacteriological investigation of infective lesions of the mouth' (1930)[7] and 'The role of dentistry in preventive medicine' (1931). Talmage Read was also active in dental politics. He was Secretary of the Glasgow Odontological Society, Secretary of the West of Scotland Branch of the British Dental Association and a member of the Association's national Representative Board.

Clearly, by the age of thirty-eight Read had achieved considerable academic success and recognition from his fellow practitioners in Scotland. The personal qualities which supported his academic achievements were no less formidable. Marcus Hollings (appointed assistant to Professor Read in 1931) described him as a man with 'an arresting personality which forcibly strikes one on first acquaintanceship'. Commenting that the appointment to the Leeds chair attracted widespread interest, Hollings highlighted Read's qualities as 'outstanding professional ability, considerable personality capable of establishing cordial relations with staff and a flair for teaching and organisation'.[8] One of his Leeds students recalled that Professor Read was a working leader,[9] a characteristic also identified by his widow, who described him as a 'hard working and dedicated man'.[10] The student also draws attention to other characteristics which contributed to Read's successful application for the Chair:

> The lecture theatre allowed him to exercise the full scope of his vast clinical knowledge, scholarship, felicity of expression and appealing humour. But perhaps his lasting fame among the undergraduates was founded, ultimately, in his celebrated teaching clinics. He was a true doctor in the strictest as well as the widest, interpretation of the term.

5 Read family papers.

6 *Dent.Rec.*, 41(1921), 601-09.

7 *Dent.Rec.*, 50(1930), 89-96.

8 M.R. Hollings, transcript of 'Address to Leeds University on Professor Read's retirement' (Read family papers).

9 *Ibid.*

10 as note 3 above.

Talmage Read clearly impressed upon the minds of the members of the Committee on the Chair of Clinical Dental Surgery that he was the man of exceptional ability for whom they were searching, especially considering the importance they attached to 'the new Professor taking a constant and active share in the clinical instruction of students'.[11] He was unanimously elected to the Chair.

11 as note 2 above, p. 392.

THE REMARKABLE CAREER OF AN ACCIDENTAL HEROINE: LILIAN LINDSAY (1871-1960) †

Christine Hillam *

To mention the name of Lilian Lindsay to those who knew her is to evince, thirty-seven years after her death, affectionate sighs of, 'Ah, dear Lilian!' Pursue the conversation further and one usually hears some wry anecdote of how she gently but firmly put some non-thinking person straight. Townend, borrowing from Steele, summed up these two aspects of her personality thus: 'To have loved her was a liberal education'.[1] For here was a lady renowned for her gentleness, one whose official obituary in the *British Dental Journal* describes her as 'our beloved Lilian', who at the same time could make strong men, the leaders of their profession, quake in their shoes.[2] A remarkable woman, indeed.

Lilian was born on 24 July 1871, at Hungerford Road, London, the third of the eleven surviving children of James Robertson Murray (? -1885) and his wife Margaret Amelia (née Bennett) (1841- ?).[3] Her father being a chorister at Westminster Abbey, was educated at Westminster School. Disinclined to follow the legal career planned for him, he became a professional musician, and was for twenty-one years organist and choirmaster at both St Botolph's Aldersgate and St Paul's Camden Square, as well as playing an innovatory role in the church music life of London with the founding in 1870 of the London Church Choir Association. That Lilian's mother equally sprang from a comfortable background is suggested by the fact that she and her sister Lucy had spent a period at the Moravian school at Neuwied in Germany. This was to have later repercussions for her daughter, as will be seen. Lilian herself was educated at

† Based on the paper 'Lilian Lindsay: remarkable work, remarkable woman', delivered to the symposium 'Lilian Lindsay Centenary Celebration', Royal College of Surgeons of Edinburgh, 28 September 1995.

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1 Quoted in Obituary, *Brit.dent.J.*, 108(1960), 168.

2 *Ibid*, 167.

3 Much of the account of Lilian Lindsay's life given here is based on E.M.Cohen and R.A.Cohen, 'The autobiography of Dr Lilian Lindsay', *Brit.dent.J.*, 171(1991), 325-28.

Camden School, for even by the end of the nineteenth century, there was still no state provision for secondary education for girls in England. Founded to provide a sound basic education for the daughters of families of modest means by the redoubtable Frances Mary Buss, that devotee of women's access to higher education, Camden School had its links with Miss Buss's other creation, the North London Collegiate School.[4]

When Dickens wrote of the 1790s 'it was the best of times, it was the worst of times', he might equally have been describing educational opportunities for women in the 1890s. True, women no longer had to contend so strenuously with social, medical, economic, moral and religious objections to the very idea of formal higher education for girls.[5] They had been able to sit university local examinations since the 1860s, from 1878 they had been admitted to all degrees in London University and by 1880 a number of women's colleges had been set up. In fact, towards the end of the nineteenth century unmarried middle-class girls were being actively encouraged to train for work, provided it fell within the traditional or extended female sphere.[6] Entry to such areas as elementary schoolteaching presented no great problem and women were frequently channelled in this direction; here they were seen as performing an institutionalised version of their natural role as guardians of the moral conscience of society whilst constituting no threat to men in an expanding field. Nursing too had become a respectable area of employment (at least in its upper echelons) and one where the expertise of its practitioners, once again, did not impinge on the male sphere. Even so, those women who did or needed to work were accorded a lower social status, for the middle-class view of women as a dependent sub-species to be protected by men from the rigours of the paid job market, from which they were seen as naturally divorced by gentrification and contemporary concepts of ideal womanhood, had become widely held.[7] A working woman was a public declaration that she had no man to provide for her, or a detraction from the social reputation of the man who might have done so. For one marker of the professional middle-class gentleman was his demonstrated ability to support and protect dependent women, on the aristocratic model, and afford them leisure. Another was his willingness to be liberal and take as seriously the education of his daughters as he did that of his sons. However,

4 Frances Mary Buss (1827-94) founded the North London Collegiate School in 1850 and Camden School (from which 2 year scholarships were available for girls seeking a university education) in 1871. (*The North London Collegiate School, 1850-1950* (London: OUP, 1950)).

5 For a full discussion of the development of secondary education for women in Britain, see Joan N. Burstyn, *Victorian education and the ideal of womanhood* (London: Croom Helm, 1980).

6 Burstyn points out that in the third quarter of the 19th century there was an excess of women in the population, partly as a result of male emigration to the colonies, and that this drew more women into the labour market.

7 Women were valued for their intuition and redeeming purity; education was seen as training the reason.

when the resultant well-educated girls set their sights on independent careers and sought, like their brothers, to share in the status and economic benefits enjoyed by the professions (ironically, often areas of life in which earlier generations of women had participated, either as individuals or as contributors to family businesses), they encountered problems.

Much energy had been expended in the nineteenth century on transforming trades and crafts into restricted learned professions with their concomitant middle-class status. The impetus for the drive towards closed professions (as in the case of dentistry) had usually been an intolerable degree of overcrowding in an unregulated market, with its associated threats of reduced incomes and status for those who saw themselves as an élite within the group. In such situations, a chronological line would be drawn, after which new aspirants to a professional title must have cleared particular educational hurdles before entering on a defined training programme; this is what happened with the 1878 Dentists Act. Indeed, education itself came to be seen less as part of the development of the individual and more as a means to an end, the preparation for a profession and a vehicle for social mobility. The élites which professionalisation created, many of whom had had their ideas formed in superficially more stable social times, had no desire to see this hard-won standing dissipated by the stigma of working women. In most cases there was no regulation which explicitly excluded suitably qualified women from the professions and as we have seen, by the second half of the nineteenth century they too had access to the initial educational entry qualifications. Women were generally ineligible by social convention rather than by law; institutions free to accept who they chose, were equally free to rebuff applications from those they did not want, including women. Where justification was sought, the hoary old excuses of intellectual and physical inferiority were trotted out, closely followed by pronouncements on the moral dangers of co-education and fears for the continuation of the race. These pretexts ignored the fact that women were often operating unregistered in professional areas already.[8]

The futures of their daughters must have been very much on the minds of the Murrays as their family grew ever larger; it would have taken a father of very substantial means to have supported seven daughters for life in the event of their not making good marriages, at the same time as educating four sons. As James Murray died in 1885 when Lilian was only fourteen and her youngest brother not yet born, it was timely that in the following year, 1886, she won a Frances Mary Buss Scholarship entitling her to two years' free education at the main school, the North London Collegiate.

It was also in 1886 that a German schoolfriend of Lilian's mother's, Olga von

8 Witness the bizarre case of Aleen Cust (1868-1937), who despite having studied for 5 years at Edinburgh Veterinary College (1894-1900), being in practice and holding public veterinary appointments, was not allowed to sit the final examination of the Royal College of Veterinary Surgeons (necessary for registration) until 1922. There was no clause in the 1844 Charter to exclude women but 'usage will now [1894] exclude her'. (Connie M. Ford, *Aleen Cust, veterinary surgeon; Britain's first woman vet* (Bristol: Biopress, 1990).

Oertzen (1842-95), entered the picture.[9] One of the many unlikely and enterprising things the spirited Olga had done since her schooldays in Neuwied (they included becoming a deaconess,[10] serving as an army nurse in three wars and winning a number of medals, including the Iron Cross for bravery) was to accompany Anna von Doemming to America.[11] Here they both acquired in 1881 a DDS from Pennsylvania College of Dental Surgery.[12] Between 1869 and 1881 nineteen women graduated from American dental schools after following the full course as students.[13] They included twelve German women and a Russian, each unable to acquire a dental qualification in her own country. After practising in Cologne for a while, Olga had set up practice in London, where she renewed her acquaintance with Lucy Bennett,

9 Described by Lindsay in her autobiographical sketch as '*hoch wohl geboren* of outstanding character, impatient of all restraint, especially that of the formal life of a German aristocratic family'. Olga Aurora Auguste Agnes von Oertzen, the eighth of the eleven children of Wilhelm Detlof von Oertzen (1806-49) and his wife Eleonore (1811-89), was born in Roggow in 1842. (Personal communication, Wilhelm-Thedwig von Oertzen, Von Oertzen Family History Society, quoting an item in *Oertzen-Blatt*, no.38, 1989, 157). Details of her early life remain to be elucidated.

10 The Protestant deaconess movement was founded by Pastor Theodor Fliedner (1800-64) in 1836. Based initially at his centre in Kaiserswerth, the movement spread to a large number of places in Germany and abroad. After basic instruction, sisters (who must be over 25 and commit themselves for 5 years) opted for training in nursing or teaching. In later years (when Olga von Oertzen became a deaconess at the Salem Foundation in Stettin), the order attracted its fair share of daughters of the Prussian aristocracy. Not all who spent time at Kaiserswerth intended to become deaconesses: Florence Nightingale and Agnes Jones were merely short-term visitors in 1849 and 1860 respectively. For fuller details of the organisation and underlying ethos, see Catherine M. Prelinger, 'Die deutsche Frauendiakonie im 19. Jahrhundert: die Anziehungskraft des Familienmodells' in *Frauen in der Geschichte*, vol.6, Frauenbilder und Frauenwirklichkeiten (Düsseldorf: Schwann, 1985), pp. 268-85.

11 Anna von Doemming (subsequently a dentist in Wiesbaden) was later to be prominently involved in the movement for secondary and higher education for women in Germany. In 1898 she was instrumental in negotiating for the Girls Gymnasium in Karlsruhe to be taken over by the municipal authorities (James C. Albisetti, *Schooling German girls and women: secondary and higher education in the nineteenth century* (Princeton: Princeton University Press, 1988), p. 210).

12 Their choice of Philadelphia may have been influenced by the fact that Olga von Oertzen's sister Wanda (b. 1845) was at one stage (dates currently unknown) the matron of the Mary Drexel Home, the German Hospital in the city. It may be that von Oertzen and von Doemming initially went to Philadelphia as nurses. One of the Murray daughters was to enter the same field and become the first matron of the Robert Jones Orthopaedic Hospital.

13 'Women in dentistry — 1855-1880', *J.Amer.dent.Assoc.*, 15(1928), 1735-56. The 'Evelyn Pierrepont' of England listed in this paper was later in practice in the Manchester area. Dentist to a penitentiary and a reformatory in 1879, this seems more likely to have been a man than a woman. Evelyn Pierrepont appears in the first *Dentists Register* of 1879 as having obtained the LDSRCSI in 1878.

Lilian's aunt, at a meeting of Old Neuwiedians.[14] As the only foreign dental qualifications then recognised by the General Medical Council (GMC) for registration purposes were the DDM from Harvard and the DDS from Michigan, she could not enter her name on the *Dentists Register*.[15] Hence by advertising herself in London trade directories as a dentist, as she did, Olga was breaking the law.[16]

It was no novelty for a woman to be practising dentistry in England; women had always been involved in one capacity or another in dental practice, albeit in modest numbers. There is ample evidence from the eighteenth and nineteenth centuries of wives assisting husbands and widows carrying on the family business.[17] Women also had their own independent practices and travelled around the country selling dental products or offering dental treatment to the public and schools like any other dentist of the period.[18] In the first decade of the nineteenth century, the newly widowed Sophia Bott spent a few weeks training with her father-in-law George before carrying on her husband's business under her own name into the 1850s.[19] Hers is one of the earliest obituaries in the dental press.[20] At least up to the middle of the nineteenth century, these women seem to have been perfectly accepted by male dentists. It seems to have been largely after dentists had acquired the licence in 1859, as they felt the need to consolidate their relationship with the Royal College of Surgeons (which admitted no women), and after registration in 1879, that they sought to distance themselves from anything, such as further incursions by women, which might suggest that theirs was after all a trade and not a profession.

By virtue of having been in *bona fide* dental practice before 22 July 1878, twenty-six women (eight of them practising in conjunction with pharmacy) were admitted to the first *Dentists Register* of 1879. No further women could then be

14 In volume 4 of the Oertzen family history produced by G.C.F. Lisch in 1886 is to be found the comment 'Olga z. Zt. in Köln am Rhein weilend' [Olga is living in Cologne at the moment]. (Personal communication, Wilhelm-Thedwig v. Oertzen). This confirms Lindsay's memory of von Oertzen arriving in London in 1886 at the earliest. Lucy Bennett was to be the principal beneficiary of Olga's will in 1895.

15 The GMC was responsible for maintenance of the *Dentists Register* until the General Dental Council was instituted in 1956.

16 Her practice was at 29 Sussex Place, Onslow Gardens, South Kensington; she also had a 'weekend practice' in the High Street, Great Marlow, very close to The Cottage, Bisham, which she appears to have shared with Lucy Bennett and where she died on 21 December 1895.

17 e.g. Martha Blair of Liverpool in the 1820s and Elizabeth Manne of Hull in the early 1850s.

18 A notable example was Mrs de St Raymond. See, for example, her advertisements in the *York Courant*, 10 Feb and 10 Mar 1775, where she offers to perform transplants.

19 D.G.Hillam and Christine Hillam, 'The Bott family of dentists', *Dent.Hist.*, 11(1985), 1-10.

20 *Brit.J.Dent.Sci.*, 3(1859), 82.

added unless they had a registrable qualification. However, there was nothing to prevent an unregistered woman practising provided she did not use the titles protected by the Act. Since the prosecution rate was negligible, many practitioners ignored this last restriction. Olga von Oertzen was one of them, as we have seen. In 1892 there still were 17 women on the Register, some of them from well-known dental families; it seems very likely that there were others working as dentists in family practices without being themselves registered. The 1891 census summary tables list 345 women as involved in dentistry in England and Wales. Most were probably employed as ancillaries, mechanics or by dental suppliers, but some are likely to have been unregistered operators in general practice.

It was in this educational and professional climate that, as her two year scholarship at the North London Collegiate came to an end, Lilian Murray apparently won a further award for two years which would presumably have prepared her for entry to university or other higher education. According to Lilian, she was summoned to Miss Buss to discuss her future. The headmistress announced that Lilian was destined to be a teacher of the deaf and dumb. 'Whether the sudden attack roused my rebellious spirit or I may have had an allergy to teaching I do not know, but I refused to teach'. This enraged Miss Buss who declared, 'Then I will prevent you from doing anything else'. 'Like a flash', recounts Lilian, 'I replied, "You cannot prevent me from becoming a dentist". She prevented me from having that scholarship ... I knew nothing of dentistry, but having stated boldly that I would be a dentist, there was nothing else to be done'. It was this somewhat flamboyant gesture, reminiscent of some Angela Brazil heroine, that according to Lilian launched her into a lifetime in dentistry. She herself always found the perennial question of why she had taken up dental practice a difficult one to answer. Towards the end of her life she came to the conclusion that the possibility must have been sown in her mind by the example of Olga von Oertzen. One wonders whether there may have been more to it than this. The terms of Olga's will suggests she was very attached to the Murrays, and especially to the young Lilian,'my dear friend'.[21] Perhaps the possibility of dentistry had already been discussed between Mrs Murray and her friend or at least been considered as a contingency plan in the event of Lilian's not being awarded a second scholarship.

Whatever the chain of events, Lilian was now committed to dentistry. The regulations in force at the time called for the mechanical training to be undertaken by apprenticeship to a registered dental practitioner. Olga was not on the *Dentists Register* and could thus not take Lilian on as an apprentice for the purposes of the regulations. However, she was in the habit of sending her mechanical work to a dentist who was and it was to him that Lilian duly began a three year apprenticeship. She herself does not name him but John Boyes was of the opinion that he was Alfred

21 Probate London, 17 Feb 1896 (effects £1,060). Her principal beneficiary was her old schoolfriend, Lucy Bennett (Lilian's aunt), with whom she appears to have shared The Cottage, Bisham, and to whom she left an insurance policy of £1,000. In the event of Lucy's predeceasing her, the beneficiary would be Lilian, failing which her sisters, then her brothers. To Lilian herself, she left her two dental practices.

Smith of Holloway, LDS 1880 and in practice before 1878.[22] (His dealings with an unregistered dentist such as Olga would probably have put him beyond the pale in the eyes of the establishment). Lilian's account of her entry into dentistry is somewhat synoptic and repeatedly gives the impression that she was not really aware of what she had let herself in for: 'I then found that I must pass the preliminary examination[23] before registering as a dental student'.[24] After a few attempts, she says, she succeeded in so doing; her registration is dated 3 August 1889.[25] Presumably when she was coming towards the end of her apprenticeship, the Registrar of the GMC told her she must secure a place at a dental school and advised her to try the National Dental Hospital and College.[26] She recalls that when she arrived there, she found the Dean, Henri Weiss, waiting for her on the pavement outside and was not allowed to cross the threshold.[27] Lilian states that he was against allowing women to enrol as students and suggested she should contact William Bowman Macleod, Dean of the Edinburgh Dental School.

These last events are described very briefly by Lilian in her autobiographical sketch and should perhaps be examined more closely. No one must have been more aware than the registrar of the GMC that the two London dental schools prepared students for the Licence of the Royal College of Surgeons of England and that the College did not admit women to any of its qualifications.[28] The National had, how-

22 Personal communication, R.A.Cohen. The grounds for Boyes's opinion are unknown, but may be assumed to have been personal information from Lilian Lindsay herself.

23 A matriculation type of examination required for other forms of higher education.

24 Her autobiographical sketch describes the whole process of her entry into dentistry as though each step came as something of a surprise to her. Whether this was really so (suggesting either that this had been an ill-informed decision on her part or perhaps a course of action arranged by others in which she was not consulted) or whether she recounted the events in these terms for narrative effect, is uncertain. The regulations made it quite clear that the student should have passed the preliminary examination before embarking on the apprenticeship (e.g. *Dent. Rec.*, 8(1888), 365-99).

25 *Register of Dental Students*, University of Edinburgh Archives. The GMC's own Dental Students' Register for these dates appears not to have survived (Personal communication, June 1995, from the GMC, corroborated by enquiries made by the GDC).

26 Originally founded in 1859 by the College of Dentists as the Metropolitan School of Dental Science to be a rival establishment to the London School of Dental Surgery. Later to become the University College Hospital Dental School.

27 Henry Weiss, Dean from July 1888 (*pro tem*) to May 1892, when he resigned on grounds of ill-health, whereupon the Medical Committee took the opportunity to revise the regulations relating to the office of Dean (J.A.Donaldson, *The National Dental Hospital, 1859-1914* (London: British Dental Journal, 1992), pp. 53, 58, 59).

28 It was not to do so until 1908. This met with guarded approval. Howard Marsh, Master of Downing and Professor of Surgery at Cambridge, saw the validity of the move since 'those women

ever, since 1886 been prepared to admit to short courses women already registered as medical students.[29] This, and the fact that they declared themselves in 1893, the year after Lilian began her own studies, prepared to admit women 'under the usual conditions' would suggest the College as a whole was not against the admission of women *per se*.[30] It may well have been considered at the time that, since she would be unable to sit the licence examination of the Royal College of Surgeons of England at the end of the course, to have admitted a full-time woman student would be tantamount to deliberately training someone for unregistered practice. The imbalance between the total numbers of students at some dental schools of the time and the number of their graduates suggests that this was already a problem where men were concerned. They were enroling for individual modules of the course and going into unregistered practice when they had acquired what they wanted, or when their funds were exhausted.[31] It was extraordinary for Weiss to meet Lilian in the street, whatever his reasons, but if he really was antipathetic to woman students on principle, as she suggests, it was to his credit that he recommended her to approach MacLeod, perhaps in the knowledge that the Edinburgh Dental School would admit women.[32]

of the upper middle class — in whose way marriage does not come — have to get their own living and provide for their ripening years just as men have. There is no other way in which they can escape from poverty and its prostrating disabilities and misery' (*Lancet*, 7 Nov 1908, 1388). A correspondent to the *British Dental Journal* from Guy's Hospital saw it as a slight on Licentiates, whose opinion was never canvassed and who had no vote (*Brit.dent.J.*, 29(1908), 1160-61). The first woman admitted LDSRCS Eng was Lily Pain in 1913. By then there had been 'at least eight lady registered dental practitioners ... as members of the British Dental Association' (*Brit.dent.J.*, 34(1913), 35).

29 *J.Brit.Dent.Assoc.*, 7(1886), 759. Cited by Donaldson, p. 44.

30 The first woman, Miss Halliday, was admitted in October 1893, but for a short course. However, not until 1902 did the College advertise 'Lady students are admitted'. The first two women to enrol for a full dental course (Madeleine Louise Bostock and Dorothy Rose Humby) were admitted in May 1906. In December 1907 they had been joined by Lily Pain and two women on 6 month courses (one from Russia, the other from Holland). Bostock took the Glasgow LDS and Humby the Edinburgh LDS. One can only wonder why this course was not suggested for Lilian Murray. Pain became the first woman to obtain the LDSRCS Eng after the change in regulations (Donaldson, pp. 62, 91-93).

31 There were, of course, no grants and few could afford to finance themselves for the two years' full-time study that the dental school training demanded. Of the 25 students whose names appear on the same page as Lilian Murray's in the Edinburgh Register of Dental Students, only 8 graduated 2 years after entering the school. One student took 15 years over the process; some did not graduate at all. Those schools which did not require students to sign an undertaking to follow the complete course (compulsory at the London Dental School) or who offered a year's hospital practice (as the National certainly did around 1870) were conniving at unregistered practice and helping to create the very situation they theoretically deplored.

32 Minutes of the Administrative Committee and Senior Dental Staff, Edinburgh Dental School, 18 Jan 1887: '[the Committee] recommends the Hospital admits women if the Royal College decides to admit women to the dental examination'. I am endebted to Mr Paul Geisler for drawing my attention to this minute. There had been discussion in 1886 on what they would do if a woman applied.

The real villains in the piece were the fellows and members of the London College who on two occasions, and against the opinion of their own Council, voted against the admission of women which the law had allowed since 1876.[33]

Following Weiss's suggestion, Lilian learned from Edinburgh that 'Women are received on the same footing as men'. So, having borrowed the money for her fees, in 1892 she went to the Edinburgh Dental School. Once there, Lilian found (to her surprise, she says) that she was the only woman student. The treasurer of the school did his best to dissuade her from registering (on 1 October 1892) for the whole course but gave up in the end in the face of her determination. Medical classes were provided by the two colleges established for women, that founded by Sophia Jex-Blake and a second breakaway institution. For anatomy and physiology Lilian joined the second. When she later needed to enrol for lectures in surgery (only available at Jex-Blake's college) she was charged double fees. (Her autobiographical sketch recounts how the formidable Jex-Blake invited her to lunch). When it came to clinical classes in surgery, problems arose. The Infirmary was judged by the College of Surgeons to be allotting too few beds for the women students to achieve the required standard. The women set about raising the £500 needed for the hospital to provide the requisite number and classes recommenced. Lilian took maximum advantage of the facilities and opportunities afforded her by the possession of a 'ticket' and describes briefly but in graphic terms her experience of visiting a poverty-stricken Edinburgh family when acting as locum for a senior woman medical student on Christmas Day.

Despite these and other implied trials, Lilian called these 'some of the most joyous, and certainly the most carefree days' of her life during which she encountered no real problems with staff or students. She graduated on 3 May 1895, having won the Watson Medal for dental surgery and pathology and the medal for materia medica and therapeutics in 1894. And thus she became the first woman to obtain a Licence in Dental Surgery from a British Royal College.

On her first day at the school Robert Lindsay was deputed by the dean, William Bowman Macleod, to show Lilian around. Lindsay, who was seven years older than Lilian, had been chief mechanic in Macleod's practice; after qualifying as a dentist in 1894 he was appointed tutorial dental surgeon at Edinburgh Dental Hospital. By her own account, her meeting with Robert Lindsay was a turning point in her life. It began, she says, with the flippant answer she gave when he asked her the eternal question of why she had thought of dentistry as a career. She had replied that she had to earn her living and thought she might as well do so in dentistry as in anything else. Whereupon he replied, 'If that is your only reason, give it up at once.' She comments, 'This came like one of those shocks which have proved almost miraculous in

33 A law was introduced in 1876 'to remove Restrictions on the granting of Qualifications for Registration under the Medical Act on the grounds of Sex'.

cases of depression or allergy — or may account for those mysterious cases of conversion. From that day I began to realise that the debt I owed to my profession was of equal importance to the debts I owed as a citizen.' Despite an attachment between Lilian and Robert Lindsay, on qualification in 1895 Lilian returned to London. Her own explanation for this was the heavy family and financial responsibilities under which the pair of them both laboured.[34]

Back home in London, she set up practice with borrowed money at 69 Hornsey Rise, in Islington. That very same year, in December, Olga von Oertzen died leaving Lilian her practice; this she sold, using the proceeds to pay off some of her debts. Olga's legacy had included the 'weekend practice' at Marlow in Buckinghamshire which Lilian continued. After 10 years, she had repaid money borrowed for her fees and setting up practice and Robert Lindsay had discharged his own responsibilities. They were married in West Holloway on 26 July 1905. Lilian then joined her husband in practice at 2 Brandon Street, Edinburgh. Here they remained until Robert Lindsay took up his post in London as dental secretary of the BDA in 1920 and they moved into a flat at the new BDA headquarters at 23 Russell Square.

The death of her husband in 1930 after ten years back in London was a deep blow to Lilian Lindsay. Thereafter she threw herself even deeper into work and into historical writing. A new and productive phase of her life began. In 1920 at Robert's instigation, Lilian had been charged with setting up a library for the BDA; she remained honorary librarian until 1946. She had set about her task with great vigour and effectiveness, despite perennial problems of underfunding, building up a specialist library and not omitting the purchase of rare items. (These were years when she spent much of her time at the British Museum, as is attested by her library slips).[35] In 1921 the library consisted of 360 books; by 1951 there were 10,000.[36] In the 1930s she now instituted the 'packages' system, on the American model,[37] whereby members could borrow a collection of papers on a single subject. By 1936 there were nearly 50 of these. In her eagerness to promote the use of the library by out-of-London practitioners, she recommended the formation of study circles meeting to discuss the contents of the famous 'packages'[38] but sternly informed the West Lancashire and West Cheshire Branch of the BDA that 'those who confine their attention

34 Lilian Murray had borrowed heavily to finance her Edinburgh studies and to set up practice, and presumably also had to help support her many younger brothers and sisters (her youngest brother would have been 20 when she married). Robert Lindsay had the responsibility of supporting the children of his brother James (also a dentist) who died prematurely.

35 Personal communication, R.A.Cohen.

36 *Brit.dent.J.*, 91(1951), 79.

37 Personal communication, E.M.Cohen.

38 Lilian Lindsay, 'Study circles', *Brit.dent.J.*, 63(1937), Supp. no.6, 17-18.

solely to dental literature, can have little appreciation of it'.[39]

The year after her husband's death Lilian was persuaded to take on the post of sub-editor on the *BDJ*, an office she held for 20 years until she was 80. Various honours came her way from now on.[40] In 1933 she became the first woman branch president, in 1946, the year when she was awarded the CBE, the first woman president of the Association. She was elected FDSRCS Eng in 1947 and received an honorary FDS from Edinburgh in 1959. There were presentations, honorary degrees, honorary memberships, medals and commemorations, particularly on the occasion of her being on the Register for fifty years.

She ended her days in Orford, Suffolk, living with her sister in the simple house she and Robert had bought in 1928, presumably with retirement in mind.[41] She died on 31 January 1960, aged 88, universally mourned. The residue of her estate (approximately £9,000)[42] she bequeathed to the Benevolent Fund of the British Dental Association.

From her forties onwards Lilian Lindsay was a prolific writer and deliverer of papers to learned societies.[43] Over sixty of these appeared in print (mainly between 1925 when she was aged 54 and 1957 when she reached 86). They can be divided into three main groups: twenty-eight which are overtly historical in approach (dealing with persons, some aspect of clinical dentistry, the development of the profession in general or in a particular geographical area), 12 principally concerned with clinical dentistry (mainly orthodontics) and 20 which are more general (covering such topics as the BDA library, dental health education and oral hygiene). Only two concern women in dentistry, both very brief and written not for the profession but for publications dealing with careers for women. The earliest of her published papers appears to have been 'Superstition and the dental art', read before the Odonto-Chirurgical Society of Scotland in November 1912 whilst she was still living and practising in Edinburgh.[44] In choice of subject for this paper (the concepts of toothache and dental disease in primitive and pre-industrial societies) she was to some extent reflecting a contemporary interest in folklore and magic in medicine; she claimed to have read every volume of Frazer's *Golden Bough*, first published in 1890.

39 Lilian Lindsay, 'How to get the best out of dental literature', *Brit.dent.J.*, 60(1936), 109-14.

40 For a complete list, see H.A.Cufflin, *A bibliography of Lilian Lindsay (1871-1960)*, November 1962 (typescript, Museum of the British Dental Association).

41 Personal communication, R.A.Cohen.

42 Personal communication, E.M.Cohen.

43 as note 40 above. For a full examination of Lindsay's writings, see E.Muriel Cohen, 'The historical writings of Lilian Lindsay', *Dent.Hist.*, 15(1988), 16-31.

44 Lilian Lindsay, 'Superstition and the dental art', *Dent.Rec.*, 33(1913), 1-8; *Amer.dent.J.*, 10 (1913), 460-65, 501-04; 11(1913), 523-26.

There is then a considerable gap of twelve years in Lilian's publication history; it was 1925 which saw the beginning of a whole flood of writing which continued for most of the rest of her life. By now, the 1921 Dentists Act had come into effect. There had been minor flurries of interest in the past in the origins of dentistry, designed, at least subconsciously, to justify some new status won by its practitioners;[45] it is to some extent within this context that Lilian Lindsay's subsequent writings should be seen. When she re-entered the world of dental history writing it was with a paper entitled 'Notes on the history of dentistry in England up to the beginning of the 19th century' delivered to the 5th International Congress of the History of Medicine in Geneva in July 1925.[46] Her opening words exemplify much that is characteristic of a Lindsay paper:

> It seems to have been accepted by students of the history of dentistry in England that the modern dental surgeon is an offshoot from the stock from which the general surgeon developed, namely the Guilds of Barbers and Barber Surgeons. My reading of the early documents connected with the rise of medical and dental science and practice in England has led me to hold a different opinion. The available information seems to prove that the early surgeons and medical practitioners avoided dental operations as far as possible and resorted largely to drugs and nostrums for the treatment of dental disease; that the barbers in addition to their practice of phlebotomy doubtless did extract teeth, but that the real practitioners of such dentistry as was possible were the 'tooth drawers', to whom we can trace a constant reference in literature from the twelfth to the nineteenth century, when dentistry finally established itself legally as one of the learned professions.

Here we see a series of careful statements clearly reflecting original research, a reluctance to take the statements of others on trust, a desire to push back the chronological frontiers of specialisation and her strong faith in dentistry as a learned profession.

These characteristics are to be found permeating the whole of her written work, whether she was delighting in showing that there was nothing new under the sun as regards clinical techniques, rescuing eighteenth century practitioners from the charge of empiricism, urging members of various BDA branches to carry on the noble tradition of their forebears or bringing unexpected material to bear on modern issues to the not inconsiderable astonishment of her audience. Such an occasion was that on which she addressed the British Society for Orthodontics on Albrecht Dürer's search for ideal proportions in the context of Angle and the philosophy of aesthetics.[47] Her belief in the central role of the British Dental Association in dentistry was absolute,

45 see C.Hillam, 'Robert Wooffendale, the making of a reputation', *Bull.Hist.Dent.*, 41(1993), 7-13, for a fuller discussion of this theme.

46 Lilian Lindsay, 'Notes on the history of dentistry in England up to the beginning of the nineteenth century', V^e^ Congrès International d'Histoire de la Médecine, Genève, 20-25 juillet, 1925 (Transactions), Genève, 1926, 153-59; *Brit.dent.J.*, 46(1925), 969 (abstract); 48(1927), 268-74.

47 Lilian Lindsay,'Human proportions', *Dent:Rec.*, 58(1938),289-302; *Trans.Brit.Soc.Orthodont.*, 1938, 9-22.

although she herself had initially been admitted as a member provided she did not attend meetings.[48] She expressed this faith at times with almost religious fervour; speaking to the Students' Society of the National Dental Hospital in 1937, she concluded:[49]

> I can only speak from my own experience that the one way to give full scope to your many-sided powers in dentistry is to become members of the British Dental Association, and in so doing, serve your profession and honour it, in order that you may enjoy that peace of heart and mind which is the Kingdom of God.

Lilian's five local studies of the early days of the Association were similarly designed to encourage her listeners to take pride in the worthy tradition to which they were heirs.[50] Not that she considered all the profession as heirs to the reformers of the 1870s; she remained adamantly opposed to the admission to the BDA of those without an academic qualification, who included the so-called '1921 men'. She perhaps felt they should follow her husband's example and become qualified.

At least twenty of her published papers were printed versions of oral presentations. She was famous for these virtuoso performances, being one of those remarkable A.J.P.Taylor characters who are able to speak continuously, fluently and elegantly for an hour without notes, relying on a phenomenal memory. As a result, her papers are without references. This was perhaps in accordance with the tradition of some medical history writing of the period but has nevertheless presented problems for subsequent generations of historians who have not always found it easy to follow up her ideas. She might also, perhaps, be criticised for not placing her findings in a broader general historical context, but since few popular writers on medical history of her day did either, this would be a somewhat churlish reproach. It may be that, as with many of us, the search was more exciting than the writing up. As with all researchers, some aspects of her field interested her more than others; in her case it was the lineage of scientific and technical ideas and the identification of those men she saw as direct ancestors of the modern professional dentist, particularly those who had ventured into print. The undistinguished practitioners of the eighteenth and nineteenth century seem to have been of little interest to her, but in this she was to some extent reflecting the contemporary great men approach to history. However, she was not histrionically vituperative about the ordinary dentists, as some historians of dentistry have misleadingly been; she simply ignored them.

48 J.A.Donaldson, 'Ars scientia mores', *Brit.dent.J.*, 149(1980), 335.

49 Lilian Lindsay, 'Samuel Lee Rymer and the National Dental Hospital', *Nat.dent.Hosp.Gaz.Lond.*, 4(1937), 36-45.

50 Lilian Lindsay, 'Those London men', *Brit.dent.J.*, 54(1933), 49-54; 'Early dentistry in the Central Counties', *ibid.*, 57(1934), 6-12; 'The Eastern Counties', *ibid.*, 59(1935), 121-29; 'The earliest branch of the British Dental Association', *ibid.*, 66(1939), 121-35; 'Western Counties', *ibid.*, 101(1956), 202-06.

None of these apparent shortcomings, however, negate the originality of her contribution to an understanding of the development of dental practice, particularly in Britain. Her insistence that dentistry was not an offshoot of surgery in England but that the professional toothdrawer, with a long and honourable tradition of his own, was the ancestor of the modern practitioner, was quite new. Further research may have modified some of her findings, but her work remains an essential starting point for any researcher in the field; she was, after all, the first to write seriously and at length on the development of dentistry in Britain.

It might be thought that over sixty single author papers of some length represents an extraordinary output for any researcher who is also an honorary librarian and sub-editor of a fortnightly professional journal. Yet Lilian Lindsay also found time to produce her own *Short history of dentistry*, provide the introduction to the 1924 reprint of Charles Allen's *Curious observations on the teeth* of 1687, contribute to four other books, write two short pamphlets and, most importantly perhaps, make the first translation into English of the second edition of Pierre Fauchard's *Le chirurgien dentiste* of 1746. Her contributions to the *BDJ* in the form of letters, reviews and obituaries were frequent and she left behind her unpublished translations, mainly from German, of two books and 112 scientific papers. Obituaries refer to her, not surprisingly, as 'an indefatigable worker'.[51]

Lilian herself is said to have thought little of all these achievements and believed her work was of small consequence compared with that of other women dentists. Conversant as she was with the difficulties and the political activities of an earlier generation of women dentists in America and Germany, and with public appointments won by her successors in Britain,[52] she appears to have felt, especially later in life, that her contribution in these areas was less significant. It was, she said, pure chance that she was the first woman to receive the licence in Britain;[53] we too must be careful not to romanticise this event. There can be little doubt that dentistry was not her original goal; perhaps she had seen her future in the humanities. She speaks of the initial 'resentment' felt by many who opposed Miss Buss in her plans for their careers and who paid the price for it,[54] and the way in which she recounts her entry into dentistry gives no impression that she set out to challenge the system. (Credit for this must surely go to MacLeod, who must have been well aware of the possible professional, political and personal repercussions of his accepting her as a student at Edinburgh). Even after she qualified, Lilian Lindsay is not known to have

51 Obituary: Bryan J. Wood, *Brit.dent.J.*, 108(1960), 205. She has also been described by those who knew her as a workaholic, but it is to her credit that she diverted this compulsion into the benefit of the Association and its members.

52 She paid tribute to some of these, mentioning them by name, when being presented with a portrait of herself in 1951 (*Brit.dent.J.*, 91(1951), 79).

53 as note 49 above.

54 *The North London Collegiate School*, pp. 58-59.

been an active campaigner for the entry of women to dentistry. As with many of the first women in different professions, it was something which she had done for herself (rather than for women as a whole) and she seems to have seen herself as an honorary man in the profession.[55] According to those who knew her well, she did not have feminist sympathies and was not involved with any of the women's issues of the day, even in her younger years. It may well have been her lack of stridency in this area that took the wind out of the sails of those who opposed the admission of women to the dental profession and eased the way for those who followed her, that and the personal qualities of this 'compelling personality'. For as well as being a woman possessed of 'shrewdness and great tenacity of purpose ... concealed by a deceptively modest and gentle manner',[56] she was also seen as the epitome of 'goodness, graciousness and gentleness', one who 'always knew the answer to every problem'.[57] (This admixture is amply borne out by pictures of this diminutive, bespectacled lady, her hair in an increasingly wispy bun, and a sweet but enigmatically determined smile on her lips). For others she was one who[58]

> held strong views on many subjects but was never guilty of intolerance. It was her wide sympathy with those around her and her quiet charm which endeared her to us. ... Modest, almost to a fault, and utterly sincere, her scorn, if that is not too harsh a term to apply to so gentle a creature, was reserved for insincerity and its sister pretentiousness. Truly a great and lovable woman.

Yet despite her apparent lack of interest in feminist issues in general, she certainly served as a role-model for later women dentists, something she came to enjoy — 'I am very proud of the women who have succeeded me ... I boast about them like any mother or grandmother, or perhaps after fifty years I should say any great-grandmother ... In fact, I glow with pride and shine with a reflected light!'.[59] They held her in the greatest esteem and affection and this was sincerely reciprocated as she grew into the role of matriarch of the profession, delighting in the achievements of women dentists and giving them every support.[60]

Lilian Lindsay's greatest strength lay, perhaps, in her willingness to give herself wholeheartedly to the matter in hand, even in a situation she would not have chosen

55 Burstyn rightly warns of the 'fallacy of expecting those who aspire to enter existing social institutions to embrace avant-garde policies' (p. 153).

56 Obituary, *Times*, 2 Feb 1960.

57 Appreciation: Eleanor Knowles, *Brit.dent.J.*, 108(1960), 205.

58 *Ibid.*, Bryan J. Wood.

59 *Brit.dent.J.*, 91(1951), 79.

60 Women dentists made a number of presentations to her (for example, when she was president of the British Dental Association and on her eightieth birthday).

for herself. Her determination to see through what she had, perhaps inadvertently, got herself into took her to Edinburgh where she took maximum advantage of the opportunities offered her and acquitted herself with distinction. Thereafter, she harnessed her abilities absolutely to whatever role she was called on to play. Her presidential address in 1946 reveals one who cared sincerely for bringing relief from dental disease to those least able to afford it, which seems likely to have made her an excellent general dental practitioner.[61] Back in London in 1920, she addressed herself to a new situation, this time applying her literary inclinations to produce an astonishing output of original publications and devoting herself wholeheartedly to the creation of the library, which was seen at the time of her death as her lasting memorial and until recently bore her name. When her husband died, 'she allowed her independent spirit full rein ... her work for the Association became to her, as it had been to him, an all-absorbing passion'.[62] In its turn, the profession showered her with the kind of honours usually reserved for presidents of the General Dental Council or discoverers of the cause of some disease. Towards the end of her life, she was universally seen as the matriarch of the Association, a last link between the legendary figures of the early days and the changed world of the present.

Sadly, since her death Lilian Lindsay's central role in the institution of the Library of the British Dental Association (which probably did as much as anything to enhance the standing of what could be seen as a new profession in the 1920s) appears to have been largely forgotten. (What would one so excited by and pre-occupied with the acquisition and dissemination of information not have done with the computer technology available to her successors?). Today, although occasionally cast in the role of heroic feminist pioneer, she is remembered chiefly for her historical writing, in commemoration of which the Lindsay Society was founded in 1962.[63]

Her presence at BDA headquarters lives on, however, in the two portraits the Association commissioned of her, the first (said to be the better likeness) by Kathleen Williams (1942), the second by T.C. Dugdale (1951).[64] Fitting tributes to a remarkable career.

61 Lilian Lindsay, 'Presidential address', *Brit.dent.J.*, 81(1946), 1-4.

62 Obituary: W.G.S., *Brit.dent.J.*, 108(1960), 167.

63 Originally the Lindsay Club, on the model of such bodies as the Osler Club. In 1995 the Society instituted a Lilian Lindsay Memorial Lecture (after which the speaker is presented with a silver medal bearing a relief portrait of her) to mark the centenary of her admission to the *Dentists Register*. The first recipient was R.A.Cohen.

64 Reproduced *Brit.dent.J.*, 73(1942), opp. 250 and 91(1951), opp. 53 respectively. The location of the 'new portrait' which 'now hangs in the hall' (*Brit.dent.J.*, 110(1961), 2), said to be an excellent likeness, is currently unknown.

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CASUAL CHRONICLES

J.E.McAuley *

THE HYPODERMIC SYRINGE †

Following the publication of William Harvey's *De motu cordis et sanguinis in animalibus* in 1628, a method was sought to administer drugs either subcutaneously or intravenously in order to expedite their effect. Syringes were already in use for injecting fluids into the various cavities of the body. These were fashioned in ivory or bone with the barrel and canula in one piece. The idea, however, of using such an instrument hypodermically does not seem to have become apparent until more than two hundred years later.

The problem appealed to the scientific mind of Christopher Wren, and he joined Robert Boyle in an experiment at a meeting of the Royal Society held in Oxford in 1665. A dog was secured, a vein in the hind leg was exposed and a quill inserted and from a bladder attached to it a warm infusion of opium was run in. 'A moment passed, the dog struggled from the pain of the operation, it was released from the table, it arose but soon nodded, muscular inco-ordination was evident and the animal fell into a deep stupour'. It was thought that the dog would die if allowed to sleep, and it was kept awake by whipping it around in the open air. It eventually recovered from the injection without ill effect, but was later stolen, probably as a result of the local fame it no doubt acquired.

It was not until the early part of the nineteenth century that any further practical steps were taken in this matter. It was found then that effective absorption of a drug could be obtained by introducing it under the skin by means of a lancet previously dipped into the medicament. Another method was the removal of the epidermis by blistering the skin; a paste of morphia and water was then applied and rapid absorption took place. This was followed by the implantation of medicinal pellets beneath the skin. Morphia was also introduced subcutaneously by means of 'setons'; these threads were coated with morphia and moistened with water before use. They were manufactured by Messrs Mackie (of Bouverie Street, London), were attached to a fine needle for insertion and were obtainable in packets of twelve in different doses.

Various types of syringes were in use during the seventeenth and eighteenth centuries, but such an instrument was first employed hypodermically by Francis Rynd of Dublin in 1845. He injected a solution of morphine into 'the supra-orbital nerve, and along the course of the temporal, malar and buccal nerves' to relieve a facial neuralgia. He did not in fact use a hypodermic needle but a fine trocar and canula,

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† This article originally appeared in *Dental Magazine and Oral Topics* in the late 1950s.

and it was not until 1861 that he published a description of the instrument and his technique. A similar syringe was designed by Charles Gabriel Pravaż, of Lyons. The needle was a fine canula to which the barrel was fitted, and the injection was made by rotating the screw piston rod — in this way very small amounts of a drug could be given. The syringe was not intended, and Pravaz did not claim to have used it, for subcutaneous medication.

It has generally been accepted that Alexander Wood of Edinburgh first used a hypodermic syringe in 1843. Closer scrutiny of the facts reveals that this is not correct. The instrument he used was a true hypodermic, 'an elegant little syringe constructed for the purpose by Mr Ferguson, of Giltspur Street, London'. The barrel, piston rod and piston were of glass, the metal parts of silver and the needle was screwed to the barrel. Wood published two accounts of the occasion on which he first employed the subcutaneous injection for therapeutic purposes. The first account was given in 1855 in which he definitely states that this took place in the year 1853. His patient was an elderly woman who was suffering from a cervico-brachial neuralgia. In his own words: 'Accordingly on November 28th I visited her at 10 pm to give the opiate the benefit of the night. Having ascertained the most tender spot ... I inserted the syringe ... and injected twenty drops of muriate of morphia'. He concludes: '... from that time to this the neuralgia has not returned'. He goes on to describe other equally successful cases.

The first paper appeared to attract very little attention. This may have proved a disappointment to Wood, and for some reason he wrote a second account of the case in 1858, and in this he gives the date of his first subcutaneous injection as 'the end of November, 1843'. This seems to have aroused no comment from anyone at the time, and Wood's contemporaries interested in the subject accepted the earlier date as correct. The probable explanation is that the date 1843 in the later paper was initially a misprint, but Wood certainly never made any attempt to correct it. He could not have been unaware of it because this second paper did give rise to a deal of discussion. This earlier date gave him a clear priority over Rynd in the use of a syringe for hypodermic medication, and when, in 1861, Rynd published his account of his first subcutaneous injection, Wood still made no attempt to correct the mistake.

The syringe itself underwent many modifications and improvements, particularly in the hands of the Parisian instrument maker Luer and the Viennese Leiter. Barrels and plungers were graduated, nozzles improved, and needles were bevelled and made finer. Beautiful and delicate syringes were constructed to fit cases small enough to slip into a waistcoat pocket. Messrs Arnold of London about 1870 produced an automatic syringe; release of a spring shot the needle from the case into the tissue with the automatic ejection of the contents. Many of the syringes produced in the later years, very fine and expensive though they were, were almost impossible to sterilise satisfactorily.

Today the properties considered most desirable in a dental syringe are smoothness of action and simplicity of design. The modern cartridge syringe fulfils these demands, and now that many drugs other than local anaesthetic solutions are available in cartridge form its use is likely to become more widespread.

FREDERIK EGBERT REMKO de MAAR
25 October 1912 - 19 January 1997

It is with great sadness that we report the sudden death of Frits de Maar. Born in Groningen, he qualified at Utrecht as a dental surgeon in 1934 and practised in The Hague. In 1949, after a period of military service, he became a part-time assistant at the Dental Institute of Utrecht while continuing his studies in restorative dentistry. Early in his career he became interested in dental history and amassed a fine collection of dental prints, silver, ceramics, toothpicks and toothpick boxes and a library of historical dental works together with the reference works to support them. This interest led him to encourage and organise the formation of the dental museum in the University of Utrecht based on the Kalman Klein Collection, which, though specialising in material from the Netherlands, included many artefacts from other countries. His sorrow when in 1988 the museum was closed and the contents stored was matched by his delight when it re-opened in a new home in Utrecht shortly before he died.

Frits wrote a large number of articles mainly on historical themes, although since they are nearly all in Dutch their accessibility is limited. Among his papers is an authoritative account of the history of dental amalgam, presented at the FDI meeting in New York in 1969. In 1991 he produced an illustrated account of representations of Saint Apollonia in the Netherlands and in Flanders, the fruit of many years of research. As a member of the FDI he contributed papers to the international conferences in New York and London and attended those in Paris and Dublin where he and his wife made many friends among the delegates. With Archie Donaldson, Dr F.Witt and Dr L.J.Cecconi and others he was a founder-member of the FDI's International Group for the Study of Dental History formed in 1957, this being the first occasion that Frits had attended an FDI meeting. For the Lindsay Society, of which he was made an honorary member, he organised a very happy weekend trip in 1976 to the Netherlands, where visits were made to the Utrecht dental museum and to other scientific and cultural museums in Utrecht, Leyden and Haarlem.

Frits received the degree of Doctor *honoris causa* of the Free University of Amsterdam. In 1961 he was made an honorary member of the Société Française de l'Art Dentaire, and contributed reports and book reviews to its journal as well as a number of articles, notably one on prosthetic dentistry in Amsterdam in the mid-nineteenth century. In 1966 he was made an honorary member of the American Academy of the History of Dentistry.

With his wife Bobby and his family, to whom we send our sympathy in the loss of a dear husband, father and grandfather, Frits had a happy life. Ronald and I were glad to visit them in May 1996 at their delightful home, where we spent a memorable time examining his collection and enjoying the company of a charming couple. Frits was always a welcoming and convivial host. He will be greatly missed.

E. Muriel Cohen

NOTES AND QUERIES

Contributions should be sent to the editor, quoting the precise source, reference and location (where applicable). Quotations should be verbatim. If the communication is a paraphrase of other material, this should be clearly indicated.

023 THE DENTAL WOES OF THE WYNNE FAMILY

[The diarists are Elizabeth ('Betsey') and Eugenia, 2nd (born 1779) and 3rd (born 1780) daughters of Ricardo Gulielmo Casparo Melchior Balthazaro ('Richard') Wynne. 'My aunt': Justiniana, Countess von Rosenberg, sister of Richard Wynne; Benincasa: a former Jesuit and the Countess's lover; Granger: dancing master to the Misses Wynne]

1789 [the family was living at Strotzheim]
BETSEY: *28 September* Directly after dinner my aunt went to Strasburg with Benincasa and Granger to have out a tooth that has been causing her some great pain for some days past.
EUGENIA: *29 September* My aunt and Benincasa returned from Strasburg. She has had her tooth out and we propose to bury it in the garden.

1790 [the family was living at Montizella, 'a league from the little town of Conegliano']
BETSEY: The dentist cleaned my teeth and stopped a large one. He cut a great piece off but it did not hurt me.

1794 [in Regensburg]
BETSEY: *Sunday 12 October* After having been to Church and the Cathedral where there was good music, I had a tooth drawn out and suffered excessively, as the tooth-drawer named Rathseler and which is excellent had a great deal of trouble to take it out.

1806 [in London]
EUGENIA: *11 June* I began the morning with that puppy of a tooth drawer Mr Waite.
[John Waite, 2 Old Burlington Street, from at least 1794-1832]

(*source: Wynne Diaries (1789-1820)*, ed. by Anne Fremantle, 3 vols (Oxford: OUP, 1935-52) Selected quotations).

David Cubitt

024 DENTISTS AT HOME AND ABROAD

[The diarist is Sir John Peter Boileau, Baronet. 'John': John Elliot, his eldest son (1827-61); 'Eddy': Edmund William Pollen, his 3rd son (1831-1912); 'Carry': Caroline Mary, his 2nd daughter; 'Frank':

Francis George Manningham, his 2nd son and the 2nd Baronet (1830-90)]

1839 [in Paris]
24 July Dentist Mr Rossi for John 8 Place des Victimes 10.0. ... Then with John to the Dentist to have a Tooth out — well done ...
25 July Dentist for Edmund 10.0. Wrote and then took Eddy to Mr Rossi Dentist ...
26 July Dentist for Eddy 15.0. Mr Rossi Dentist for Carry and Frank 15.0. Up and breakfast after reading Prayers to family by 10 o'clock. Then wrote L and to Dentist with Eddy ... Home to dine and in evening out & Dentist with Carry and Frank and came home walking thro' Palais Royal ...

1840 [in London]
3 April Dentist Mr Bigg 10.0. [Bigg & Son, 2 Langham place, Regent street, London] To Dentist & Bankers ...

1841 [in Nice. On 29 January, Boileau had felt unwell]
30 January ... I sent for Mr Bowling as face painful. He lanced the Gums about and I did not go down to dinner but had some tea only upstairs and when he came again and found the face to swell a great deal and appearance of an abscess forming advised having the tooth out, so we went to my room and after two good stout tugs he did it very well. He was not so painful as sometimes it has been but it shook all the nerves in my head so much as to be very severe pain indeed for some minutes after and disabled me from holding a basin. To bed somewhat relieved but not well ...
31 January Not up till late under remedies ...
1 February Got up — but mouth bad & [?] so obliged to go to bed and [?] Camomil &c ...
2 February Better and up by ½ p 9 ...

1843 [in Norwich]
17 January ... paying Bills and then with Edmond [sic] who came to Luncheon to Mr Woodcock the Dentist who took one tooth out. [Henry Woodcock (1790-1879), 70 Broad st, Norwich in 1843]

1846
19 March [in London] Tooth ache and uncomfortable ... then home tooth aching much so to Dentist but not relieved ...
20 March To Dentists with Eddy after breakfast as face still bad. He did a good deal to me ... — but my face very painful & I could hardly keep going
21 March Ill in bed with face. Dr Scott came but nothing could be done ... In bed with pain and laudanum all day from this time till the 28th in much pain & confined to bed or room [illegible] then the swelling [?ripe] & Scott lanced the inside of Mouth which gave great pain — but after relief — & I could sit up & eat & be at ease all the Evg ...

7 June [in London] ... in pain from my Jaw — & afraid of a fresh attack
8 June Dr Scott called but my face easier
5 December [in London] Up writing an hour before breakfast — then Dr Scott came & advised having my tooth out ... John arrived unexpectedly from Oxford. He and I walked out together, and I went to Dentist ... Frankie-Bigg pulled me about for half an hour & at last took all the stuffing out of my 3 teeth & found the *causa morbi* — but thinks he can cure me without extraction — So must be patient till Monday ...
7 December ... to Dentists, & then home.

(*source:* Diary (ms) of Sir John Peter Boileau, Baronet. Norfolk Record Office (part, July 1839-Oct 1846: ref Boi 69, 117 x 5; part, Oct 1846-Mar 1850: ref MS 21470.T140D). Selected quotations).

David Cubitt

025 KEEPING TOOTHACHE AT BAY

[Joseph Kinghorn (1766-1832) was a Baptist minister whose ministry was spent entirely in Norwich. The following is an extract from a letter written to his father in October 1797]

I observe what you say about the Toothache. I have been troubled with it lately but my tooth is very hollow. I am obliged to keep mine constantly filled with a piece of ginger which swells and excludes the air. If notwithstanding that it will be painfull a bit of opium mixed with camorph [?camphor] only about the size of a pins head quiets it & will keep it quiet a day or too [*sic*]. This I put into the tooth & a piece of ginger at the top as a cork.

(*source:* C.B.Jewson, *The Jacobean City: a Portrait of Norwich 1788-1802* (Glasgow and London: Blackie & Son, 1975), p.127. No particular reference is given for Kinghorn's letter, but in 'Appendix A Manuscript Sources' appears 'Kinghorn's Papers, in possession of the author').

David Cubitt

026 DEATH OF MR MARCH, DENTIST, 1802

Early on Monday the 11th instant the celebrated Dentist, John March, died at his house in Knightsbridge.

Mr March was born in Sweden, of humble parents. It is probable that his address and courage obtained for him the commission which he held for many years in the French army; during which service he was wounded in his foot. He afterwards went through a regular course of anatomical and chirurgical studies, and having chosen for himself that branch of surgery to which he ever afterwards devoted his life, he went first to Ireland, and thence to England, in both which countries he established an unrivalled and unprecedented reputation. Some of the most eminent professional

men, among whom were MR SHARP, the late MR POTT, and JOHN HUNTER, bore repeated testimony to his accomplished skill. Of its importance he was fully aware, and is said to have occasionally received from the nobility, on whom he placed his chief reliance, greater payments than were ever before made to anyone in his line of practice. To all those whose circumstances would otherwise have precluded them from his assistance, and particularly to artists and professional men, of whatever kind, his house, hand and heart, were at all times open, and his abilities always gratuitously at their command.

He possessed a capacity of extraordinary comprehension, and a temper of equal firmness. He had, by mature study, imbibed the principles of the most celebrated philosophers of past ages, and he incorporated them with his opinions and his life. His manners were polite, but, like his aspect, commanding, and his discourse was that of a Spartan. He carried to an extreme of rigour his estimate of vice and virtue. He neither forgot an injury or a benefit: the latter he repaid by unbounded exertions of liberal friendship, which no length of time could abate or diminish; the former he punished by ceasing all communication with the person from whom it arose. In reading the characters of men, pusillanimity met with his contempt, fraud his abhorrence, talents his protection, and virtue alone, in whatever station, his respect.

(*source: Suffolk Chronicle and Ipswich Advertiser ...* , no.44, Sat 30 Jan 1802, p. 4, col. 1).

Angela Dain

The following papers by Burnby, Hillam, Baron and Deltombe were delivered for discussion at the October 1996 meeting of the European Research Group on the History of Dentistry (see Dental Historian, 31(1996), 58). Each was originally of 30 mins duration; the papers of Drs Deltombe and Baron have been edited together by Dr Baron and translated by Christine Hillam, who accepts responsibility for any misrepresentation of the authors' intentions.

THE PREPARERS AND DISTRIBUTORS OF ENGLISH PROPRIETARY MEDICINES

J.G.L.Burnby *

A Sussex schoolteacher turned general shopkeeper wrote in his diary on 9 July 1760[1]

> In the afternoon, my wife walked to Whitesmith to see a mountybank perform wonders, who had a stage built there, and comes once a week to cuzen a parcel of poor deluded creatures out of their money by selling his packets which are to cure people of more distempers than they ever had in their lives for one shilling each, by which means he takes sometimes £8 or £9 a day.

It was by such means — a stage, bizarre clothing, a zany and even a band — that the mountebanks gave 'quack' medicines the poor reputation they still hold today. A less emotive, and possibly less self-centred view may well lead to a greater appreciation of these medicines.

Basically, 'quack' medicines (more accurately called 'proprietary medicines') were the same as those prescribed by the physicians and apothecaries, and those dispensed by the apothecary or chemist and druggist. Many were ultimately incorporated into the official pharmacopoeia, as was, for example, Daffy's 'Elixir Salutis' which had been advertised as a cure-all since at least 1673. It first appeared in the *Pharmacopoeia Londiniensis* of 1721 as 'Elixir Salutis' and in the *British Pharmacopoeia* of 1914 as 'Compound Tincture of Senna', a much simplified preparation made by macerating senna leaves, coriander and caraway fruits with glycerin in 45% alcohol. Earlier versions had also contained liquorice, the much prescribed but useless anti-venereal guaic, elecampane (*Inula helenium)*, a diuretic, and bearberry (*Uvae ursi*), an antiseptic of the urinary tract used in cystitis.

Robert Turlington's 'Balsam of Life' (which he patented in 1744) became enormously popular and ultimately was made official by inclusion in the *London*

* *J.G.L.Burnby, BPharm, PhD, 8 Bowling Green Lane, Wirksworth, DE4 4EF.*

1 *The Diary of a Georgian Shopkeeper* ed. by G.H.Jennings (Oxford: OUP, 1979), p. 45.

Pharmacopoeia as 'Compound Tincture of Benzoin' or even more familiarly as 'Friar's Balsam'.[2] Containing as it does benzoin, storax and balsam of Tolu, it undoubtedly had antiseptic and expectorant properties of value in respiratory problems.

The arrival of the proprietary medicine

Although the hey-day of proprietary medicines was the eighteenth and much of the nineteenth centuries, they were known long before then. The London College of Physicians in 1636 included the production of nostrums in their long list of grievances against the apothecaries:

> Cooke hath pills, called Cook's pills, & a Medicine called Cooks golden egg, And Edwards a water called Edwards Cordiall Water, And Holland Purging bottles called Hollands Bottle.

The perpetrators of these 'crimes' were Edward Cooke (warden of the Apothecaries' Company who traded with Russia and had a large wholesale business for the manufacture and sale of drugs), Richard Edwards (Master of the Company) and a Robert Holland of Fenchurch Street. These were highly respected men and Cooke was certainly a very rich one.

Nor should the people who tried these nostrums be regarded as credulous, but rather as those in despair. There was much ill-health and orthodox medicine of the day was, with a few exceptions, useless.[3] The men and women who read the fulsome advertisements for some 'infallible cure' or other deserve not contempt but sympathy, especially in the light of present-day parallels such as the illegal importation from Mexico into the United States of apricot kernels for the treatment of terminal cancer.

The rapid growth in the sale of proprietary medicines, whether patented or not (few were), owed much to the freeing of the press in 1695 when the Licensing Act was not renewed. The immediate result of lifting restrictions on printing and of more effective postal services was a swarm of 'Postman' and 'Postboy' newssheets. Advertising gave the press a measure of independence from the political subservience from which it had suffered earlier. Whilst the papers gained a degree of financial freedom, at the same time the government received revenue after a tax[4] was imposed

2 C.G.Drummond, 'Friar's Balsam or friars' balsam?', *Chem.Drugg.*, 163(1955), 687-88.

3 The eighteenth century saw only two introductions which were of undoubted use in medicine: *Digitalis purpurea* in congestive heart failure and cowpox vaccination for the prevention of smallpox. Cinchona bark had been introduced in the previous century and opium was known from the earliest times. To these, perhaps, may be added Ipecacuanha root (*Cephaelis ipecacuanha*), introduced to Europe from Brazil in 1672; this contains the alkaloid emetine, a specific in the treatment of amoebic dysentery. The early nineteenth century saw the isolation of the alkaloids and the improvement of techniques and chemical knowledge, but the next advances had to wait for anaesthesia, antisepsis and, above all, the Germ Theory and the introduction of vaccines and antitoxins.

4 This tax continued to be levied until 1853.

in 1712 not only on the newspapers themselves, but also on the advertisements.

Newspapers were not the only ones to gain from the power of advertisement; so did the printers of handbills, as was reported by an indignant writer in the *Morning Post* of 15 December 1782: 'A person can not walk from St Paul's to Temple Bar without a dozen different quack bills thrust into his hands'. In fact before the nineteenth century, more proprietary medicines were advertised as available from printers and newspaper offices and their agents and delivery men (the newsmen) than from druggists. *Burbage's and Cresswell's Nottingham Journal* advertised in 1786 that they sold retail and wholesale 110 proprietary medicines, including six for the teeth. Equally involved was the bookseller. Francis Hilliard — printer, bookseller and stationer of Leek — was declared bankrupt in December 1794 and an auction of his goods held in the following January. Apart from the anticipated printing presses and a binding press, paper and stationery, they included patent medicines, and no fewer than 240 large bottles of Dicey & Co's 'Daffy's Elixir'.[5]

The preparers of proprietary medicines

In the first instance, advertisements lead the reader to believe that it was the inventor himself who produced the product; and perhaps it was but in many cases this was only for a very short while. Dr Robert James (MD Cantab) patented his famous fever powder, an antimonial, in November 1746 but had already entered into an agreement with John Newbery, bookseller of Reading and London, earlier in the year. In future Newbery was to make James's pills for gout, rheumatism, scurvy, leprosy and King's Evil, as well as to have a half share in his fever powders.[6] Business records reveal that William Jones of Great Russell Street, London, wholesale and retail chemists and druggists, supplied antimony and cream of tartar to Newberys, receiving James's powders or a credit in return.[7]

Newbery had already had experience in marketing proprietary medicines. In 1744 Thomas Greenough, citizen and apothecary of London (but who hailed from Reading), took out his first patents for his 'tinctures'; that packaged with a red wax seal was for 'preserving the teeth', the other, sealed with black wax, was for 'curing toothach'. He appointed John Newbery his sole agent, from whom the tinctures could be obtained either at his London warehouse or his Reading shop. Even earlier, Newbery shared the sale of the Female Pills of John Hooper (an apothecary and surgeon in Reading) with William and Cluer Dicey. The Diceys, by now of Bow Churchyard, London, originally came from Basingstoke and Sandhurst, Berkshire; this area could with some justification claim to be the original home of the proprietary medicine business on a national scale.

5 *Derby Mercury*, 11 Dec 1794 and 8 Jan 1795.

6 'Proprietors and proprietaries', *Chem.Drugg.*, 49(1896), 161.

7 G.M.Watson, in *The Evolution of British Pharmacy*, ed. by F.N.L.Poynter (London: Pitman Medical, 1965), p. 56.

Joshua Ward (1685-1761) is generally regarded as a notorious 'quack'[8] but was in fact a competent chemist who had probably received his initial training in drysaltery. On his return from exile in France, he developed a whole range of medicines, of which his pills and drops became the best known. On his death he left his recipe book to his close friend John Page, who decided to make the contents known to the public. As a result of this action, it became common knowledge that the medicines had been made by two London manufacturing chemists, John White of St Mary le Bone and François Joseph D'Osterman of Pimlico. Each was granted an annual pension of £600 by George III as compensation for the publication of the recipes and the profits of the sales of Ward's medicines were to be given to two charities. On their deaths, in order to continue the sale of Ward's medicines at low prices, George III was again petitioned to 'renew part of his Late Bounty not exceeding £150 to £200 a year to such person[s] as may give proper proof of their capacity and Integrity in preparing the said Medicines ...'.[9] The *Leicestershire and Nottinghamshire Journal* of 4 December 1773 announced that the preparation of the medicines was now entrusted to the widow of Mr D'Osterman and 'Mr Godfrey, an eminent chemist of Southampton Street, Covent Garden'.[10]

It was often the death of the patentee which brought to light the name of the actual preparer of the medicine, who often emerged as having been his wife. A regular advertiser was a Francis Spilsbury who described himself as a 'chymist' and devised some Antiscorbutic Drops which sold well. He died in August 1793 and on 7 November his widow 'told the Public' that the 'business is carried on by her the same as usual, she having in reality, been the preparer of the Drops for several years'.[11] Although the Drops had been on sale for ten years and more, Spilsbury did not patent them until 1792 when we learn that they contained 23 ingredients, including antimony, socotrine aloes, cascara bark, juniper berries, guaiacum wood, sassafras wood, orange peel, vinegar and sulphuric acid.[12]

John Norton, a surgeon and apothecary, may have invented his Maredant Drops in the 1760s, but it was his father William who actually prepared them, frequently assisted by John's wife. She continued to do so after the death of her husband and two sons, although an encroacher, John Hayman,[13] laid claim to his drops being the

8 see, for example, Roy Porter, *Health for sale* (Manchester: Manchester University Press, 1989), pp. 29, 34, 222, 228 etc.

9 PRO (Kew), MS T.1.419 ff.260 r. & v.; T.1.419 ff.306 r. & v.

10 The Godfrey mentioned, Ambrose III, was the grandson of Ambrose Gottfried Hanckwitz, Robert Boyle's chemical operator and manufacturer of phosphorus.

11 *Derby Mercury*, 7 Nov 1793.

12 'Proprietaries of other days', *Chem.Drugg.*, 107(1927), 838.

13 *Derby Mercury*, 16 Sept 1790. It seems Hayman was far from successful as he became bankrupt

only genuine ones.

In his will of 1716, Richard Stoughton (apothecary of London and by now the possessor of an MD of Aberdeen) bequeathed the patent for his elixir, which had nearly ten years to run, to his widow Susannah; on her death four years later, it passed to their two sons, Richard and Aram. The quarrels then began between the relatives, very public quarrels in the newspapers; from these we learn that the elixir had actually been prepared by a 'Servant' of the two brothers. This is not surprising as both the elder Richard and his wife had left monetary bequests of many thousands of pounds, to say nothing of the property they possessed.[14]

Likewise we learn from advertisements that it was a Ninian Trotter, 'chymist' of Bear Lane, London, who had been the preparer of the Asiatic Tooth Powder which he then sold wholesale to a Dr Debraw, and that the widow, being in possession of the recipe, was continuing with the work.[15]

The formulae for successful products had considerable commercial value. Joseph Dalby (an apothecary in Welbeck Street, London, who died in 1784) was the inventor of a popular carminative. Having quarrelled with his sons, he carefully states in his will that full directions for its preparation have been given to his daughter Frances, wife of Anthony Gell, gentleman, of Westminster.[16] According to an advertisement in the *Derby Mercury* in June 1816, she and her sons were still the preparers, although Newberys were the only sellers of the carminative, as they had been for over thirty years.

As far back as the 1660s there was available the 'Golden Spirit of Scurvy Grass' of Thomas Blagrave. In later years, as was so common, the advertisements led to a full-blooded slanging match between him and a Robert Bateman who claimed to be the inventor and only preparer. Rivalry rumbled on but the distillate obtained from the leaves of the antiscorbutic *Cochlearia officinale* retained its popularity for at least 150 years, even if distillation destroyed its vitamin C content. Then, rather surprisingly, we find that Johnsons of Maiden Lane, London, assayers of ores and metals, were now the proprietors of Blagrave's Spirits. The firm took the Spirits in bulk, bottled and labelled them, advertised them at four shillings an entry and sold them, mostly to druggists, at ten shillings a dozen. It is unlikely that they did the actual distillation, but had it done for them by a distiller named Shirley of Warwick Lane. For once, we have an honest costing. The cost books show for 1791 sales of about 70 dozen bottles, but the net profit for the years 1798-1796[17] only amounted

in October 1796 (*ibid.*, 6 Oct 1796).

14 R.E.M.Davies, 'Dr Richard Stoughton and his Great Cordial Elixir', *Pharm.J.*, 240(1988), 377-81.

15 *York Herald*, 30 Jan 1790.

16 PRO. Prob.11 1119-38.

17 D.McDonald, *The Johnsons of Maiden Lane* (London: Martins, 1964), pp. 48-49.

to between sixty and seventy pounds.

An interesting advertisement of 1792 relates that[18]

> The late Dr Waite, having by his last will appointed his Executrix to dispose of the RECIPE [for his 'celebrated Worm Medicine in the form of Gingerbread Nuts'] the Public is informed it was sold by Public Auction (by Direction of Dr Waite's Mother and sole executrix) at Baker's Coffee house, Change Alley, London on Thursday, 15th. March 1792 by Mr Rogers and purchased by John Evans, No. 42. Long-lane, West Smithfield, and William Howard of Reading who are now the only Proprietors.

The goodwill value of proprietaries was not inconsiderable. In the *Daily Advertiser* of 7 March 1783 there was the offer of 'the Recipe of two established Medicines' for £200, the profit from which was stated to be £150 a year.[19]

The major wholesalers

The centre of the drug trade in Britain has always been London, consequently it is not surprising that the majority of the large wholesalers were centred in the capital. This is, however, not to exclude the other cities with their Henrys of Manchester and the Swinfens of Leicester, for example.

Reputable firms such as that of Joseph Gurney Bevan (the future Allen and Hanburys) refused to deal with any but the patentees themselves or their successors and had nothing to do with the counterfeiters who abounded. Bevan was often suspicious of the wide-reaching claims made on the labels and sometimes wrote to his correspondents that 'the directions ... are calculated to make the purchasers believe that the medicine is prepared by the Inventor or his successor'.[20] In spite of his expressed views, however, in 1779 Bevan applied unsuccessfully to Newbery for a certificate to manufacture James's Fever Powders for a West Indian order. Moreover, like Corbyns, the firm sent to the West Indies and North America those preparations which were in greatest demand, such as Stoughton's Elixir, Dover's Powders, Bateman's Pectoral Drops, Norton's Maredant Drops or Anderson's Scots Pills. Bevan dealt largely, both buying and selling, with Wray & Co. of 14 Birchin Lane, London, 'our neighbours', who were manufacturers and dealers in 'patent' medicines. Martha Wray was the niece of Robert Turlington who died in 1767, whereupon, with her husband William and nephew Hilton Wray, she inherited the lucrative Turlington's Balsam business.

There is little doubt that the proprietary drug trade in the eighteenth century was big business. Stoughton grew rich on his Elixir, and Lionel Lockyer of the Sign

18 *Derby Mercury*, 4 Oct 1792.

19 'Some early press advertisements', *Chem.Drugg.*, 28 June 1930, 840.

20 Letters from Bevan to Isaac Bartram (10 July 1785) and Effingham Laurence of New York (15 April 1786), cited by S.S.Stander, 'A history of the Pharmaceutical Industry with particular reference to Allen & Hanburys, 1775-1843' (unpublished MSc dissertation, University of London, 1965).

of the Three Boars' Heads, over against the Meal-Market, Southwark, aspired to and obtained burial in an ornate chest tomb in Southwark Cathedral, even if Joshua Ward was not successful in his bid for interment in Westminster Abbey.

The three largest dealers in these medicines in most of the eighteenth century were probably Wrays and their predecessors, Diceys of Bow Churchyard, London, and Newberys of St Paul's Churchyard, London. Diceys' success in this field started with the patenting in March 1726 of Bateman's Pectoral Drops by a chemist called Benjamin Okell who was in association with John Cluer, Robert Raikes and William Dicey, printers and newspaper owners in St Ives, Huntingdonshire, Northampton and Gloucester. Even before the Pectoral Drops were patented, they were advertised in the 1721 issues of the *Northampton Mercury* as being[21]

> now sold for him [if 'he' ever existed] in most cities ... at the Printing Office in Northampton, and that at St Ives, and by the Men that carry this News ... and William Peachey, stationer, Cambridge.

In 1761 Robert Raikes junior sold a half share of the firm's interest in Bateman's Drops to John Newbery, which is probably a measure of the importance it had gained. Newbery was an astute businessman and a clever promoter of his agency's products.[22]

Other important London wholesalers were Thomas Jackson at 95 Fleet Market,[23] John Wye of 59 Coleman Street (who found it useful to say that he had previously been a partner of Dicey's) and Shaw and Edwards (later W. Edwards & Son) who moved from 74 Borough High Street to St Paul's Churchyard in the early years of the nineteenth century.[24]

In the course of time these wholesalers came to own the patents of many proprietaries (Newbery, for example, owned at least twelve outright) or else managed to become the sole suppliers of them. It has not yet been determined whether these wholesalers were in all, or some, cases the actual preparers of the medicines, even if they possessed the patent or recipe. It is known that Joseph Gurney Bevan and William Jones supplied both Francis Newbery and Martha Wray with basic materials, so it must be assumed that these last two had the necessary laboratories. Certainly

21 J.Burnby, 'Printer's ink and patent medicines: the story of the Diceys', *Pharm.J.*, 229(1982), 162-64. The firm became 'Dicey and Sutton' in the nineteenth century; as 'W.Sutton & Co.', they finally left London for Enfield, Middlesex.

22 'An agreement that established a "dynasty" ', *Chem.Drugg.*, 166(1956), 254-55. An even closer relationship between the two wholesalers was developed when young Raikes's sister married Francis Newbery.

23 On Jackson's death in 1793, the firm was taken over by James Barclay; it survived into the post-1945 era.

24 'Proprietors and proprietaries', *Chem.Drugg.*, 49(1896), 152; 'An important amalgamation', *ibid.*, 119(1933), 758-59; *ibid.*, 10 Nov 1959, 189.

there is some evidence that Wrays were engaged or were interested in manufacture.

The Sun Fire insurance records for 16 January 1786 show that Thomas Barwis of Wandsworth, gentleman, and Hilton Wray of 14 Birchin Lane, London, druggist, became the assignees to the estate of Joseph Gattey and William Waller at 16 Cloak Lane, Druggists & Chymists. The property, including six houses (and the wearing apparel and household goods in two of them), utensils and stocks, a 'madder stove house', 'an iron liquor house', two brewhouses, offices, two drying houses, four warehouses and an 'elaboratory' was insured for £5,900.[25] This may be compared with the insurance policy for £1,000 of J.G. Bevan of Plough Court, dated 6 January 1783 which detailed 'his now dwelling house, being two houses laid into one', utensils, stock, vaults, counting house, cellar and 'elaboratory''.[26]

In due course specialist wholesalers of proprietaries grew up who stocked many of the medicines drawn from several manufacturers. William Bacon with his Royal Patent Genuine Medicine Warehouse at 150 Oxford Street, London was one of this type. John Sanger joined this firm in 1810 and eventually took it over. Sangers were still active after World War II as druggists' sundriesmen and wholesalers of pharmaceuticals with an excellent reputation.[27]

Distribution

The heavy advertising of these medicines indicates not only high levels of production with adequate stock in hand, but an efficient distributive network from manufacturer and wholesaler to retailer and the consumer. The London wholesaler, often the sole selling agent, had a choice of using road, canal or sea, or any combination of them The cheapest of all was the coasting vessel, followed by the carriers' lumbering old waggons or carts. By the second half of the eighteenth century, England was developing a comprehensive, fairly well- maintained network of turnpike roads, an essential aid to effective distribution. Where the terrain was rough and hilly (as in Derbyshire), trains of pack-ponies had to be used. If the goods were needed urgently, then the buyer would request at least part of the order to be sent by expensive stage or mail coach, a surprisingly quick route.

Usually the buyer would give specific directions as to how the goods should be dispatched. Sims and Ansell of Stockport always told Howards of Stratford, Essex, that their order should be dispatched by canal to Manchester from where they would collect it themselves; this was also the method by which they returned the empties. James Glencross, well-established chemists and druggists in Plymouth, requested their orders to be sent by waggon to Portsmouth and thence by coasting vessel to Plymouth.

25 Guildhall Library, MS 11936/514311-334.

26 *ibid.*, 11936/469590-306.

27 'An important amalgamation', *Chem.Drugg.*, 119(1933), 758-59; *Pharm.J.*, 4th series, 146(1941), 160. William Bacon's firm must have pre-dated 1779, as he took out a patent for fever pills in that year.

The wholesalers and manufacturers always took the completed orders to the coaching inns which acted as London termini, the canal basins of the Regent's or Grand Junction Canals or the shipping wharfs on the Thames.[28]

CONCLUSIONS

There is no doubt that the majority of these 'quack' medicines had little therapeutic value, but then neither had the more orthodox treatment of the established and respected doctors. Both had their dangers: mercurial and antimonial preparations are usually dangerous, but then so is excessive purging, vomiting and bleeding in a debilitated patient.

The exaggerated claims of the eighteenth century proprietaries led to a degree of scepticism in the public, so that advertising had to become less blatant, more skilful and more truthful. A pharmaceutical industry had been set up almost without knowing it; some of the companies in the long run turned to the production of what are now known as 'ethicals', and even to science-based research products.

28 A.W.Slater, 'Howards, chemical manufacturers, 1797-1837: a study in business history' (unpublished Msc dissertation, University of London, 1955).

THE AVAILABILITY OF DENTAL PRODUCTS IN BRITAIN AT THE END OF THE EIGHTEENTH CENTURY

Christine Hillam *

Self-declared 'dentists' undertaking a full range of treatments — from what are thought of today as oral surgery, orthodontics and periodontics to restoration and prosthetics — were few and far between at the end of the eighteenth century. Even if we allot each of them a very heavy case-load, they can have treated between them no more than 100,000 or so of the then population of Britain of about 11 million. No doubt a larger section of the populace had occasional recourse to toothdrawers of different kinds for emergency extractions, but there seems likely to have been a sizable (but now unquantifiable) constituency of those who, cost apart, either succeeded in never experiencing invasive treatment of the teeth or at least avoided it if at all possible; and who can blame them in an age without effective anaesthesia and in which the skill of the unregulated practitioners was highly unpredictable? No doubt some of these dental virgins had no need of treatment in either their terms or ours but the available evidence suggests that in fact oral decay, disease and deficiencies were increasingly common, due to a complex web of dietary and medical reasons shot through with differing perceived needs to those of a modern urban society. This being the case, there seems likely to have been a good market for products which promised to stave off further trouble, restore damage or relieve the immediate agony of toothache. Earlier generations had no doubt had their own pet domestic remedies; by the end of the eighteenth century a predilection for the new and the sophisticated combined with the greater availability of surplus cash drove both the anxious and the agonised further into the arms of the producer of proprietary medicines, the fueller of the self-medicator.

The enormous expansion of the market for proprietary remedies in general over the course of the eighteenth century owed much to the virtual lack of regulation of medicine-selling in Britain. Producers also undoubtedly played on the exoticism associated with medicines emanating from London (as almost all did), for this was a market already potentially saturated by the products available from the local apothecaries with whom the country abounded; better the mysterious pill sent down specially from London to the bookseller (already a purveyor of sophistication) than Dr Brown's usual old remedy.

As regards dental products, these were already available not only from the self-

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same apothecaries but also from any of the increasing number of providers of dental treatment to be found throughout the country, of whom 155 have to date been identified as practising at some time in the 1790s.[1] Whilst based on a relatively small number of towns, and with the largest concentration located in London, many regularly went on tour several times a year to service a wider area. During these visits, they would take supplies of their products for old and new patients and establish agencies for their sale with perfumers, milliners, stationers, booksellers, etc along the way.[2] This not only kept their name active until the next visit; it also took advantage of the superiority often popularly accredited to a product not available from a home-grown producer. There is evidence of at least 64 dentists in the 1790s (41%) doing precisely this; a small number of dentists, as we shall see, went even further and the production and marketing of dental preparations must have formed a substantial part of their business interests.

Yet despite this dental presence, there was still perceived to be a market for London-based proprietary products (a term preferable to 'patent medicines' since very few dental remedies were ever patented). This suggests they were aimed not only at those ever eager to try something new, but also at those who were unlikely to seek dental treatment for one reason or another. A further potential market was the consumer who did not live in the kind of urban area where dentists' products were more likely to be on sale but who was nevertheless linked to an urban culture by other means. For the growth of the proprietary medicine market was intimately bound up with the development of the provincial press whose advertising columns were used to create and then nourish a demand for yet more possible solutions to intractable ills. In the process some readers were no doubt also afforded the exciting experience of feeling that they too could participate in a relatively inexpensive way in the niceties of the consumer society of the wider world. Should they be bashful, they could probably obtain many of the products by post from the printer of the newspaper who constituted a vital link in the distribution chain for many proprietary medicines. Indeed, the printing and the medicine dealing were often inextricably linked parts of the same business, advertisements for proprietary products sometimes being paid for in kind rather than in cash.[3]

In his paper on medicines advertised in Bath in the eighteenth century, Brown found the largest single category of proprietary medicines (52) to be dental prepara-

1 Numbers derived from my own work on trade directories and newspapers (see, for example, *Brass plate and brazen impudence* (Liverpool: Liverpool University Press, 1991), pp. 64-67), that of D.W. Wright ('London dentists in the 18th century: a listing from the trade directories in the Guildhall Library',*Dent. Hist.*, 12(1986), 8-16) and on the survey of newspapers of the 1790s referred to below.

2 Hillam, p. 117.

3 G.A.Cranfield, *The development of the provincial press* (Oxford: Clarendon, 1962), p. 233. This appears to have been John Newbery's custom in dealings with the *Northampton Mercury*.

tions,[4] which accords well with subjective impressions gained from the press of other towns, most of which are decidedly less fashionable than Bath. This present paper looks specifically at the general availability of dental proprietary products in the last decade of the eighteenth century and outlines the way in which they were marketed.[5] It takes as its starting point systematic searches of advertisements in 46 newspapers of the 1790s published in a total of 33 different towns in Britain (including London).[6] The systematic searches were supplemented by one partial search (Leicester) and items from three collections of dental advertisements.[7] The latter largely refer to London and bring the total number of different sources to 57.

Reliance on such materials raises fundamental questions of interpretation, thanks in part to the nature of newspaper advertising itself. The first problem is that of comprehensiveness. Although by the end of the eighteenth century most newspapers were carrying more advertisements then they had done earlier, some were still reluctant to take too many. In addition, the presence of different products in the different newspapers serving the same town (as in Leeds, Liverpool, York, Birmingham, Newcastle, Norwich, Edinburgh, Glasgow and, of course, London) dispels any fantasies that the complete picture of availability of such products is revealed in the pages of a single local newspaper.

4 P.S.Brown, 'Medicines advertised in 18th century Bath newspapers', *Medical History*, 20(1976), 152-68.

5 A detailed consideration of each of the products, of the marketing chain and of the many issues involved in this theme is beyond the scope of this present short paper, but will appear elsewhere.

6 Although newspapers might be produced in one particular town, an examination of the lists of sales agents makes it clear that they served a much wider geographical area than the town itself. This might overlap with the circulation area of another newspaper and extend to embrace one or more counties, including those where no newspaper was published. Thus, County Durham was served by the Newcastle press and Bedford by the *Northampton Mercury*. Wales was served by neighbouring English newspapers.

7 Systematic searches: *Aris's Birmingham Gazette, Bath Chronicle, Belfast Newsletter, Bury & Norwich Post, Caledonian Mercury, Cambridge Chronicle, Chelmsford Chronicle, Chester Chronicle, Coventry Mercury, Cumberland Packet/Paquet, Derby Mercury, Edinburgh Advertiser, Edinburgh Evening Courant, Farley's Bristol Journal, Glasgow Advertiser, Glasgow Courier, Glasgow Mercury, Gore's Liverpool Advertiser, Hampshire Chronicle, Hereford Journal, Hull Advertiser, Hull Packet, Ipswich Journal, Kentish Gazette, Leeds Intelligencer, Leeds Mercury, Lincoln, Rutland & Stamford Mercury, Manchester Mercury, Newcastle Advertiser, Newcastle Chronicle, Norfolk Chronicle, Norwich Mercury, Northampton Mercury, Nottingham Journal, Salisbury & Winchester Journal, Sheffield Iris, Sheffield Register, Shrewsbury Chronicle, Swinney's Birmingham & Stafford Chronicle, Times, Williamson's Liverpool Advertiser, Worcester Journal, York Chronicle, York Courant, York Herald, Yorkshire Journal [Doncaster edition].*
Collections of newspaper advertisements: British Dental Association; Menzies Campbell Collection of Newspaper Advertisements (Royal College of Surgeons of England); T.Purland, *Dental memoranda* (Ms 63518, Wellcome Library). These furnished (randomly collected) advertisements from the *Argus, The Diary, Lloyd's Evening News, Morning Chronicle, Morning Herald, Oracle, Reading Mercury, Star, Sun, World.*

The second major problem of interpretation revolves around the frequency of advertisements. Whilst advertising exists to create demand and also to take advantage of a boom in consumer spending, it is also used to move stock when sales are sluggish or in economic hard times when extravagant advertising is employed to chase the little surplus cash in the system. Moreover, since the newsmen would be carrying supplies of the proprietary medicines stocked by the printer with them on their rounds delivering the paper,[8] it was less urgent perhaps for these to be promoted. Thus, for this and related reasons, no simple correlations can be made between the degree of advertising and the level of sales, except that the willingness of vendors to pay for advertising (and the tax on it) might suggest the existence of a worthwhile return in terms of resultant sales.

Nevertheless, despite these *caveats*, the evidence of over 3,500 advertisements (3,611) for dental proprietary products available throughout a large part of the country in the 1790s provides some insight into the potential demand for self-medication in this area, the assumed dental problems of the readership, the identification of some of the proprietors and manufacturers and the sophistication of the scale of production and distribution of the products themselves.

The overall pattern of advertising

The volume of advertising of proprietary dental medicines in the newspapers examined fell over the decade, particularly after 1794. So dramatic and so widespread was this drop (Fig. 1) that it seems likely to represent some market trend.

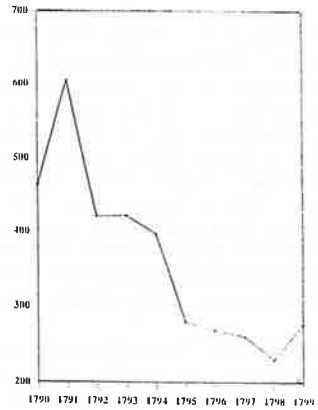

Fig.1 total number of advertisements for proprietary dental products, 1790-99 sample

8 Cranfield, p. 249. Many advertisements placed by the printers of newspapers themselves state that the medicines for which they are agents are available from the newsmen.

Whether this reflects a decrease in demand during the economically pressed time of the French wars is a matter for debate; the economic strata who formed the market for these products (typically priced at anything from one shilling to half a guinea) may well have been less affected by the financial climate than some. That it may represent a decrease in supply is suggested by the fact that there was also a fall in the overall number of brands advertised during this same period (from a high of 31 in 1792 to a mere 16 in 1799), apparently leaving on the market mainly the larger scale operations. It may be that some manufacturers were feeling the pinch sufficiently for them to cut their advertising costs or perhaps cease offering such attractive wholesale discounts to agents such as the printers.[9] It also seems to be true that fewer new brand names were being launched nationally as the decade progressed — only an average of 2-3 per year in 1797-99 as opposed to the 10-11 per year in 1791-92.

The products

The survey of advertisements revealed 85 individual products being advertised for sale under 66 different brand names: 36 different toothpowders and dentifrices,[10] 20 liquids or tinctures (some of these products also promised to prevent toothache),[11] 25 toothache cures (including Perkins' Tractor)[12] and 4 preparations designed to ease

9 The Asiatic Tooth Powder and toothbrushes produced by Sharp (perfumer, cutler and razor maker, of 131 Fleet Street, London), for example, were sold by the dozen at a discount; the dentist Sedmon gave a 'liberal allowance for ready cash' and 6 boxes and 6 bottles were supplied carriage free (*Yorkshire Journal [Doncaster edition]*, 16 July 1791).

10 *Toothpowders and dentifrices:* Amboyna Tooth Powder, Asiatic Tooth Powder, Balsamic Powder for the teeth, Bayley's & Benett's Tooth Powder, Berdmore's Tooth Powder, Jackson's British Tooth Powder, Ann Bryan's Genuine British Tooth Powder, Byzantian Dentifrice Powder, Carbonic Tooth Powder, Chemical Dentifrice, Debraw's Oriental Dentifrice/Asiatic Tooth Powder, Devonshire Tooth Powder, Madame Du Barre/y's Tooth Powder, Duchess of York's Tooth Powder, Dr Daniel John Enoco's Original Spanish Aromatic Dentifrice, Essential Dentifrice, Foy's Dentifrice, Fuller's Dentifrice Universel, Goldsmith's Vegetable Toothpowder, Hart's Tooth Powder, Hattan's Tooth Powder, Huxham's Oriental Toothpowder, Incomparable Tooth Powder, Paraguay Tooth Powder, Prince of Wales Tooth Powder, Romano's Tooth Powder, Royal Tooth Powder, Sharp's Asiatic Tooth Powder, Stringer's Oriental Tooth Powder, Stringer's Myrrh Dentifrice, Staines's Tooth Powder, [unidentified toothpowder], Trotter's Asiatic Tooth Powder, Universal Dentifrice, Vegetable Dentifrice, Warren's British Tooth Powder.

11 *Liquids and tinctures:* Signor Antonielli's Celebrated Antiscorbutic Decoction, Balsamic Liquor for the Teeth and Gums, Berdmore's Tincture, Chemical Essence, Devonshire Tincture, Duchess of York's Tincture, Foy's Tincture, Goldsmith's Vegetable Tincture, Greenough's Tincture, Hart's British Astringent Tincture, Hodgson's Antiscorbutic Tincture, Marshall's Balsamic Tincture, Paraguay Lotion, Prince of Wales Royal Tincture of Peach Kernels, Preedy's Tincture, Rooke's Matchless Balsam, Romano's Tincture, Royal Tincture, Sotherby's Tincture, Stringer's Essence of Myrrh.

12 *Toothache cures:* Complin's Specific, Dawson's Elixir, Delescott's Opiate for the Teeth, Emperor of Germany's Tooth Powder [sic], Essential Tincture, Fothergill's Infallible Specific, Goldsmith's Toothache Compound, Greenough's Tincture, Grey's Toothache Lozenges, Hamilton's Tincture

the trauma of teething (one the famous Burchell's Anodyne Necklace, advertised doggedly in the *Times* but nowhere outside London).[13] Although constituting only 30% of the number of products, the toothache remedies accounted for 43% of the total number of advertisements. Similarly, the teething aids made up only about 5% of the number of products but 12% of the number of advertisements. Thus it would seem that, of those products which were advertised, at least, the names of pain relief products were promoted more actively than were oral hygiene aids.

The majority of brands made a very fleeting impact on the market in the 1790s in terms of the frequency of appearance in advertisements, 42 of them (64%) being mentioned on fewer than ten occasions.[14] The majority of this last group, however, are advertised in only one town (where they may have enjoyed comfortable sales making frequent advertisement unnecessary), no attempt being apparently made to market them on a large scale. A further 15 brands appear only between 10 and 100 times in the pages of the press over the decade.[15] It is the remaining 9 brands which must have been household names at the end of the eighteenth century, advertised as they were in anything up to 30 newspapers in the survey and between 100 and over 600 times each (Table 1):

	no. of advertisements	no. of newspapers in which advertised
Mrs Wyles Toothache Medicine	285 (1791-99)	30
Simson's Aethereal Tincture for toothache	202 (1793-99)	27

for the Toothache, Hodgson's Toothache Tincture, J.S-h's [toothache remedy], Katterfelto's Toothache Tincture, Norfolk Toothache Pills, Peck's Preparation for the Teeth, Perkins's Tractor, Rennie's Newly Invented Medicine, S I L's toothache cure, Simson's Infallible Aethereal Tincture for the Toothache, Dr Solomon's Tincture, [unidentified toothache remedy], Tooth-ach Fluid, Warren's Tincture for the Toothache, Williams's Arquebusade Opodeldoc, Mrs Wyles's Toothache Medicine.

13 *Teething aids:* Burchell's Anodyne Necklace, Fothergill's Infallible Specific, Odonton, Severon's Balsamick Restorative.

14 *Advertised on fewer than 10 occasions:* Antonielli (Leeds,York), Balsamic (London), Bayley's & Benett's (Bath), Berdmore (London), Bryan (Bath), Byzantine Dentifrice Powder (Glasgow), Chemical (Bath), Dawson (Stamford), Delescott (Newcastle), Emperor of Germany (Edinburgh), Enoco (London), Essential (Bristol), Foy (Bath), Fothergill's Specific (Chester,Liverpool,York), Fuller (London), Goldsmith (London), Hattan (Winchester), Hodge (Bath), Huxham (Shrewsbury), Incomparable (London), J S-h (Cambridge), Marshall (Ipswich), Norfolk (Bath,Edinburgh,-Canterbury), Odonton (London), Paraguay (Bath), Peck (Chelmsford), Perkins (Newcastle), Prince of Wales (Shrewsbury), Preedy (Chipping Norton), Rennie (Newcastle), Royal (Bury St Edmunds, Liverpool), Romano (London), S I L (Cambridge), Severon (Bath), Sharp (Shrewsbury,London), Solomon (Bath, Bristol), Sotherby (Bristol), Staines (Cambridge), [unidentified toothache remedy], Tooth Ache Fluid (Salisbury), Universal (Shrewsbury,London), Williams (Reading,Stamford,London).

15 Amboyna (60), Asiatic (24), Carbonic (15), Complin (68), Debraw (21), Du Barre/y (97), Duchess of York (37), Fothergill's toothache medicine (25), Hart (11), Katterfelto (10), Rooke (36), Stringer (83), [unidentified toothpowder] (28), Vegetable (29), Warren (22).

Greenough's Tinctures	568	26
Devonshire Tooth Powder & Tincture	281	24
Trotter's Asiatic Toothpowder	217	23
Jackson's British Toothpowder	654	18
Grey's Toothache lozenges	164 (1797-99)	13
Hamilton's Tincture for toothache	144	11
Burchell's Anodyne Necklace	401	1

Table 1: The nine most heavily advertised brands

It is noteworthy that there are only two toothpowders in this list, the rest being concerned with the relief of pain.

The geographical availability of these dental products was often wider than is suggested by purely local advertising. Reliance on announcements in the local press would, for example, lead to the impression that the citizens of Carlisle had a choice of only 6 dental products during the decade. Perusal of the small print of an advertisement placed in the *Caledonian Mercury* for 15 February 1790, however, reveals that D. Stewart's 'Oriental Dentifrice Powder' is, in fact, stocked by Alexander Wilson, a Carlisle mercer, as well as by dealers in unexpected towns all over the country. This reflects the fact that only a small proportion of the advertisements are inserted by medicine dealers, partly because of the expense, perhaps, and partly because their business is obvious to local people; far more advertisements are placed as a column filler by the printer himself. The wide distribution can also be hidden in such a phrase as 'sold also by all appointed Venders ... within the Circuit of this Paper'.[16] Were all 3,611 advertisements in the newspaper survey to be subjected to fine analysis, it seems likely they would reveal many of these products as being on sale in every small town in the country.

Manufacturers and proprietors

The proprietors of some 37 of these dental brands are known from the advertisements (Table 2):

brand	*proprietor during the 1790s*
Amboyna toothpowder	[anon] 2 Cecil st, Strand, London
Asiatic toothpowder	C.Clark (successor to Debraw),197 Fleet st, London
Berdmore's toothpowder	Mary Bartholomew, 163 Fleet st, London
Jackson's British Powder	Thomas Jackson, succeeded 1793 by James Barclay, 95 Fleet st, London
Burchell's anodyne necklace	Basil Burchell, goldsmith, 79 Long Acre, London
Byzantian dentifrice powder	D.Stewart, perfumer, 22 Prince's st, Edinburgh
Chemical dentifrice	Hopwood
Complin's specific	Edward Complin, chemist/druggist, 181 Bishopgate, London
Madame Du Barry's toothpowder	G.Donadieu, Charles st, London
Debraw's oriental dentifrice	Richard King, Chancery lane, London
Devonshire Toothpowder & Tincture	William Perry, surgeon, 3 Salisbury st, London
Duchess of York's toothpowder	[Harrison?], 56 Cornhill/C.Sharp, 131 Fleet st, London
Dr.Enoco's...Spanish...dentifrice	John Maxwell, Brook st, London
Emperor of Germany's toothpowder	invented by Ferdinand Joseph
Fuller's dentifrice universel	J.Fuller, 8 Covent garden, London
Greenough's tinctures	R.Haywood, 10 Ludgate hill, London

16 *Newcastle Chronicle*, 5 May 1798.

Grey's toothache lozenges	[Ward?] 324 Holborn, London
Hart's tincture	Hart, perfumer, 5 Piccadilly & High st, Kensington, London
Hatton's toothpowder	William Hatton, 28 George st, London
Hodgson's antiscorbutic tincture	Robert Hodgson, chemist/apothecary, 68 Snow Hill, London
Huxham's oriental toothpowder	Dr Huxham
Katterfelto's toothache tincture	Katterfelto, travelling showman
Marshall's balsamic tincture	Marshall, 6 Bloomsbury sq, London
Odonton	B.Honeywood
Paraguay toothpowder	Dr Senate
Peck's preparation for the teeth	F.C.Peck, practical chemist, Chelmsford
Preedy's tinctures	James Preedy, Chipping Norton
Rennie's newly invented medicine	Alexander Rennie, gardener, Gateshead
Romano's toothpowder	Romano, 23 Mount st, London
Severon's balsamic restorative	[Dr.Severon] Silver st, London
Sharp's asiatic toothpowder	Sharp, perfumer/cutler, 131 Fleet st, London
Stringer's oriental toothpowder	Richard Stringer, chymist, 19 Strand, London
Staines's toothpowder	James Staines, perfumer/hairdresser, Cambridge
Trotter's asiatic toothpowder	N/M.Trotter [various addresses] London
Universal dentifrice	J.MacHan
Vegetable dentifrice	B.Walkey, apothecary, 39 Rathbone pl, London
Mrs Wyles toothache medicine	Mrs Wyles, Chelmsford

Table 2: Names of proprietors derived from newspaper advertisements

The proprietor of Amboyna is coyly know as a 'gentleman of fortune' — hence he can afford to offer £1,000 to anyone who experiences toothache or tooth decay if they use his medicine according to the directions.[17] The proprietor or manufacturer of Grey's lozenges is an anonymous 'Medical Gentleman of eminence in his profession'.[18]

Just as many of the details of the proprietors remain as yet rather vague, so is information on the manufacturing process. It is not known how many of the proprietors actually produced the product themselves (some had the skills to do so but whether they also had laboratories is another matter) or whether they bought it in bulk from a back-street manufacturer and put their own labels on. Some passed the whole business of distribution (and maybe of manufacture) to agents, usually well-known wholesale chemists and druggists, such as Newbery of St Paul's Churchyard and John Wye of 59 Coleman Street (wholesale agent for Complin's and Simson's toothache remedies).[19] Carbonic toothpowder was handled for the proprietor by Paytherus and Co of 136 New Bond Street[20] and Paraguayan toothpowder managed by J. Pidding of 76 Oxford Street.[21] These agents in turn arranged concessions with dealers throughout the country as well as themselves selling retail. Of the small number of dentists who marketed their own products nationally on any scale in the 1790s (Jacob Hemet,

17 e.g. *Bury and Norwich Post*, 2 Aug 1797.

18 e.g. *Edinburgh Evening Courant*, 14 Jan 1799.

19 e.g. *Derby Mercury*, 28 Dec 1797 (Complin) and *ibid.*, 29 Aug 1793 (Simson).

20 *Cambridge Chronicle*, 20 Aug 1796.

21 *Bath Chronicle*, 8 Nov 1798.

Spence, George Bott and Bartholomew Ruspini), only the first seems to have used a wholesale agents (Bayley and Lowe of Cockspur Street).[22] Ruspini established his own 'warehouse' just up the road from his own house in Pall Mall. His overt justification for this was the incidence of forgeries, an occurrence which seemed at times to pre-occupy the producers of dental products, although it was also a very useful advertising ploy.[23]

Whatever the chain of production, this was a complex business; the organisation and resources required by the bigger producers to keep wholesalers and retailers supplied must have been considerable. It must also have spawned a host of specialist middle-men, from carriers and printers of labels to London agents for the receipt of advertisements to be inserted in provincial newspapers (often a particular coffee house keeper was appointed)[24] and the writers of the advertising copy itself.

The form of the advertisements and consumer expectations

Where a dental proprietary medicine is simply listed as one of the products sold by a printer, medicine dealer or perfumer, no details are given of its intended action or claims made for its effectiveness; not so in the case of advertisements placed by the wholesalers or producers. In contrast to the often concise advertisements for visiting dentists, these can be quite discursive:[25]

> *MADAM Du BARRY'S TOOTH-POWDER*
>
> This Dentifrice is in high estimation abroad and from its great success in this country, is declared to be unrivalled for its excellent properties and superior efficacy in cleaning the TEETH, rendering them white and beautiful, preserving the Enamel, eradicating all Scorbutic Humours from the Gums, bracing them to the Teeth, and effectually remedying all disorders to which the Teeth and Gums are incident.
>
> The Dentifrice to be had of the PROPRIETOR, C. DONADIEU, Charles-street, Soho-square, One Shilling per Box.

Behind the accretions, however, the message is very much the same whatever the product: all toothpowders and tinctures make the teeth white without damaging the enamel or gums, eradicate the scurvy in the gums, remove tartar, fasten loose teeth and reattach the gums, prevent further decay, sometimes guarantee a pain-free future, sweeten the breath and make decayed teeth less offensive. Trotter's toothpowder will enable users to avoid the 'pernicious practice of having their teeth scaled'.[26] Too-

22 Hemet claimed to prepare his products himself but appointed Bayley and Lowe, perfumers, sole wholesale agent (*York Herald*, 6 Mar 1790).

23 e.g. *Derby Mercury*, 3 Apr 1794.

24 Cranfield, pp. 199-200.

25 *Argus*, 12 Feb 1790.

26 e.g. *York Herald*, 30 June 1790.

thache remedies are usually effective in a few minutes and banish future pain. Simson's does this without destroying the nerve,[27] Grey's[28] (containing no particle of opium) acts by inducing in the tooth 'a plentiful flow of watery humour'. Whatever may be thought of the likelihood of these products working, one certainly derives from the advertisements a clear picture of the requirements of the consumer, or in some cases, those being inculcated by the advertiser. Mrs Wyles, preparer of a toothache remedy which effectually cures the complaint in a few minutes, targets her potential customers very shrewdly:[29]

> ... the drugs which compose this medicine, are free from containing any noxious quality, that it may be administered to an infant with the utmost safety, neither will it impair by long keeping: therefore persons who reside in villages, or remote situations, will find it convenient to keep this medicine by them, as the locality of their situations often deprive them of that immediate relief which the above complaint undoubtedly requires.
>
> This medicine not being a liquid, renders it convenient and portable for the pocket; it is therefore particularly recommended to gentlemen in the army, and navy, and to travellers of every description.

A final reminder that this is the world of commerce we are looking at, not that of health care.

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27 e.g. *Derby Mercury*, 29 Aug 1793.

28 e.g. *Edinburgh Evening Courant*, 14 Jan 1799.

29 *Chester Chronicle*, 4 May 1792.

DENTAL PRODUCTS IN FRANCE IN THE 18th CENTURY: their production, distribution, commercialisation

Pierre Baron and Xavier Deltombe *

Introduction

The production, distribution and commercialisation of dental products in eighteenth century France are best understood in the context of the nature of contemporary medical practice as a whole.

Physicians being very few (perhaps 1,000 in the whole of France), internal medicine was overwhelmingly in the hands of empirics, healers and charlatans of all types.[1] These 'doctors', whether opportunist surgeons or dabblers, some of them itinerant, practised some degree of medicine without let or hindrance from the authorities, obtaining permits to remain for a few days from the mayors of the towns through which they were passing. Even those who did not move on managed to practise with minimal interference. Also administering to the sick were members of religious orders, charitable ladies and volunteers.

If physicians were a rarity, surgeons were not — 452 in the Tours area (584 in 1786), 450 in the Dijon area and 306 for the Amiens area at the beginning of the eighteenth century, for example.[2] To these figures should be added the country surgeons and those who practised outside the guilds. Then there were the 'operators',

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1 *Dictionnaire des Sciences Médicales*, 60 vols (Paris: C.L.F.Panckoucke, 1812-20) [hereafter Panckoucke]: 'Charlatan: 'derived from the Italian *ceretano*, itself from *Coeretum*, a township near Spoleto, from where the first imposters, purporting to be followers of Hippocrates, travelled from town to town selling drugs and taking advantage of people's gullibility'. Alternatively, the word 'comes from *circulutanus*, a corruption of *circulator*; some authors give the derivation as *ciarlare*, an Italian word meaning to prattle'. Citing M.Biot in *Le Mercure de France* (n.d.): 'The charlatan, on the other hand, needs to impress people ... the daily columns of the news-sheets are where he establishes his reputation. Here he makes his arrogant boasts, here he flaunts his claimed discoveries, at length and with confidence. Sometimes he exhibits them ...'. The reader is further informed: 'all the cures he prescribes are exotic, powerful, rare and expensive. Most come from abroad; for he knows that whatever comes from afar seems better to the French. How can one not believe in the efficacy of a medicament which has to be procured from the other end of the world? How can one relieve pulmonary catarrh without 'Indian green honey' or 'Chinese Hockiac'?' (vol.4 (1813), pp. 543-55, entry by Cadet de Gassicourt).

2 François Vidal, Philippe Caron, Didier Granier and Henri Morgenstern, *Histoire d'un diplôme* (Paris: *Le Chirurgien Dentiste de France*, 1992), p. 6.

who, whilst being on the fringe of the guild system, had picked up a degree of practical skill over the years.[3] They frequently specialised — as bonesetters, oculists, truss-makers, herniotomists; at the bottom of this pile were the cutters for the stone (the lithotomists) and toothdrawers. (Surgeons, though very versatile and capable of performing a large number of procedures, rarely took on inferior work such as that of the dentist, bone-setter or truss-maker).

The toothdrawers, itinerant in the main, were frequently also truss-makers or oculists and often travelled around accompanied by a (sometimes quite large) troupe of actors. Using rudimentary instruments they performed basic procedures, mainly extraction, filing, cleaning or whitening the teeth. All sold drugs, a variety of cures, dentifrices and opiates, toothache remedies, etc. From the seventeenth century they had been subject to statutes[4] and obliged to undergo examination in order to be able to practise,[5] but those who observed these regulations were few in number. The majority of the rest managed to practise without ever being prosecuted.

It was in this context that Louis XIV took the decision to promulgate a series of Letters Patent designed to regulate the practice of medicine. Between May and September 1699 there appeared a series of Royal Edicts comprising 150 articles in all.[6] All these regulations and statutes were registered in the Paris Parlement on 3 February 1701. Having been put into force in the city of Paris, they were extended to Versailles in 1719 and to the provinces in 1723. However, although certain provincial towns applied them almost immediately (Lyons, for example, in 1725), others dragged their feet; they were not in force in Bordeaux until 1754 or in Marseilles until 1769, 70 years after the Edict of 1699.

These regulations were supposed to bring some order into the practice of medicine and, as far as dentistry went, require that dentists serve their apprenticeship to a member of a guild and sit examinations for the title of 'dental expert' before being allowed to practise. The regulations did indeed produce a few such 'experts' but it was a long time before they were to be found in all the large towns and dentistry continued to be practised by 'illegals' and all kinds of charlatans.

The medicine market

The manufacture and sale of remedies involved a whole host of people. The

3 Panckoucke: 'Opérateur, n.m., *operator*, one who performs operations ... up to a certain point it is possible to be an operator without being a surgeon ... but time, advances in knowledge and the numerous good operators of all kinds who are to be found everywhere at the present day will see the demise of these side-shows advertised so prominently in the newspapers, as well as of those paeons to miraculous cures which some oculists still cling to' (vol. 37, pp. 347-59, entry by Percy and Laurent).

4 Statutes of 15 February 1614.

5 Letters Patent of 26 April 1636.

6 M. Verdier, *La jurisprudence de la Chirurgie en France*, 2 vols. (Paris: D'Houry, 1764), pp. 665 and 797.

medicines prescribed by physicians were mainly prepared by apothecaries. Surgeons, dentists,[7] oculists, truss-makers, lithotomists and officers of health also produced and sold remedies, but unlike the physicians they prepared them themselves, or had them made up by druggists[8] or dealers. In fact, provided the law was adhered to, the manufacture of medicines was open to anyone, as is shown by a publication written specifically for ladies who ministered to the suffering.[9]

Dentists mainly sold products designed exclusively for the treatment of the teeth and gums — such as dentifrices,[10] opiate liquids,[11] antiscorbutic and toothache elixirs),[12] general remedies[13] and rattles and anodyne necklaces[14] — but were frequently involved in the sale of such general panaceas as orvietan.[15] Many of these remedies were subject to the legislation on the distribution and sale of drugs and medicines.

7 Here 'dentist' is defined as anyone who regularly treated the diseases of the mouth and teeth. This included some Master Surgeons and surgeons who went over exclusively to dentistry (e.g. Claude Guillaume Beaupréau, Guillaume Delga, Nicolas Dubois de Chémant, Jacques René Duval and Salgues). Panckoucke states: 'Dentiste, n.m., *dentarius*; a surgeon who treats the diseases of the teeth. ... When the dentist is only an empiric who extracts, cleans and fills the teeth, in imitation of what he has observed done by others, he should not be described either as a surgeon or as a dentist; to merit the title of expert, he must possess exceptional skill. In the early days of the specialty, dentists who were even more ignorant than the barber surgeons, operating in public, travelling around the countryside to extract and whiten teeth, deceiving the public with their fallacious promises ... and who, not content with breaking most of the teeth they attempted to extract, used to sell powders and liquids whose effect, hastening as they did decay in the teeth, brought them new patients ... (vol. 8 (1814), pp. 407-08, entry by Fournier).

8 Panckoucke: 'Droguiste, n.m., *pharmacopola*; this word is applied not to one who produces medicines, but to one who sells the basic materials from which pharmacists make medicines' (vol. 10 (1814), pp. 255-56, entry by Cadet de Gassicourt).

9 *Le Manuel des Dames de Charité, ou Formules de Medicamens faciles à préparer, Dressées en faveur des Personnes charitables, qui distribuent des Remèdes aux Pauvres dans les Villes, et dans les Campagnes. Avec des Remarques utiles pour faciliter la juste application des Remèdes qui y sont contenus. Et un Traité abrégé sur l'Usage des Saignées* (Orléans: N.Lanquement, 1747).

10 Panckoucke: 'Dentifrice, n.m., *dentifricium*, from *dentes fricare*, to rub the teeth: pharmaceutical preparation in the form of a powder or an opiate, designed to clean the enamel ... The dentifrices sold by some dentists should be treated with caution. They are made of powdered pumice stone, burnt alum and other very acid abrasives which soon destroy the teeth if used frequently ... powders are applied with a small brush ... opiate for the teeth is made of dentifrice and honey' (vol. 8 (1814), pp. 406-07, entry by Cadet de Gassicourt).

11 Panckoucke: 'Opiat: n.m., *opiatum*, internal medicine, sometimes official, most often proprietary, of soft consistency, the name derived from the Greek for "opium", since compositions containing opium were once so called ... only those which contain opium (and there are only two, theriac and diascordium), fall into this category ... as the name "opiate" should be reserved for those which contain opium, mesenteric opiates and dentifrices should be categorised as electuaries, and "opiate" kept for theriac, the two orvietans, mithridate, diascordium, *philonium romanum* [no English name given by Nicholas Culpeper, *The London Dispensatory* (London: 1653), p. 165 (ed.)] and Solomon's opiate, which contains opium only in as far as it has theriac in it' (vol. 37 (1819), pp. 464-65, entry by Nachet).

12 Panckoucke: 'Elixir, *elixirium*, a made up alcohol-based tincture' (vol. 11 (1815), pp. 434-36, entry by Cadet de Gassicourt).

There had been a whole series of regulations issued throughout the eighteenth century designed to control both remedies and their producers and sellers. As part of the policy to aid the sick and contain epidemics, Chamillart had been appointed Controller-General of Medicines in 1700. From 1709, when Nicolas Desmarets held the office, by an arrangement with Jean-Adrien Helvetius, 'King's boxes' of medicines (with instructions for their use) were sent to different regions of France according to need.[16] This system was continued throughout the whole of the eighteenth century at no charge to the patients, the entire cost being borne by the royal government.[17]

From 1728 a series of decrees regularised the system of issuing permits to sell medicine, although in fact the Chief Physician to the King had the ultimate say on the granting of licences for a part or the whole of the country. At local level, licences could be granted by aristocrats, princes, marquises or counts, magistrates and police lieutenants, as well as by a Faculty of Medicine or a College of Medicine — or Surgery,[18] as in the case of Anthoine Dutroncy,[19] who during his viva for the quali-

13 Panckoucke: 'Remède: *remedium*, from the Latin verb *remediare*, to cure, produce a cure. This name is given to all those means which are considered appropriate to bringing about a salutary change in the state of an illness. Whatever the form they take, they are considered "remedies" when they are utilised against some disease' (vol. 47 (1820), pp. 447-48, entry by Barbier).

14 Panckoucke: 'Anodin, or Anodyn, adj., *anodynus*, from the prefix "a" and *odyn*, Greek for "pain". The word "anodyne", in a medical context, means (as its derivation suggests) remedies which have the property of easing pain and even of removing it completely' (vol. 2 (1812), pp. 174-76, entry by Barbier).

15 Panckoucke: 'Orviétan, n.m., *orvietanum*, internal medicine, official, a soft made up compound ... This electuary contains fifty-four different drugs, a characteristic which makes it comparable with theriac; Hoffmann revised the formula and reduced the number of constituents to twenty-six, in the process cutting the quantity of opium by half: he called the result "improved orvietan" or *orvietanum prestantius* (vol. 38 (1819), pp. 361-62, entry by Nachet).

16 Jean-Adrien Helvetius (1661-?1727): his name is still associated with ipecacuanha, the Brazilian plant introduced into France in the seventeenth century and promoted initially by a dealer named Garnier, who involved Helvetius in selling it. Helvetius made a lot of money from the sale of this plant and, after a court case brought by Garnier, who wanted a share in the proceeds of sales, was obliged to compensate the dealer. Helvetius had obtained from Louis XIV authority to conduct trials in the hospitals and then the exclusive sales rights (See under 'Ipecacuanha' in Panckoucke, vol. 26 (1818), pp. 1-38, 2 pl, entry by Merat).

17 François Vidal, 'Les medicaments au XVIIIième siècle. Fabrication, vente et distribution. "Les boîtes du Roi"', *Le Chirurgien Dentiste de France*, 9 June 1994, pp. 41-44.

18 Matthew Ramsey, *Professional and popular medicine in France, 1770-1830* (Cambridge: CUP, 1988), p. 406.

19 Collège de Chirurgiens de Lyon, Livre pour les actes de légère expérience, 11 November 1728.

fication of dental expert, was questioned on drugs and medicines:

> We, the Master Surgeons of Lyons, have examined Dutroncy on various practical procedures concerning the diseases of the teeth and the different ways of extracting them as well as on the medicines and drugs which he uses to clean them.

On 25 April 1772 Louis XVI had instituted the Royal Commission for Medicine to examine individual medicines. Then the Royal Corresponding Society of Medicine [*Sociéte de correspondance de Médecine*], founded on 29 April 1776, was made responsible for controlling drugs and combatting epidemics. Finally, 29 November 1778 saw the inaugural meeting of the Royal Society of Medicine whose role was to settle all problems relating to medicine. The Paris Faculty of Medicine saw this as a considerable diminution in their powers.

Those who wished to obtain a licence to sell some product or other had first to put in an application, then appear before the Commission, accompanied by a lawyer or notary to testify to his probity as a businessman. If the application was successful, a licence [*brevet*] was issued, followed by a Patent Letter confirming the conditions and detailing the duration and geographical extent of the licence. The majority of these licences related to theriacs, anodyne powders or antiscorbutic elixirs but a fair number of permits were issued to dentists for the preparation and sale of remedies for caries, scurvy and aphthae.

Also subject to licensing, but from the beginning of the seventeenth century, were the manufacture and sale of orvietan.[20] (This medicine was essentially a general antidote to poisons, including snake venom; diluted in wine it became a cure-all and was also used on animals). The original royal grant was quite specific in its terms:

> It is expressly forbidden for any Operator or other person who dispenses drugs to use the name Orvietan, to counterfeit or to sell it, on pain of a fine of one thousand livres, even if he is in possession of Royal Letters, without the express permission of the said Contugi, originally Orvietan. Dated this day, 9 April 1647, in Paris, at the Great Chancellery ... Chritofle Contugi called Orviétan from Rome dispenses his unique and proven secret named Orviétan ... Heir to Jean Vitrario, successor to Sieur Hierosme Feranti, the original inventor of the said Orviétan, for the treatment of the diseases listed below ...

No dental malady is included in the list except 'stinking breath'.[21]

Exclusive rights to orvietan remained in the Contugi family until 12 July 1700 when Louis XIV appointed Nicolas Andry, former Dean of the Faculty of Medicine

20 Claude-Stephen Le Paulmier, *L'Orviétan, histoire d'une famille de charlatans du Pont-Neuf aux XVII et XVIIIièmes siècles* (Paris: Librairie Illustrée, 1893), p. 251.

21 Chritophe Contugi had taken as his second wife Clarisse Vetraria, the widow of Hyeronimo Ferranti or Fioranti (an operator on the Pont Neuf in Paris about 1600-1601) and of Verrier, called le Tramontan or Juan Vetrario. Chritophe Contugi, like Ferranti and Vetrario, had his own company of actors and wrote his own plays. After the death of Clarisse he married Roberte Richard, an actress in his company by whom he had fourteen children.

in Paris and a Doctor-Regent, to inspect its manufacture. However, the Contugi family who owned the formula, continued to produce the medicine, sold it wholesale and took commission on retail sales. At the same time Louis XIV also issued a licence to the Contugis which allowed Geneviève Contugi to produce orvietan jointly with her brother Jean-Louis.[22] On 10 May 1716 a Patent Letter renewed the right to manufacture to Florent-Jean-Louis Contugi, the son of Jean-Louis.[23] This right was confirmed by a new Patent Letter dated 10 April 1727:[24]

> Right to manufacture, market and sell orvietan accorded to Florent-Jean-Louis Contugi, son of the late Jean-Louis Contugi and Marguerite du Chesnoy. 2,000 livres per annum and 1,000 to the inspector.

In his will dated 7 October 1740, Florent-Jean-Louis Contugi left the right to his nephews Louis-Victoire and Charles-Louis Sagot.[25] However, on 27 October his widow, sister Marguerite-Françoise and Anne Contugi (wife of Louis Sagot) obtained the right to part shares in the manufacture and sale of the medicine.[26]

By a licence [*brevet*] dated 29 September 1741 Louis XV replaced Nicolas Andry with Charles Dionis,[27] who was henceforth entitled to issue permits to whoever could provide sufficient guarantees.[28] This right was accorded to Charles Dionis and his wife 'in place of the Contugi sisters',[29] and confirmed in 1772.[30] Dionis died on 18 August 1776 and the Contugi family had to have seals put on his

22 Archives Nationales (AN), O1 44 f°297 v°. Geneviève and Jean-Louis Contugi were the children of Louis-Anne Contugi, son of Chritophe and Marie-Anne Geffrotin.

23 AN, V5 1252.

24 AN, O1 71 f°116 v°.

25 AN, Y55 f°59.

26 Licence dated 27 October 1740 at Fontainebleau. AN, O1 84 f°491.

27 Charles Dionis was the son of the famous surgeon Pierre Dionis and the son-in-law of Nicolas Andry by his marriage to his cousin, Marie-Françoise Andry.

28 In this way Louis Lecluse, seigneur of Le Tilloy, expert dentist, obtained a licence to sell and to inspect sellers of orvietan for the three years 1 April 1772 to 1 April 1775. To obtain this right, he underwent examination by a commission and two notaries (Regnault and his colleague), and received his licence dated 26 March 1772. Dionis assigned him 'the right of inspection of all operators in the kingdom who sold orvietan without a permit issued by the said Maître Dionis' (AN, V3 193 f°101 v°).

29 AN, O1 85 f°333.

30 When the Royal Commission for Medicine was instituted on 25 April 1772, the Faculty of Medicine raised objections and presented to the King a petition expressing their opposition. Mention is made in the *Observations sur la Requête de la Faculté* of 1773 of the confirmation of Dionis's rights over the distribution of orvietan (Le Paulmier).

doors to exact the arrears due to them.

Another famous family of Pont Neuf operators had a permit to sell orvietan at the same time as the Contugis, namely the Toscanos. To do so, they needed authorisation from both the Contugis and the authorities. Joseph Toscano derived his permission to sell the medicine from a Patent Letter dated 21 December 1685 and sold the medicine 'like the unlicensed operators, on a stage set up in public squares where he attracted the crowd by innocent entertainment and this way made considerable sales'.[31] His sons Grégoire and Paul presented their orvietan at the Jardin du Roi and obtained a licence, confirmed in Grégoire's name alone on 11 June 1727.[32] The same day Grégoire was issued with permission to set up his stage.[33] His son Algaron Toscano succeeded in renewing the permits of his father and grandfather on 15 August 1771.[34] Another member of the Toscano family, Charles, who lived in Gaillac, possessed a licence to sell orvietan of his own manufacture dated 7 December 1758 and registered with the local provost on 8 December 1764.[35]

The composition of orvietan varied with the producer. It was clearly made in small quantities, although sold by a very large number of people. Undoubtedly there were several orvietans; Louis de Blache, for example, obtained his own licence to manufacture and sell on 10 April 1740.[36]

The names of large numbers of orvietan sellers are known, together with the dates on which they were granted licences. (However, it should be noted that there are also very large numbers of advertisements in which orvietan is not mentioned at all). An examination of the twenty year period 22 June 1762 to 17 September 1783[37] reveals the issue of 216 licences, to the following groups of recipients:

no occupation noted		59
surgeons		45
surgeon	22	
surgeon oculist	11	
former surgeon	2	
surgeon-major	2	
former surgeon-major	1	
navy surgeon	1	
former navy surgeon	1	
former hospital surgeon	1	
surgeon-herbalist	1	
surgeon & chemist	1	
surgeon operator	1	
operator surgeon	1	
operators		36
operator	33	
operator/botanist	2	
operator/botanist/chemist	1	
dentists		32
dentist	12	
surgeon-dentist	10	
operator/dentist	7	
oculist/dentist	2	
surgeon/oculist/dentist	1	
botanists and chemists		27
botanist	16	
chemist	5	
chemist/botanist	4	
botanist/chemist	2	
physicians		10
physician	4	
doctor of medicine	2	
physician/operator	1	
physician/botanist	1	
physician/chemist/botanist	1	
former physician	1	
oculists		4
herbalists		1
midwife		1
innkeeper		1

31 AN, V5 1252 f°43.

32 AN, V5 1252 f°43, AN, V3 1254 f°183.

33 AN, O171 f°175.

34 AN, V3 1279 f°79.

35 AN, V3 188 f°17 v°.

36 AN, V3 1797 f°155 v°.

37 From date of the licence issued to Nicolas de Sanctis, surgeon (AN, V3 198 f°48 v°) to date of the licence issued to Pierre-Bertrand Linguet, surgeon (AN, V3 198 f°175 v°).

It will be seen that the 32 dentists constitute at least one in seven of the recipients (the unspecified 'operators' and those licence-holders for whom no occupation is given might include dentists) and one quarter of the 124 licence-holders for whom the precise occupation is given.

As can be seen, there were several different kinds of permits or licences associated with orvietan: a licence to manufacture, a licence to sell and a licence to inspect the operators, dentists, surgeons, charlatans and shopkeepers — anyone, in fact, who was making money out of the medicine without having a permit to do so. So lucrative a business was it that, when rights appeared to be infringed, the injured parties were not slow to initiate proceedings.

A long running dispute took place between the Dionis and Contugi families over the proceeds of the sale of orvietan.[38] Charles Dionis died on 18 August 1766.[39] The Commissioner, Claude Louis Boullanger, had seals put on the doors to Dionis's first floor apartment at Cul-de-Sac de la Soudière in the presence of 'Misses Marie-Françoise and Marie-Jeanne Dionis, the older daughters, two of the beneficiaries'. But 'on the 21 August, Marguerite-Françoise Contugy, domiciled at rue Poupée, Paris, and Sieurs Louis-Victoire Sagot (a sergeant in the Piedmont Regiment) and Charles-Louis Sagot, the sons of Anne Contugy, objected to the placing of the seals'.[40]

38 Le Paulmier.

39 AN, Y12681.

40 The late Anne Contugy was the sister of Marguerite-Françoise Contugi (also written as 'Contugy' or 'De Contugy'); she was also the wife of Louis Sagot and the mother of Louis-Victoire and

Another interested party, a dealer in textiles, also objected. Françoise Contugi's agent, one Ozenne, requested that seals be placed on the furniture of the Dionis family to secure the interests of his client, who had[41]

> a life interest of eight hundred livres due to her from the deceased ... according to the contract drawn up by Maître Crevon and his colleague, notaries in Paris, on 5 September 1741, [she is] to be paid past and future arrears of the said life interest, together with all the other sums which she will itemise below as being due to her in the form of principal, arrears and costs, with interest ...

Henriette Magdeleine Besnier, Dionis's widow and guardian of the younger Dionis daughters, together with the older misses Dionis objected to the seals but accepted, on the other hand, that an inventory be made of Dionis's warehouse.

On 16 June 1777, the Commissioner presented himself at the warehouse together with Julien Edme Marie Regnard, a beverage vendor and spicer, who claimed that Dionis had permitted him to sell orvietan in powder and liquid form, as well as the Dionis daughters. Regnard produced his accounts and handed over to the Commissioner a sum of money derived from the sale of orvietan, keeping part of the total for himself. Françoise Contugi and the Sagot brothers received their dues as well. On 18 November 1785, Françoise Contugi stated before witnesses to Maîtres Boulard and Lair, notaries in Le Châtelet, that her nephews had gone abroad. Thus, she became the sole inheritor of the life interest in the sale of orvietan. Judge Augran ruled on 17 December 1785 that Françoise Contugi, in addition to her own share, was also entitled to the income that the widow and daughters of Dionis were obliged to pay the Sagot brothers, amounting to 125 livres apiece.[42] Subsequently the medicine fell into disuse and was much less used.[43]

The sale of dental medicines

It is quite clear that throughout the eighteenth century all dental practitioners, including the famous ones, sold dentifrices and medicines, and particularly those designed to cure toothache and strengthen the gums. Some even sold them by mail order:[44]

> Citizen Botot advises citizens throughout France that he deals with orders placed with him

Charles-Louis Sagot.

41 AN, Y12681.

42 Le Paulmier and AN, Y5136.

43 Perhaps after the abolition of certain regulations and of the guilds, it was universally available and hence lost its mystique. Nevertheless, a decree of 18 August 1810 confirmed the limited sales rights. The Codex of 1818 no longer mention orvietan (Panckoucke).

44 *Gazette Nationale ou Le Moniteur Universel* (GN), 13 Nov 1793, 408.

> with the greatest care.

Others, such as Joseph Daniel, dealt more widely: 'he sells pots for 3 livres and 6 livres and despatches them to anywhere in Europe'.[45] It seems that the sale of products was of considerable economic importance, if one takes into consideration both the tight regulations relating to the right to sell and manufacture them (contravention attracted fines),[46] and the court cases which were brought to enforce rights to income from the products.

In their advertisements, dentists often refer to the authenticity of their product. Botot extols 'the balsamic water which he has invented and which won the unanimous votes of the Faculty and of the Royal Society of Medicine'.[47] Laforgue declares 'These are the principles which I explained in a memorial I presented to the Faculty, who approved of my powder (for sale at 3 livres a box) ...'.[48] Botot warns the public against shoddy goods:[49]

> M. Botot considers it his duty to warn the public that ill-intentioned and dishonest imposters have the audacity to sell an elixir under his name ... it is similar in colour to the balsamic and spirituous water of M. Botot ...

In another advertisement, Le Roy de la Faudignère speaks of[50]

> Secret and approved remedies: odontalgic elixir of Sieur Le Roy de la Faudignère, Surgeon-dentist to the Prince des deux Ponts. This remedy, approved by the Faculty and by the Royal Commission for Medicine, is indisputably one of the most reputable for all ills of the teeth and gums. Enquiries to the Author's surgery, rue St Honoré, Hôtel d'Alligre.

Palermo also boasts of 'approval':[51]

45 *GN*, no. 43, supplement to 12 Feb 1793, 416.

46 Pellegrin was fined 500 livres, plus damages, for treating dental disease and distributing drugs and orvietan with having the requisite licence (Archives départementales du Gard, 4E 168).

47 *GN*, 18 Dec 1790, 659. This product is still sold today in pharmacies and drug stores under the name 'Eau de Botot'.

48 *GN*, 25 Jan 1790, 202.

49 *GN*, 18 Dec 1790, 659.

50 *Almanach Dauphin ou Tablettes Royales des artistes célèbres et d'Indication Générale des principaux Marchands, Banquiers, Négocians, Artistes et Fabricans des Six-Corps, Arts et Métiers de la Ville et des Faubourgs de Paris et autres villes commerçantes du Royaume. Présenté et dédié à Monseigneur le Dauphin, pour la première fois en 1772.* (Paris: Lacombe & Edme, 1777).

51 *GN*, 23 Mar 1791, 691-92.

> The true aromatic preservative elixir for the cleanliness and preservation of the teeth and mouth ... approved by the Society of Medicine of Paris.

However, many advertisements make no reference to 'recommendations' or 'approval'; we might be tempted to concluded the products on sale in these cases were not approved, for if they were, the advertisers would surely mention it since this could only strengthen the products' appeal. Thus Salgues, advertising in 1773 states that he[52]

> has for a long time made an Elixir to preserve the teeth, the properties of which are widely known; he has added to his first compound several drugs and simples ... he sells pint bottles at six livres ...

Nor does Ricci claim any official approval:[53]

> The author ... has also enriched the dental pharmacopoeia with two medicines, including one known as the Odontic Elixir ... the other is an Opiate ...

Borsary is similarly lacking in any claims: 'Sieur Borsary, surgeon oculist and dentist ... sells opiates, antiscorbutic elixirs and a toothache remedy ...'.[54] The same is true of Carnelli, who, having no particular recommendation to boast, stresses its intrinsic qualities:[55]

> Sieur Carnelli, surgeon-dentist to His Serene Highness Monseigneur the Prince de Marsan, Governor of Provence, in receipt of a pension from the Province, and a member of the College of Surgeons of Aix ... has fortunately discovered a sovereign remedy ... Bottles of this elixir cost 3 livres.

What would really reassure the buyer, however, would be the positions he held.

Other products without any special recommendation were sold by Garriot: 'he has an antiscorbutic opiate to whiten the teeth and strengthen them; he sells an Elixir which nourishes and firms the gums'.[56] Gondrain has his 'admirable elixir, which instantly removes pain in the teeth'.[57] Morel 'sells a solution of Peruvian balsam,

52 *Affiches, Annonces et Avis divers de la Ville et Baillage de Sens, et du Baillage de Villeneuve-le-Roi*, 10 Aug 1773.

53 *GN*, 29 Dec 1793, 75.

54 *Affiches de Sens*, no. XVIII (107), 25 Sept 1791.

55 *Affiches de Toulouse et du Haut-Languedoc*, 1789.

56 *Affiches de Rennes*, no. 37, 15 Nov 1786.

57 *Ibid*, no. 42, 6 May 1789.

which causes the gums to grow back and fixes loose teeth'.[58] Some,[59] like de Munault, sell 'everything necessary for the care of the teeth, and an elixir to prevent pain'.

Not all dentists advertised. Those who did may even have been in the minority, the rest relying for publicity on the reputation they built up from their practices, or on their books. Dental publications were very numerous in France in the eighteenth century and frequently contained details of remedies. Lecluse, for example, in his *Pratique abrégé du Dentiste* refers to his elixir, his 'Water for Haemorrhages' and his 'Astringent antiscorbutic lotion'.[60] Geraudly similarly lists all the dental products he has invented in his book of 1737.[61] In the foreword [*avertissement*] (which is, in fact, printed at the end of the book), he relates how his products were distributed:

> ... an Elixir to fortify and firm the Teeth, and make the Gums grow back, ... an Essence which relieves and immediately cures pain ... I would have marketed them myself had not Mademoiselle Callais, whom I had taken on as a pupil, begged me to allow her to do so. I yielded to her entreaties all the more willingly with the realisation that the purchaser would not suffer if she were engaged to sell them at a price lower than they could be bought for in an apothecary's shop, or at which they could be produced if I made them myself in small quantities.

Geraudly describes the dosage of his medicines and how they should be used, then gives his prices: 'Opiate: pots of different prices. The smallest cost one livre ten sols. The smallest phials of Essence and Elixir: 3 livres'. This passage confirms that dentists sold not only their own products, but also those of others (as did Mademoiselle Calais, when she sold Geraudly's),[62] and that dental products were sold not only by shopkeepers but also by apothecaries.

Dentists, then, were not the only ones to sell dental products any more than they themselves restricted their sales to purely dental medicines (orvietan being, as we have seen, a universal panacea). Surgeons too were active in the field, Viguie being a typical example. Viguie uses a miraculous product and markets it through shopkeepers:[63]

58 *Ibid*, no. 44, 23 May 1787.

59 *Affiches de Rennes*, 3 Nov 1784. De Munault claimed to have been a pupil of Bourdet.

60 Nicolas Henri Louis Lecluse, *Nouveaux éléments d'ondontologie, contenant l'anatomie de la bouche; ou la description de toutes les parties qui la composent, et de leur usage. Pratique abrégé du Dentiste, avec plusieurs observations. Traité utile au public* (Paris: Delaguette, 1754), pp. VIII-265. David 165.

61 C.J.Geraudly, *L'art de conserver les dents. Ouvrage utile et nécessaire, non seulement aux jeunes gens qui se destinent à la profession de Chirurgien-Dentiste, mais encore à toutes les personnes qui veulent avoir les Dents belles et nettes* (Paris: P.G.Mercier, 1737), pp. XI-161. David 128.

62 Although spelt 'Callais' by Geraudly, the more frequent spelling is 'Calais'.

63 *Affiches, Annonces et Avis Divers ou Journal Général de la France*, 15 Nivôse Year III [1794-95], pp. 1678-79.

> The remedy which we advertised as the most efficacious of known remedies for perfecting teeth in the most appalling state, for banishing the offensive odour which emanates from most mouths, and for supplying teeth to those who have none — that is to say, for strengthening in their sockets teeth on the point of falling out as a result of the broken down state of the gums - this incomparable remedy is to be had from Citizen Ray, 753 rue de la Loi, the office of the *Journal Militaire*. Citizen Viguie, the famous Paris surgeon, who frequently uses it on his patients, is among those who can testify to its admirable qualities.

Cap-de-Ville, for his part, claims to treat all illnesses — or almost all — including toothache. He does not specify how, but is probably referring to a 'miraculous remedy':[64]

> Citizen Cap-de-Ville, Naval Surgeon, purposing to spend some time in this Town ... also cures toothache instantaneously, without either seeing or laying hands on the patient ... He lives at 172 rue Fromenteau, Maison Républicaine, opposite the Palais Égalité. His name is on the door and he is always at home.

Not to be left out are the shopkeepers, spicers, druggists and agents of all sorts who made a living from dealing in goods of different kinds, including without a doubt, dental medicines and products. Such was the following lady:[65]

> Citizeness Berthelemot, confectioner and Seller of Perfumes, 53 and 55 Grande Galerie de Pierre, Palais de l'Égalité, always attentive to bring to the attention of the public whatever is of the very best, announces that she stocks a rose-coloured opiate, of a medium consistency, pleasant tasting and most delightfully perfumed. It completely whitens the teeth and destroys any tartar covering them if used continuously; it contains all the properties of every kind of odontalgic elixir, in that it fortifies and reattaches the gums. [She also sells a] Vegetable Powder of a grey colour, pleasant tasting and agreeable to the smell: this whitens the teeth perfectly, without removing the enamel, colours in one day the gums and lips a beautiful rosy red and maintains or restores to the mouth the freshness of youth. In addition, she has an odontalgic liquor which not only fortifies the gums and firms the teeth in their sockets, keeps them white, healthy, stops toothache, and arrests decay, but also imparts to the mouth the most agreeable perfume and freshness. For convenience of use, a few drops are to be added to ordinary or any kind of Toilet Water. In addition to these and other pharmaceutical items, Citizeness Berthelemot also has a publication which shows how these products are to be used and the fail-safe method of keeping the mouth in a good state.

Another dealer (trade unknown) declares:[66]

64 *Ibid.*, p. 1679.

65 *Affiches, Annonces et Avis divers ...*, no. 157 , 7 Ventôse, Year III [25 Feb 1795]. Individual advertisements, pp. 2595-96. A little later, an advertisement reveals that Citizen Berthellemot sells, from the same address 'the tonic [*eau de salubrité*] of citizen Jendy Delhoumaud, Consultant Doctor, Physicist and Naturalist, for diseases of the mind [*âme*]' (advertisement in no. 159, 9 Ventôse, Year III [27 Feb 1795], p. 2636).

66 *Affiches, Annonces et Avis divers*, no. 140, 20 May 1785, p. 1349.

> He maintains a warehouse at the premises of Sieur Bruère & Co. at the Passage du Perron, Palais Royal.

This last advertisement confirms the existence of both wholesale manufacturers and retail distributors.

Booksellers also sold medicines: 'Messrs Belloste, Brothers, licensed by the King, have closed the warehouse they had at Vannes for the distribution of their pills, which are still available from M. Robiquet, Bookseller, Place du Palais'.[67]

Some self-declared sellers of orvietan, such as Greslier, also sold other medicines.[68] Among his extensive stock is to be found an elixir which is both odontalgic and dentifrice, .'Greenough's Toothache Essence[69] for cleaning, preserving and whitening the teeth and for strengthening the gums'.[70] Greslier 'imports these items direct from England in order to avoid the counterfeits and imitations which have been produced in France'.[71]

The constituents of these analgesic products are largely unknown, since each had its closely guarded secret formula. However, some of them are fully described in dental texts and from these it can be deduced that the following components were commonly used by dentists to make up their products:

oil of cloves[72]	oil of guaiac	tobacco
brandy	spirits of wine	Water of the Queen of Hungary[73]
spirits of camphorated wine[74]	laudanum[75]	spirits of vitriol

67 *Affiches de Rennes*, no. 27, 23 Jan 1788.

68 *Affiches de Rennes*, no. 32, 2 May 1785. Grelsier may advertise himself as an orvietan seller, but no trace has yet been found of his being issued with a licence.

69 Imported from London. The packaging of Greenough's tinctures bore a grey lozenge.

70 *Affiches de Rennes*, no. 32, 2 May 1785.

71 *Ibid.*. He also imported such medical remedies as Stoughton's Elixir and English Taffeta. In Lemery there is reference to a product known as English Drops [Gouttes d'Angleterre].

72 Nicolas Lemery, *Cours de Chimie* (Paris: 1730): 'oil of cloves, like oil of guaiac soothes toothache'. [Eugenol — essence of cloves — is used in the same way today]. However, Panckoucke: 'Giroflier: cloves are a component of all dentifrices ... I have frequently seen this oil applied on a piece of cotton to the hollows of decayed teeth in order to destroy the nerve, and with no result other than an increase in pain' (vol. 18, pp. 393-96, entry by Vaidy).

73 Lemery: 'A decoction of flowers of rosemary'.

74 Lemery: 'Spirits of camphorated wine is a mixture of 1 dram of camphor to 4 ounces of spirits of wine. It is used in the treatment of scurvy and for malignant tumours. For toothache, a small piece of cotton soaked in the liquid is placed in the affected tooth or on the oral lesions. Camphor oil is also used in this manner for toothache'.

75 Lemery: 'Laudanum is an extract or decoction of opium. It is used directly on the painful tooth

spirits of nitre anodyne drops[76]

This mixture — or one similar to it — was applied to the painful tooth.

Lemery also gives contemporary receipts for such other dental ills as aphthae: spirits of alum, spirits of vitriol, spirits of salt, spirits of sulphur, Cyprus vitriol (copper sulphate) and alum. He cites tincture of antimony as being used against scurvy.

Another remedy very much used in the eighteenth century was the anodyne necklace:[77]

> Citizen Aubert jnr., successor to Citizen Aubert called Delamontagne, sole proprietor of the secret of the anodyne necklaces whose efficacy is recognised as easing teething in children and keeping at bay the fevers and convulsions which they occasion, will continue to supply this inestimable life-saver as before for 5 and 6 livres. He lives in rue du Temple, opposite 38 rue Chapon.

As with more general medicines, the production and marketing of dental remedies was a lucrative business and individuals were prepared to go to some lengths to defend their interests and hold on to their rights to sell, even if it meant attacking members of their own family in print and in the courts. The children of Leroy de la Faudignère (an expert in Paris) — Françoise (the wife of Jacques René Duval, a surgeon and dental expert in Paris) and her brothers, who were also dentists — had recourse to the law to settle their disagreement over the sale of their father's odontalgic elixir. Françoise had inherited the formula and advertised it in the provinces. In Rennes she stated:[78]

> It is my duty to inform the Public that it was to me alone that my father gave the receipt for his odontalgic elixirs and opiate for diseases of the teeth and gums: they continue to be available from the same address ... in Paris.

This was in 1787, shortly after the death of her father. Nearly thirty years later, in 1816, she was still fighting for the right to sell these remedies: 'this gift [of the

oil is also used in this manner for toothache'.

75 Lemery: 'Laudanum is an extract or decoction of opium. It is used directly on the painful tooth or on a plaster applied to the temporal artery. It is dried slowly to give it the consistency of pills or of a solid extract. Dosage: ½ grain to 3 grains'.

76 Lemery: 'Anodyne drops are liquid laudanum with the addition of volatile ammonium, oil and aromatic salts'.

77 *Affiches, Annonces et Avis divers*, Year III [1795], p. 1679. These find their modern parallel in advertisements for analgesic bracelets for rheumatism.

78 *Affiches de Rennes*, no. 39, 18 Apr 1787. Here 'Faudignère' appears as 'Faudiguère'. The address given (Pavillon Royal, Place Royale) is that of Françoise and her husband Jacques René Duval, Master Surgeon, and the former address of Françoise's father, Leroy de la Faudignère.

formula] was stipulated in my marriage contract'.[79] Her brothers did not accept that only their sister — who was not a dentist herself, although married to one — should possess rights over the sale of the elixir. They continued to sell the product, one of them in Metz, the other in Paris. Clearly, Françoise did not share their point of view:

> certain persons, using her name, have had the impudence to forge this Booklet[80] hoping thereby to deceive the Public by the Licences and certificates it contains ... They have admitted publicly in the Courts that they did not possess the secret of my Father's Odontalgic Elixir, complaining that he left it only to me and asking for it to be returned to the whole family so that all might benefit from it ...
>
> My brothers, in asking for justice, were themselves behaving, in the eyes of the Public and myself, in a most unjust manner: they declared that they were the sole proprietors of the Odontalgic Elixir and sold it with leaflets copied word for word from this Booklet ...
>
> The [brother] who lived in Paris even advertised in the *Feuilles Périodiques* that, in this controversy between him and myself, the Châtelet Court had found in his favour, without revealing, however, in what way, being content to say subsequently that it would soon become clear who was the forger, him or me.[81]

In the end, the Court gave the right to sell the elixir to all three siblings. On this decision, Françoise wrote:[82]

> ... I cite here an extract from the sentence meted out at the Châtelet Court: 'That the said Duvals shall surrender the Secret of Sieur Leroy de la Faudignère so that it may jointly benefit all Parties, according to their rights and privileges, or else pay into the estate the sum of one hundred thousand livres.

Conclusions

The sale of dental products in France at the end of the eighteenth century was big business. Quite specific legislation was designed on the one hand to prevent charlatans selling these products without a licence and on the other to protect those who did so legally. In fact, the vast majority of practitioners, if not all of them, manufactured their own products (or had them manufactured for them) which they

79 The late Leroy de la Faudignère, *Manière de prévenir et guérir les maladies des gencives et des dents, précédée d'un Avis sur son Elixir Odontalgique, dont il n'a transmis la Recette qu'à sa fille* (Paris: Gratiot, 1816).

80 The 1780 edition of her father's book (40pp., octavo, David 171). Earlier editions appeared in 1769 and 1775 (cited in the 1816 edition).

81 It is unknown whether there really was such a decision handed out at the Châtelet Court or whether the Paris brother merely gave that impression in his advertisements in order to sell the elixir.

82 The precise date of this hearing is unknown, but clearly it took place between the death of Leroy de la Faudignère sen. and the date of the edition of the book from which this quotation is taken, that is between 30 July 1786 and 1816.

then sold direct to the public or through agents, shopkeepers, apothecaries or other practitioners. They also sold toothbrushes. Some advised the use of anodyne necklaces and rattles; there is no proof that they actually sold them but it is known that these items, whilst not being dental products, certainly formed part of the gamut of remedies and were easily available. Practitioners sold not only dental products but also purveyed orvietan, a universal remedy which was used for toothache by virtue of its opium content. A licence was needed to manufacture, distribute and sell orvietan. Orvietan must have been sold in huge quantities, given the high number of permits issued. In addition to those who manufactured it there were the distributors and the sellers, and the inspectors responsible for checking licences.

Despite this apparently strict legislation and control, all of which was designed to ensure the regulations were observed, the law was not infrequently broken. Charles Dionis, officially responsible to the king for issuing licences to sell orvietan, himself breached the regulations since he was in league with such 'illegals' as the empiric operator, Trips,[83] and the beverage vendor Regnard, with whom Dionis had a stock of orvietan for sale.

Court proceedings took place when disputes arose, which proves what high economic stakes were represented by dental products.

83 Paulmier. Trips sold medicines other than orvietan in Pontoise, without a licence. The Faculty was informed and he was prosecuted.

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