

**CARDIFF DENTAL SCHOOL (1964-1971)
An orthodontist's viewpoint**

W A Barry Brown

Introduction

I was a founder senior lecturer at the Cardiff Dental School between 1964-1971 responsible for the Orthodontic Division. After qualifying with an LDSRCS from the Royal College of Surgeons of England in 1950 following undergraduate study at Guy's hospital, I gained varied clinical experience, including my National Service in the Royal Army Dental Corps,¹ before I decided to specialise in orthodontics.

In 1954 I was appointed to the orthodontic house job at King's College Hospital Dental School, working under Barry, later Professor, Leighton. I obtained a Diploma in Orthodontics in 1956 and was appointed orthodontic registrar at the London Hospital. In 1957 I went as a research assistant at the Dental School of the University of Illinois, under Professor Maury Massler, the Director of the Pedodontic Department. I worked on the chronology of tooth development in cattle and in 1959 obtained an MS (USA equivalent of MSc).² On my return from America I was appointed as a lecturer in orthodontics at the Dental School, Queen's University, Belfast. There I came under the guiding influence of Professor James Henderson Scott and worked on my PhD.

After four years of clinical work, research and diverse teaching at Queen's, I applied in 1963 for the senior lectureship and Head of the Division in Orthodontics at the Welsh National School of Medicine.

Cardiff Dental School

I first heard of the proposal to build a new dental school in Cardiff from James Scott, who was scientifically, medically and dentally qualified as well as being diversely knowledgeable in many fields. He had applied for the job of dean of the new school with responsibility for designing a suitable building and developing a teaching programme for dental students. His design, which I saw in rough sketches, was brilliantly original, based on a drum pierced with broad

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¹ W A B Brown, National Service in the Royal Army Dental Corps in Nigeria 1951-1953, *Dental Historian* 2010; 51: 76-84.

² W A B Brown, *Tooth Development in Cattle*, MS Thesis, University of Chicago, 1959, 118 pp.

picture windows. The dental chairs were to be arranged round the periphery of the floors so the students would work on their patients in front of the windows. All the services - gas, water, electricity, pressurised air and waste disposal - were to be arranged centrally, as were waiting rooms, stairs and lifts. Areas of the circle could be partitioned off to whatever number of dental chairs was needed for a particular discipline. It would have been a building of the future, allowing for the unpredictable changes of emphasis that could be expected in dentistry in the years to come.

Professor Brian Cooke, founder Dean

In 1961 Professor Brian Cooke, an oral pathologist, was appointed as dental dean-elect to the newly founded Dental School; and in 1963 Professor John Miller, a children's dentist, was appointed as assistant dean. I remember Cooke from the time he came to Guy's Hospital as a lecturer in Professor Rushton's Department of Oral Medicine and Oral Pathology. He was famous for his successful cram course for students wanting to sit the final FDS examination. People were slightly in awe of his single-mindedness.

Heads of divisions

I forget who at my interview in 1963 represented orthodontics, but I do know there was a conflict of opinion as to whether or not undergraduates should treat orthodontic patients. I was in favour and outlined how I would make it possible, remembering what I had learned from Leighton. Three other people were appointed at the same time as Heads of Divisions: John Bates from Manchester for prosthetics, Neil Swallow from the London Hospital for children's dentistry and David Adams from Edinburgh for dental anatomy. Des Eccles for conservative dentistry and John Wolfle for oral surgery were appointed a few months later.

We all had a confident view about our particular discipline and how to organise our divisions. Eccles and I had worked for our PhDs at Queen's University under the guidance of James Henderson Scott and David Adams had earlier obtained his BSc under him. I had worked in the Children's Department at the London Hospital and knew of Swallow's role in reorganising the curriculum. Wolfle and I had graduated from Guy's Hospital. Three of us in our previous jobs had helped in the design of a new dental school. I am sure the extent that many of our earlier experiences overlapped contributed greatly to the easy collaborative spirit of our discussions.

John Miller's role

Miller had an ambivalent responsibility for children's dentistry. Paedodontics was his speciality, but nobody was in any doubt that Neil

Swallow, a clinician with exceptional skills, ran the Children's Division. Orthodontics came under John Miller's overall guidance, but it was usually Brian Cooke who made the important decisions about any of the divisions. Cooke in his history of the school³ clarified John Miller's role and I quote selectively:

John brought to Cardiff all the knowledge and experience that counterbalanced my own.

He was familiar with the needs of the profession and ideally suited to selecting potential dental students, as well as handling the considerable public relation exercise between the School and Hospital with the press and television.

I was thus fortunate to have as a colleague and friend in those early days, a man so senior and respected in his discipline, who was broadly educated in languages, modern and classical, and with many interests outside dentistry including golf. He was a fully rounded university man.

Early days in Cardiff

We did not take up our full time appointments for a year, but assembled in Cardiff every other month for planning sessions. The location for the Dental School, the first part of a large planned medical complex, was on a peripheral site bordering playing fields and suburban residences. Only the steel frame of the Dental School and Hospital had been erected when I first visited the site. The first dental students were still to be selected and then programmed to complete their preclinical examinations in time for commencing their clinical studies at the new Dental School and Hospital, which was to open in October 1965.

At our first formal gathering as a team, Cooke presided and Miller was there beside him. Cooke frequently emphasised that we were a 'first eleven'. At these early meetings he stated what was expected of us. The two major concerns, because of the deadlines that had to be met, were the preparation of schedules for purchasing equipment and secondly deciding on the dental curriculum. We all enthusiastically participated in everything that needed to be done to get the school off the ground.

Professor Cooke as dean

Anyone meeting Cooke in his early days would have been impressed by his boundless energy. He approached the establishment of the new

³ Brian E.D. Cooke, *The History of the University of Wales Dental School from 1961 until 1982*, Cardiff: Published privately, 1997, 86pp.

school with boyish enthusiasm, selflessly devoting every working hour to the project. He records in his history why he had not originally applied for the post of dean of the new school:

I had not applied for the post when it was first advertised because I regarded my position as reader in oral medicine and oral pathology in Professor Martin Rushton's department at Guy's as an ideal one, allowing me to fill all my interests almost free of administrative responsibilities. Furthermore, I was in the middle of a research programme for a PhD involving tissue culture.

Cooke was highly regarded as an oral pathologist who knew his subject in great depth. He was an enthusiastic teacher, but had little research experience and had not obviously been involved in formal discussions on dental education in the future.

Insight into Cook's perception about the world may be gleaned from his warning to us when we were on student selection panels. Students should not be recruited from the sons of shopkeepers because they would not know how to behave. And yet, among the parents of his newly appointed senior lecture staff, one father was a labourer, another an electrician and a third a butcher.

Cooke dedicated his life to setting up the new school and said he could not understand why anybody would have interests outside dentistry or that one should read anything but dentistry, an unexpected claim for a person who had several of his own special interests outside dentistry. At one time there was concern for his health, with the medics implying, if he went on at his present rate, he might not survive. On one occasion he had one of his "turns", and Swallow drove him home. It was a beautiful sunny day with magnificent clouds, and Cooke told Neil: "I never realised how beautiful nature could be. I've had no time to look around."

Responsibilities

My colleagues, Adams, Bates, Swallow and I took up our full time appointments in 1964 and were accommodated in a small office block near the centre of Cardiff. We were kept very busy preparing the equipment schedules, deciding which was the best buy. Bates was the most informed about technical equipment specifications for his Division, always knowing exactly what he wanted. Apart from the responsibilities for our own Divisions, we discussed the requirements for shared usage needs. Cooke allocated to me the devising of the dental records system. I went around with Mr Morgan, the chief records officer for the Cardiff Group of hospitals, to look at recently installed systems. One of the problems in devising a scheme was that patients were not to walk around with their own notes and for that, a document lift had been installed with on each floor its own

service station. A system was eventually devised making the best use of the facilities that had been incorporated into the building design. Funding, as far as equipment was concerned, was on a generous scale.

The Heads of Divisions were responsible for working out the dental syllabus and for deciding the way the students would be taught. Cooke instructed us not to confine our thinking exclusively to our own disciplines but to consider what should be taught in the wider context of what kind of dentist the school hoped to see at the conclusion of the course. Swallow, because he had played a major part in the reorganisation of the dental curriculum at the London Hospital, was accepted by us as chairman and leader of the group. We settled on the allocation of firms of students to Divisions for fixed lengths of time where teaching would be by seminars. It had certain advantages, but with the serious disadvantage that teaching of subject matter had to be repeated for each firm of students. It wasn't equally suitable for all disciplines. However, I was willing to try any idea that meant that the teaching staff were more directly involved with students, and I believe that overall the system was especially beneficial for the students.

The detailed preparation and individual contributions made by each of us to devise an effective syllabus forged a sense of shared endeavour. We all wanted it to succeed. Cooke played no part in the discussions and Miller did so only occasionally. Both professors gave their approval to our final draft.

Among my immediate colleagues, all of whom had varied talents, it was apparent that Swallow had the clearest overall view on what dental education was about. Bates was most single-minded in establishing his own Division. Adams was a most agreeable person with an intuitive understanding about the foibles of his fellow men and sustained us with his dry wit. Des Eccles was a perfectionist who did everything to assure that the highest standards were achieved for conservative dentistry. Wolfle had, with the special needs of oral surgery, the most challenging task to fulfil.

Dental School architectural design

Cooke relates in his History⁴ that a competition for designing a Dental School in Wales as part of a new multi-million pound medical teaching centre had been announced in 1958. The *Architect's Journal* of September 1961 carried an article describing the result of the competition as disappointing:

The assessors have done little to further hospital planning by choosing three pedestrian schemes whose only virtue is that they produced a

⁴ Ibid.

workable hospital and no more; and possess little of any architectural merit (Fig 1).

Figure 1 The dental school standing alone as the first part of a multi-million pound medical complex



As mundane as the design was, it was a very spacious building and had excellent separate large and small lecture theatres. I was surprised to find how advanced the plans were for the new dental school before Cooke took over. The complete building had some excellent features,

especially in the provision of essential services of gas, electricity, air, water and the disposal of waste. There were impressive facilities in the basement for storage and the behind-the-scenes running of the Dental School and Hospital. But in my mind, the design had shortfalls as a building for efficient teaching because it had not been known before the school was built how the students were to be taught and in what group size. The facilities for clinical and theoretical teaching bore only a haphazard relation to the needs of the teaching scheme that was eventually devised, but happily space was on such a generous scale they were easily adapted.

My understanding of dental school planning had been acquired while participating in endless discussions at my last job about the design of the new Dental School in Belfast. I was very familiar with the need to balance the demands of one speciality against another. The Cardiff plan had one fundamental and wasteful flaw in its layout, which led to a lot of doubling up of facilities with the need for extra supporting staff. The building's footprint was in the shape of a capital T, the same as the Belfast school. The clinics were each located in the arms of the T separated from each other by the stairwell and lifts, while the administration and specialised services were contained in the stem. This arrangement effectively divided the clinics from each other, necessitating each of them having their own reception and waiting areas.

Cooke said⁵ he had very little to do with planning of the accommodation of the building; Dick Stephens, Head of the Department of Children's Dentistry at the Eastman Dental Hospital had prepared the plan. It must have been a prodigious effort to complete all he did in eighteen months between 1952-53. Stephens was, Cooke writes, the ideal man for the task for he was innovative, forward looking, imaginative, and particularly skilled in the practical aspects of dentistry. There were some very good features in the new building and some deficiencies, most of which were easily corrected as were two features that represented a serious hazard to children visiting the hospital. The Children's and Orthodontic Divisions were on the first floor reached by a wide staircase protected by a handrail supported by thin metal balusters, which were so widely spaced a child's head and body could easily pass between them. Fortunately, shortly after we had our first patients, Professor Miller walking up the stairs saw a child walk between the balustrades on to the roof of a small office overlooked by the stairway. That night, carpenters fitted sheets of hardboard to make the staircase safe. A few months later plate glass panels were fixed into place. There was a large rectangular pond by the main entrance, which I perceived, as a hazard to children, but the view was that when children came to the hospital, it was the responsibility of parents to see their children came to no harm. Some years later I saw that it had been turned into an attractive rock garden and now it has been planted with trees. These details are matters of trivial report but they reflect all that was involved in setting up the new school.

Epidemiology

In the midst of making preparations for the new dental hospital, Swallow, in collaboration with Professor Archie Cochrane Director of the Cardiff MRC Epidemiological Unit, identified a random sample of people in a valley community to the north of Cardiff who could be examined for their general dental condition. I, along with my fellow senior colleagues, did the examinations and we were left in little doubt about the need for increased dental resources in Wales. Radiographs were taken for a number of patients and I found it was a salutary lesson to learn that though we all had a wide range of clinical experience, we varied considerably in our diagnosis of what we saw.

The Dental Hospital is opened

After a year, the fitting out of the hospital was nearing completion and we saw the lavish accommodation available for our Divisions and the spacious facilities for clinical work. There were numerous small practical

⁵ Ibid.

details to attend to such as the best way to arrange instruments for each clinical place and the simplest way to assure materials like impression materials were ready to hand and in the right quantity. I was amused to find an automatic sweet packing machine for packaging impression materials in exact quantities.

Initially there was concern from where the patients would come and understandably some general practitioners were anxious about the effect the new hospital might have on their practices. We in our turn were concerned about what would persuade patients to come to the Dental Hospital rather than to their local dentists? Several Cardiff practitioners recruited to the staff were an invaluable link between the community and us.

The years unfold for the Orthodontic Division

The hospital opened for patients in 1965, followed a year later by the arrival of the clinical students who had completed a year of basic sciences. And so after doing no clinical dentistry for two years, my days once again became divided between clinical work, teaching, research and administration.

The appointment of Michael Harkness, a New Zealander, as lecturer in orthodontics rapidly transformed the activity of the Division. We set up together a variety of schemes for long term monitoring of treatment procedures. We prepared teaching material, involved students in simple investigations and started up a number of collaborative projects. His energy and enthusiasm were limitless.

Peter Cousins, a highly regarded Cardiff orthodontist, became a part-time clinical teacher. He was an invaluable link with general practitioners. But most important was his wholehearted sharing of the Division's activities.

Reg Wheeler, whom I had known at the London, was appointed as chief orthodontic technician. He was a gifted craftsman and helped in every conceivable way to assure the smooth running of the Division.

Garry Lewis, who qualified from Guy's hospital, originally worked at Cardiff under Cooke's guidance as a house surgeon and registrar but later became interested in orthodontics and was to be a most effective member of staff.

Some academic developments

There were the annual British Society for the Study of Orthodontics (BSSO), European Orthodontic Society (EOS), International Association for Dental Research (IADR) and Bone and Tooth conferences for us all to attend and present papers or posters. There were numerous less regular meetings of teachers at which I felt we should be represented. I was

invited to join the BSSO's committee and became involved in a number of sub-committees, frequently travelling to London for meetings.

There was never enough time to do everything as completely as we wanted, and without the help of Harkness, Cousins, Wheeler and very competent secretarial assistants, orthodontics would have appeared as a very tired old horse.

We were always looking for new ideas to explore and fresh ways to establish a high profile for orthodontics. One of the serious consequences for me with our involvement in so many spheres was a complete stopping of work on my PhD. I had collected all the data and made thousands of measurements from the cephalograms of families I had obtained during my previous appointment at Queen's University. My failure to work on the thesis was frequently on my mind. It was a job I knew I must complete, if for nothing else, than for my own self-esteem. The thought of the hundreds of hours that I had already spent on the study might be wasted, concerned me. I was betraying the families whom I had persuaded to become my sample and who had shared my enthusiasm and given up much of their time.

Help was on hand. When Harkness completed his MSc he offered to run the clinic for me for three months so I could stay at home and work on the thesis. All I had to do was to go in the afternoons to sign the letters that he had dictated. It was a marvellous gesture and without it my thesis would never have been written. It took me six months to complete my write up before I got it bound and sent off to the examiners.

Conclusion

This is a brief account of my memories of working under Brian Cooke to help establish a new dental school. His special contribution to the development of the school was to gather a team of experienced and highly qualified senior lecturers and to give each of them the freedom to establish their disciplines and fulfil their potential. He made great personal sacrifices in taking on the deanship and was never able to return to his early researches.

I pay too, a special tribute to my fellow senior lecturers who proved to be such agreeable colleagues and companions.

Acknowledgement

The photograph was kindly supplied by Cardiff University.