"The First Class"

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On a dreary morning, typical of early February in Chicago, Doctors Bell, Downs, Jentzsch, Naftzger, Wright and myself, met with Dr. Noyes and Dr. Brodie in the old school building. The year was 1930. Dr. Noyes gave us a brief summary of the path orthodontic education had pursued until that time and spoke of his desire to establish such work at the graduate level in the university. Dr. Brodie spoke on the aims that had been set up for this department. These were the preparation of students for the practice of orthodontia, for research and for teaching. These aims I believe are still the objectives of the department. With these remarks by Dr. Noyes and Dr. Brodie the Graduate Department of Orthodontia of the University of Illinois was officially opened.

One must realize the humble beginnings of the department to be able to appreciate what it has become. The Old Building was of a period characterized by architecture of the Rube Goldberg variety. It was cut up and seemingly twisted, with the floors set at half levels and quarter levels and tied together with circular staircases where death forever lurked. It was scrupulously clean, kept so by "Old Faithful" Paul but nevertheless a far, far cry from the fine building that houses the department today. We shared the space occupied by the Children's Clinic and by undergraduate orthodontia. This seriously hampered all three efforts.

In those days the course started with two days of written examinations, designed to determine whether the advised preliminary studying had been done. The subjects were the Anatomy of the Head and Neck, Histology, Embryology and Orthodontia. The results must have been discouraging because Dr. Brodie started right from scratch. He spent a great deal of time with us in the mornings and some afternoons. The first hour and a half or two were spent on the subject of Head and Neck Anatomy. We were held strictly accountable for the factual material and the correlations were worked in by Dr. Brodie as only he can do it. The rest of the mornings were devoted to technic. We had the filing problems the same as those you have had. We had jig-minded members in our class as I suppose every other class has had. The soldering problem followed the same pattern, the plaster mixing and the hand carving of blocks were done under a task-master who always had perfection in mind and knew how to stimulate his scholar never to be satisfied with less. Note that we had no mechanical plaster-mixers or model-trimmers in those days.

The afternoon sessions were divided between anatomy dissection and histology. The dissecting laboratories were the Old Building at its worst. They were poorly lighted, terrifically hot in the summers and cold in the winters. Even under these poor conditions Chet Wright was able to discover an atypical soft palate muscle. The only good aspect of the time spent in the laboratory was the usual afternoon interlude over at the University Inn, otherwise known as "The Greek's." I believe we learned more anatomy at "The Greeks" than in the lab. If there is anything

which stands out in my mind it was the "bull sessions." We ironed out among ourselves theories on all the subjects being studied, as well as others not studied. The afternoons were devoted to histology. This was under the direction of Dr. Schour who made it a living study instead of the usual one of dead cells. Dr. Schour was another teacher who knew how to stimulate his students to ever greater effort. Dr. Noyes gave us a few lectures on histology and his collection of slides from Dr. Oppenheim were very valuable.

After filing, soldering, and block trimming were finished we went into the technic of band formation, arch-bending, and accessory manipulation. Meanwhile, the problem of plaster impression-taking, impression assembly, painting and pouring were going steadily ahead. I can assure you, speaking for myself, that I have made every mistake possible and I still wonder how I managed to get along.

Then came the great day we were in the clinic. How Dr. Brodie managed to obtain all the cases we had was the miracle of the day. As the course was only organized on short notice, the cases were of every conceivable nature with a high percentage of Class III and bimaxillary protrusions, and these on adult patients. That we managed as well as we did was due only to the careful guidance of Dr. Brodie. I don't know that any of the subsequent classes ever had a nickname for Dr. Brodie, but it remained for Bob Naftzger to hit upon the "Potentate" as the name which stuck with our class.

After the head and neck anatomy had been covered we went into the study of growth and development. One must stop and realize that 18 years ago our knowledge was more limited than today. Not that we have all the answers even yet. Dr. Broadbent had been working on his cephalometric x-rays just a short time. His serial studies had not been in progress sufficiently long to give information. Dr. Krogman was at work on the craniostat but only on dried skulls and this was limited. The works of Brash, Keith, and Campion, and others were important. All these works were more or less limited, but were in the right direction. The department had no Broadbent cephalometer as yet and we had very little of the gross and intimate picture of the head as we do today.

Dr. Krogman gave us an evening series of lectures at the University of Chicago on the comparative aspects of head growth. This was a wonderful experience for us and we thoroughly enjoyed it although I am certain we did not understand all of it.

Dr. Wuerpel was another lecturer whom our class enjoyed. He gave us a background of events surrounding Dr. Angle and the early days of the orthodontic profession. His kindly advice and his trips through the Art Institute I am sure are remembered by all of us. It is wonderful that he is with us for this meeting.

The study of the forces of occlusion was given us with care and thought and are as valuable today as then. If ever a class had the fundamentals of occlusion and the forces operating on a denture literally hammered into it, we were that class. Many a session at "The Greek's" was devoted to going more fully into this phase of theory.

Just the afternoon before one of our examinations which was to take place on May 15 some of the fellows went over to a little lake in Michigan and spent the night fishing. They were back in the morning a little bit tired, but happy. They were reluctant to show the "Potentate" the catch of fish because they knew him to be a fisherman also.

Eighteen years ago our concept of bone growth in relation to orthodontic tooth movement was markedly different from that of today. We thought that if one could obtain correct proximal contact, correct axial inclination and proper interdigitation so that normal function could operate over the dental units, alveolar bone would be built and the underlying basal bone would promote the growth of the maxilla or mandible. We thought in those days that if we could get teeth into arch form, and if the arches could be brought into correct mesio-distal relationship, and if these teeth were held in position, the underlying bone would of itself bring about an architectual rebuilding of the basal bone. We believed in "Wolff's Law." It was only when we made an evaluation of treated cases using head x-rays in 1938 that we finally realized we had misinterpreted it.

The etiology of malocclusion was held to lie mainly in deviations from normal function. Class I was a matter of slipped contacts, premature loss or prolonged retention of deciduous teeth or abnormal musculature. In Class II malocclusion, we were taught that abnormal breathing with its attendant abnormal function, caused the deformity while in Class III, sore tonsils and/or imitation were held to be the causative factors. Malocclusions due to inheritance were completely discounted. While abnormal function of musculature can and does alter the growing dentition, it is not the prime force that causes most of our malocclusions. Something within the growing bone that limits its size or shape must be the responsible factor.

It is said that a fool rushes in where angles fear to tread. The orthodontic ideas prevalent eighteen years ago placed practically no limit on orthodontic treatment. As newcomers to the profession we felt that we knew the answers and even some of the questions. We knew how to move teeth with our appliances, but somehow and some way they did not always move as we wished, nor did they always stay. It was only after much sweat, some tears and many resorbed roots that we found out that orthodontia did have limitations.

One thing which I feel was stressed was arch form. We went into the problem of tooth form in relationship to arch form very, very carefully. We were always reminded that an arch too wide would collapse. This I feel has been born out quite consistently. The use of extraction in those days was never mentioned. The question had been a controversial one many years before and, as far as the followers of Angle were concerned, a closed subject. One can still call it a controversial subject, each individual deciding for himself the correct course.

Dr. Angle had contemplated a trip to the department the first year the course was underway and it was with deep regret that we heard of his passing. We had all hoped to meet him in the flesh.

Anchorage is one of the keystones to success or failure in orthodontic treatment. Our class was thoroughly schooled and drilled in anchorage value. Some of the first cases treated in the department are classics in showing the value anchorage plays in treatment. We thought in those days that it was possible to move teeth distally. All our ideas and appliance manipulation were directed toward the objectives of keeping our anterior segments intact and our posterior teeth distally in cases where arch length had been lost. You know some of the answers today.

At the end of the time devoted to dissection we were given individual problems. At that time we all worked on the problem of tooth form in a particular species of animal. One had the horse, one the cow, one the dog, one the sheep, and I drew the cat. Those men having the cow, sheep, and horse got their material by going out to the stock yards. I had to get a cat from another source. So I got in a car and scoured the neighborhood for a cat and finally found a boy who hunted for and gave me a large black one. As he handed me the cat he asked, "Mister, are you a scientist?" That was the crowning touch.

In order to get the head for study I placed the animal in a round container in the Histology Department and added an ether-soaked wad to put it to sleep. I waited for what I thought was a sufficient length of time and then removed the top from the container. The cat flew out in my face, bounded in a great arc of almost fifteen feet and then lay down and died. And that is how I almost became a scientist.

Toward the end of the course we all wished to duplicate our models. In those days we used a gelatinous compound much like glue. It took a long time to jell and we got the queerest results as well as reactions. Most of the glue got in the wrong places at the wrong time with results not pleasing to the person or personality.

Looking back over the past eighteen years one is struck by the many impressions which stand out in one's mind. The first of these is that the orthodontic profession was in a very chaotic condition. There was a great deal of heat but no light. The profession was lead by emotion rather than knowledge. Many of our former ideas could not stand in the light of present knowledge. Many of our present ideas were advanced years ago. But one thing I am grateful for and I feel the balance of the class is also, and that is that I was privileged to be a member of the first class. We owe a great deal to Dr. Brodie who has inspired each and every one of us to seek the truth, practice with honesty and further the profession of orthodontia.

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