Recollections as told by Alton Moore

Allan Gibson Brodie

Al Moore spent four years as a faculty member at the University of Illinois after completing the orthodontic program in 1944. During that time Al was influenced by the great pioneers of orthodontics including among others William Downs, Holly Broadbent, Charlie Tweed, and the foremost academic leader of the time, Allan Brodie.

Allan Brodie earned his DDS from the University of Pennsylvania in 1919. His interest in orthodontics led him to Edward Angle's school in Pasadena where he entered Angle's last class in 1925. Not known for plaudits of his students, Angle made an exception by praising Brodie as 'the greatest student he ever taught' - quite an honor from the most renowned orthodontist of the time.

After a few years of orthodontic practice, Brodie was lured to the University of Illinois in 1929 by then Dean Noyes to establish the first US graduate orthodontic program. In addition to his duties as chairman, in 1934 he earned from U of I a MS degree in anatomy and histology. By 1940 he also earned a PhD in anatomy. His organizational skills led to his appointment as Dean at Illinois from 1944 until 1956.

Al was keen on explaining to our students the trials and tribulations involved in the development of the cephalometer by Holly Broadbent during the 1920's and Broadbent's large collection of serial headfilms. Brodie and Broadbent collaborated on this collection and in 1941 Brodie published his famous article on facial growth (On the Growth of the Human Head From the third Month to the Eighth year of Life. Am. J. Anat. 68 No. 2, 1941). But here is where Al challenged our students.

Al brought logic and detective zeal to the classroom challenging our students to dissect, scrutinize, and locate the 'fatal flaw' in the literature which even went to the work of Brodie, his mentor, colleague, and role model. As Al would tell the tale, Broadbent brought each child in his study back for additional headfilms several times each year starting within a few months of birth. His staff would prepare a tracing for each girl and boy at each time frame. A second tracing would be overlaid on the tracing of a same gender child of the same age to form an average of those two. As a third headfilm of the same age and gender child became available, that tracing would be overlaid on the former average and thus a new average tracing was produced. This resulted in a series of average tracings of boys and girls through their growing years. In effect each age standard was an average of an average, etc. Does this seem OK? Not to Al.

Brodie's conclusion in his 1941 article was that as a child ages the later tracings were merely enlarged versions of the original tracing, what Brodie called 'Constancy of the Pattern.' Therefore the orthodontist only needs that first headfilm to plan and treat the patient since whatever pattern the child displayed would be maintained with age. But Al saw that growth was more sporadic in amount and direction with time. Perhaps the child would grow more vertical for a time followed by a change to more horizontal for a time. Even a stair step effect could be seen for some. So Al challenged our students to find the 'fatal flaw.' In this case it was the

averaging of each new tracing with the others of each age, thereby eliminating all characteristics of individual variation. The moral of the story was the need for periodic headfilms to see change because of growth and / or treatment rather than relying only on the original film and concluding a maintenance of that initial pattern.

PS from Bob Little: My 38 years of teaching cephalometrics to graduate students was based on not just the great lessons but also the teaching techniques of Al Moore. Al ran the first 10 years of our joint time while I stood by and absorbed not only the facts but his style of teaching. There could be no better lesson than watching a Master at work.