

OBITUARY

Professor Arthur Lewin

6 February 1926 - 28 July 2016

Arthur Lewin passed away in July. He had reached the venerable age of 90 at the beginning of the year. He was recognized internationally for his important contributions to Dentistry.

Professor Bertus van Rensburg worked closely with Arthur for some 46 years and wrote this tribute to an icon.

Tribute

Prof. Arthur Lewin can be regarded as the doyen of fixed prosthodontics in South Africa. He had an extremely perceptive mind together with the ability to summarize any situation rapidly and could apply whatever he had learned.

He was born in Oudtshoorn. His father was educated in Germany as an industrial chemist, whilst his mother came from Swellendam. Arthur the youngest child in the family was full of life and sports and often in trouble through his pranks. He was eventually sent to a Marist Brother's in Uitenhage so that the Brothers could teach him how to behave and to learn all about discipline.

Arthur enrolled in the Faculty of Dentistry of the University of the Witwatersrand after he matriculated. His peers do not remember him for his academic prowess but rather as the cheerleader of the Wits students at inter-varsity meetings against Tukkies for two different years. Prof. Phillip Tobias told him when he joined the Senate of the University of the Witwatersrand, Johannesburg, that he would never have thought a cheerleader would ever have a seat in the Senate!



Prof Arthur Lewin

Arthur met a lovely, highly intelligent young lady from Klerksdorp in his final year of study. She was Joy Owsianic. They were married in December 1949. This marriage lasted for more than 60 years, ended only when she passed away after a long illness.

Arthur joined a dental practice in Klerksdorp after he qualified. This gave him the chance to become a real "wet-fingered" dentist. The practice had branches throughout the Northwest province and Arthur used to visit the outlying areas when there were cattle auctions in the towns. Treatment provided at these branch practices consisted mainly of extractions and dentures. Impressions and bites were taken the same day. The dentures were completed in Klerksdorp and sent off by post. A Joseph Rodger's penknife was placed in the box with the dentures. The idea of the penknife was to provide the proud owner of the new dentures with a tool to ease the denture where it was hurting!

Dr Lewin became an avid golfer. This hobby was curtailed because of a knee operation and was replaced by his becoming a radio-ham. He established "comms" with many people but one special contact was a famous dentist named Stan Vogel in Los Angeles. When Stan attended courses over the weekends, he used to record the lectures and called Arthur on the following Monday evening, SA time. He told Arthur where he was and transmitted the lecture over the airwaves to Klerksdorp. The mutual interests led to Stan urging him to come to Los Angeles to meet Peter K. Thomas and others so that he could improve his knowledge of occlusion and gnathology by attending the courses on offer. Arthur did meet with Peter Thomas, Charles Stuart, Harvey Stallard and B B McCullum and became one of their followers. He came back full of knowledge and ideasplus a bag of articulators on his back, ...as Prof. Shepherd from Wits once said.

Dr. Lewin urged his colleagues to obtain comprehensive mouth records by using a face-bow, check bites, hinge-axis registrations and especially the pantograph. Arthur trained his technicians, notably Cliff Prew, in the skills of gnathology. He left Klerksdorp a few years after his return from Los Angeles and relocated to Johannesburg. The reason for this move was that many of his patients were from Johannesburg and they convinced him to move. He established a very successful practice in Lancet Hall and for many years worked closely with Cliff Prew. He and Cliff subsequently moved to the Rosebank Clinic together with the patients.

Arthur became friendly with Prof. C J Dreyer who was Dean of the Faculty at Wits. Jan Dreyer introduced him to dental research, which he found he enjoyed. There was no Head of the Department of Restorative Dentistry at that time and Prof. Dreyer invited him to assume that position. He accepted the offer during 1969 but retained the right to limited private practice. He tutored the first graduate student in 1969 and started with the next group in 1970. He stressed the importance of gnathology and insisted that the graduate students themselves had to plan, design and do the wax-ups of the cases they were treating.

In his continued interest as a radio-ham he made contact again with a hobbyist called Jasper, with whom he had spoken in the past. Jasper told him he was doing research at the then "Jan Smuts" airport to determine how the earth and tarmac deform when a large plane lands. These data helped the engineers to design and calculate the strength required for the tarmac. Arthur asked him how it had been done. The answer was by means of strain gauges. Arthur's reply was if you can do that, then I can use the same type of instruments but just much smaller to calculate how a tooth deforms during mastication. Many hours went into this research. Tests were also done when a tooth was dehydrated and when water was added to it. The idea was to compare the distortion of a neurologically vital tooth to that of a non-vital one.

His next project led to the invention of the Electro-gnathograph. This instrument uses Hall-effect transducers to sense movements of the jaw, recorded as alterations in the strength of the magnetic field of a small magnet attached to the mid-incisor point of the mandible. Arthur built the prototype of this device himself, followed by another design with the help of Engineer Nicol from Siemens.

This instrument was eventually produced and distributed by Siemens AG and more recently by Bio Research in Milwaukee. All graduate students under Professor Lewin used this device for the recording of unconstrained jaw movements (or jaw movements with as little constraint as possible), on the patients they were treating.

Professor Lewin retired, as Head of the Department of Restorative Dentistry when he turned 65, in accord with the rules of the University but he remained involved in an advisory capacity with the recording of jaw movements. His friend, Jim Booth from Montana, has carried on clinical research work, which has also now been extended to include Electro-myography.

Arthur had a further 15 years as a Professorial Research Fellowship at the Dental School. The students, especially the post-graduates, at Wits unfortunately lost out on his expertise and the zest for research and the guidance that he offered.

Prof. Lewin published numerous papers and lectured throughout the world. He was recognized as a pioneer contributor to the analysis of jaw movement and masticatory physiology and received honours from many institutions.

I hope that I was able to demonstrate in this short tribute that Professor Arthur Lewin can be regarded as the doyen or a great explorer in the field of Prosthodontics in South Africa. I salute Arthur Lewin for his achievements. I regard myself extremely fortunate to have been closely associated with him for more than 46 years.

Bertus van Rensburg