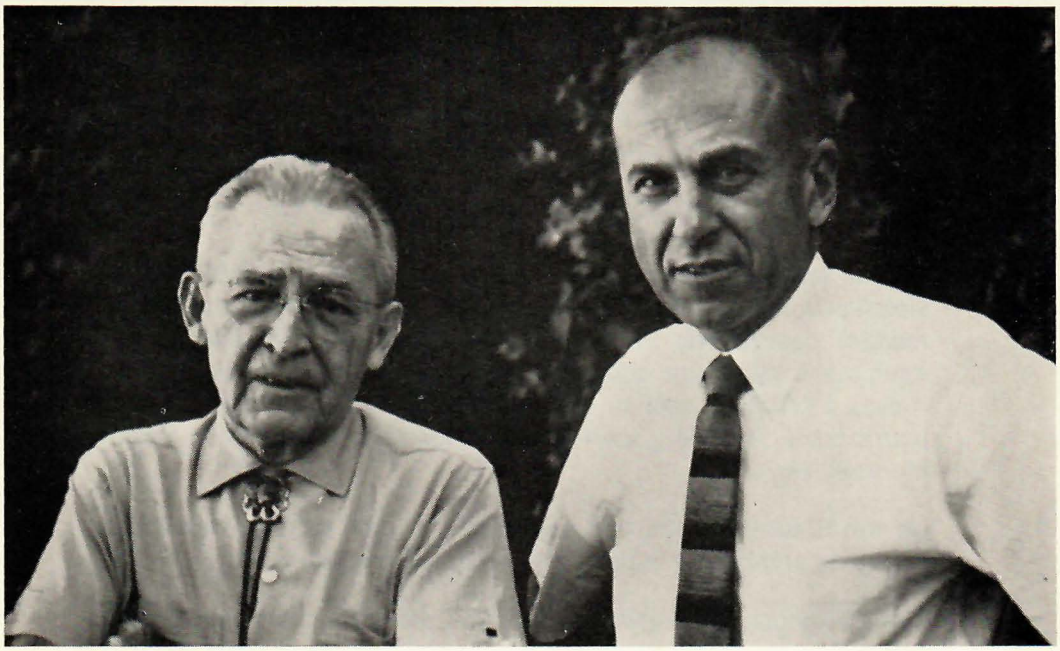
Dr. Charles H. Tweed



It would be difficult to catalog the contributions to our specialty that have been made by Dr. Charles H. Tweed of Tucson, Arizona. It was with feelings of delight and humility that I accepted his personal invitation to visit him in Tucson at the Tweed Foundation and to interview him for the readers of the Journal of Practical Orthodontics.

It is characteristic of Dr. Tweed that he would not permit serious recent illness to postpone his commitment for this interview. I am happy to report that he is well on the way toward complete recovery. The interview was arranged to coincide with a scheduled Edgewise course in the Tweed Technique being given at the Foundation.

The course was co-directed by Dr. Tweed and Dr. Levern Merrifield, Ponca City, Oklahoma. The remainder of the teaching team consisted of Dr. Montie Furr, Tucson, Arizona; Dr. Irving Buchin, Forest Hills, N.Y.; and Dr. James J. Cross, Ardmore, Oklahoma. This is an experienced group of instructors who have worked together for several years. The proceedings are highly organized and practically every moment of the students' time is charted and utilized. In addition to lectures and demonstrations covering all facets of the Technique, a vast amount of effort is placed into wire bending, all correlated to treating a malocclusion on typodonts. Although the students are hard at work, there is a relaxed atmosphere and an obviously friendly relationship between the entire teaching team and the students. Everyone is called by his first name and everyone knows exactly why he is here.

It was in this environment that our interview was conducted and, to me, it was an unforgettable experience.

SIDNEY BRANDT, DDS,
Interviews Editor

DR. BRANDT: As you know, I represent the readers of the Journal of Practical Orthodontics and I want to discuss with you many of the thoughts and ideas that are uppermost in the minds of orthodontists. Your courses, your influence, all the contributions that you have made and those of the Tweed Foundation have caused many practitioners to follow your teachings. And now, with the publication of your two volume "Clinical Orthodontics" the profession can even get a closer look at your technique. Let me note here that I plan to refer to your books frequently during this interview. I have researched them in preparation for this occasion and I would like to extend my congratulations to you for producing such a major contribution to our profession.

Let us start this interview with a few thoughts about your own career. You have now been practicing for some 37 years. Would you please tell us how and when you became interested in orthodontics?

DR. TWEED: Sid, let me thank you for your kind remarks. I have been practicing orthodontics for 39 years rather than 37. I first became interested in orthodontics approximately 43 years ago. At the time I was practicing general dentistry in a small mining camp in Ray, Arizona, and often visited my friends in California, particularly Cecil Steiner and the late Charley Boyd. I must confess that observing their affluence and comparing it to mine resulted in the first urge that I had to get into the specialty of orthodontics. Then, too, I had 3 daughters and the time was rapidly approaching when, to give them better contacts and better schooling, it seemed advisable to move from my location in Ray to a larger city where more educational advantages were available.

DR. BRANDT: What sort of treatment were you rendering to your patients in the beginning?

DR. TWEED: Well, Sid, do you mean from the beginning of my career as an orthodontist?

DR. BRANDT: Yes.

DR. TWEED: The first six and a half years of my orthodontic career were spent adhering strictly to the precept of Dr. Edward H. Angle which as you know was one of non-extraction.

DR. BRANDT: How and when did you become dissatisfied?

DR. TWEED: I would say that it was approximately 3 or 4 years after I had started the practice of orthodontics and had limited my practice to a non-extraction procedure that I became rather appalled by the fact that I was unable to create the beautiful harmony of facial esthetics that Dr. Angle seemed to think went hand in hand with proper orthodontic procedures.

DR. BRANDT: Now, won't you also tell us how you embarked on the famous 100 cases that you retreated with the removal of permanent dental units?

DR. TWEED: Allow me to correct you. It was 300 not 100 cases. I was completely disillusioned and heartbroken over the fact that I was not doing for my patients that which I felt Dr. Angle thought was so important—that is the creation of beautiful facial outlines. My first step was to visit my older orthodontist friends, and try to gather more information from these men. I completely failed in this effort. They did not seem able to answer the questions that were troubling me. As a result I returned home and decided that I would devote the entire mornings of my practice for a period of three years calling in all the patients that I had treated. I succeeded in contacting approximately 80% of all those that I had treated. Photographs, plaster models, and intraoral x-rays were made of each patient. The first thing that I did that threw some light on the problem facing me was the segregation of the photographs into two groups: those children who presented good facial esthetics and those who

had facial deformities that ranged from mild to severe. I do not recall what prompted me to do this. I put the ones with nice facial esthetics in one pile and those that presented imbalances that varied from slight to severe in the other. At the end of four years I counted these photographs and discovered to my sorrow that only 20% of these cases were satisfactory so far as facial esthetics were concerned. I selected the models of all those patients with satisfactory facial esthetics and studied the models in relation to the facial esthetics. Similarly a study was made of those who had facial imbalances that ranged from mild to severe facial deformities. It became very obvious that the children who had the lovely faces had mandibular incisors that were upright and over basal bone. In those who had facial imbalances that ranged from mild to severe it was observed that the mandibular incisors were procumbent. The mesial inclinations of the mandibular incisors seemed to affect facial esthetics in direct ratio to the extent of their procumbency. That was the beginning of the research that was done in the retreatment of these 300 individuals. And, it was the first time that I became completely aware of the importance of placing the mandibular incisors upright over basal bone.

DR. BRANDT: From that time on, things became quite active with the development of the Tweed Technique and eventually the Tweed Foundation became a going thing. How did the Tweed Foundation get started, Dr. Tweed?

DR. TWEED: Before we get into that part of your question, I wish to remind you that I received quite a beating from the orthodontic profession as a result of advocating extraction procedures. There was a time in my life when I could not refer my patients anywhere for furtherance of their treatment during the summertime. I would have to work on these patients for seven or eight months, put them under retention during the summer months, and then complete them when they returned. In fact, at one time, there was a movement started to prosecute me for malpractice because I advocated the removal of teeth in orthodontic therapy.

Many men came to visit and see what was being done, and I had many visitors in those days. For several years I had from one to four visiting orthodontists interested in what I was doing, hanging over my shoulder for 3, 4 or 5 months trying to absorb and digest that which I was doing. This became quite a problem in my practice. So much so that my patients were being neglected. At about that time I had

Fig. 1 The Tweed Foundation.

the misfortune of suffering a severe coronary occlusion. Upon recovery from my illness, members of the study group, which numbered about 40 men at that time, met and suggested that a better means to handle the crowded situation in my office would be to form a formal study group and have me devote one week of my time each year when they could all come to discuss our problems. It was this suggestion that was adopted and which led to the development of the first study group. I believe the leaders of the first study group were Dr's. Sam Lewis, Cope Sheldon, Emery Fraser, Pete Bishop, Hays Nance, and a few of the older men who realized the situation. It was they and not I who began the development and the organization of this foundation. In the beginning they felt that I should become lifetime director of the Foundation. This suggestion was followed for one year. I became nothing more nor less than a glorified secretary whose duty it was to prepare for housing and so forth of all the members of the study group and so I resigned that position and became a regular member of the Foundation.

DR. BRANDT: I'm glad you clarified that because I think the profession should know these facts. Well, as you know, I had the privilege today of attending your lecture and your classes. It is very impressive to see the harmony and the spirit of the instructors as well as the students. I think that the profession would like to know a few things about the courses. How many courses do you give annually here at the Tweed Foundation?

DR. TWEED: Three courses are given every 2 years. The entire membership of the Foundation meets every second year and during that year only one course is given here in Tucson.

DR. BRANDT: What is your student population in each course? Approximately how many students do you train at each course?

DR. TWEED: During the past 22 years or so there have been some 1600 men take this course. During the last 5 years the average course attendance has been in the neighborhood of 45 students, exclusive of the instructors.

DR. BRANDT: Tell me, Dr. Tweed, how do you select your students?

DR. TWEED: The students must make application to the Secretary of the Foundation, Dr. Montie Furr, stating their training, their qualifications and giving the names of any members of the Foundation that they know personally. It is through the membership of the Foundation that the students are selected. The requirements at the moment are as follows: To become eligible to take the course here in Tucson each student must qualify himself in one of 3 ways. First, he must have had graduate training in one of the recognized graduate schools in the country. Two, he must have taken a short course like the Lewis course in the edgewise archwire mechanism and must have practiced at least 2 years prior to coming here. And, third, those men who have completed their preceptorship with qualified preceptors—upon graduating—are eligible to attend the course providing they have had training—basic training— in the edgewise arch mechanism.

DR. BRANDT: In the light of the publicity attendant the restriction of orthodontic training for general dental practitioners, would you have any comment about that? I am sure you must have read the same things that we have read in the orthodontic journal or in the dental journals that many general practioners are a bit upset at being cut out of certain orthodontic courses. Would you care to comment on that?

DR. TWEED: Yes. I do not believe the general dentist is completely at fault. I fear very much that the members of the orthodontic profession have been a bit lax in their relationships with the general dentist.

Fig. 2 Instructors for 1967 Tweed Edgewise Course. (From left to right) Montie Furr, Tucson, Arizona; Irving Buchin, Forest Hills, N.Y.; James Cross, Ardmore, Oklahoma; and Levern Merrifield, Ponca City, Oklahoma, course director.

There hasn't been the closeness, the understanding between the two that I think very essential. That is one glaring fault we have made. I hate to admit the other but my feeling is that the general dentist has seen too much of the miserable orthodontic procedures being practiced by some members of the orthodontic profession. He takes one look and thinks; "I can certainly do as well as that orthodontist has been doing." It has been my opinion that if the orthodontic profession had been more proficient in its treatment procedures and had rendered a better service than some of them have been rendering that, perhaps, this would not have occurred.

DR. BRANDT: Thank you very much. Now I want to get onto a little different subject for a few minutes. In your book you refer to an optimum patient load for an orthodontist to carry. This should enable him to finish somewhere around 50 cases annually. And, if he does that, the objectives of treatment should be readily attained. Today, the demand for orthodontic services is quite tremendous and, even with more trained orthodontists being graduated annually than ever before, it appears unlikely that there will be any balance between supply and demand in the foreseeable future. And, the next decade will bring tremendous socio-economic changes affecting our profession such as insurance programs, Medicare, Medicaid; and various other plans that are in the works will be confronting us. How would you recommend that these be controlled? What preparations should the profession make?

DR. TWEED: To me the future is rather bleak so far as the orthodontic profession is concerned. First of all, we do not have sufficient graduate schools available at the present time to create the output of capable orthodontists. In fact, I understand that many of the proprietary schools, Catholic institutions, are phasing out in their dental and orthodontics colleges which to me is very appalling and, unless government or some agency comes to our rescue and revitalizes these institutions that are closing out and perhaps encourages new ones, I cannot see how it will be possible for the orthodontic profession in the future to fulfill the basic desires and needs of our population. I worry very much about this problem.

DR. BRANDT: How do you see the obligation of the orthodontic profession to this problem? Is there any solution? I wasn't thinking so much of the schools, but how the orthodontic profession is

organized. We have an American Association of Orthodontists, different orthodontic groups, etc?

DR. TWEED: Until such time as more graduate schools are developed, I feel certain that it has been a mistake to discontinue the preceptorship program. I feel that until more graduate schools are developed to train more orthodontists the only solution that I can see for the future is a good preceptorship program.

DR. BRANDT: Can you see any justification in the thinking of "doing a little for many" as opposed to the concept of "doing a lot for a few"?

DR. TWEED: Doing a little for many, Sid, is full of pitfalls. You as an orthodontist and all your orthodontic friends realize, and I am sure that you will admit, that at times what you thought was a very simple case proved to be one of your most tragic problems. And so, eliminating crossbite conditions, pseudo Class III's and simple procedures like that, I think that most of these children would be best left alone rather than treated. You asked me about patient load. I feel strongly that it is a tremendous mistake for a young man to overload himself in the beginning, and I believe that 100 active patients is a considerable load for each individual orthodontist no matter how proficient he becomes. One should remember there are things other than orthodontics to be considered. We have all observed the appalling trend in the youth of our country, the delinquency that is rampant throughout this country. I certainly think that the wise orthodontic father will limit his practice to the extent that he can give enough father-time to both his wife and his family. I also think it is a horrible mistake for any man to completely neglect his family in an endeavor to accumulate money beyond his needs. The most important investment a man ever makes in his life is his wife and children and to neglect them at the expense of getting unnecessary dollars I think is sinful.

DR. BRANDT: Let's go on to some questions on cephalometrics and diagnosis. Again, please bear in mind that the nature of any of my questions does not necessarily reflect a personal point of view. Rather it is means of getting an answer to what might be a bit controversial and interesting to the profession. I am sure that you are aware that many practitioners are puzzled and not all in agreement with your reliance on cephalometrics. In your book you say, " I am convinced that cephalometrics is a tool that enables the clinical orthodontist to accomplish more exacting procedures and it can help him solve some of his perplexing problems." Please explain what these exacting procedures are and why they can only be attained by using cephalometrics.

DR. TWEED: Well, for instance, I feel that we talk too much about archwires and ligature ties and not enough about growth and development. I cannot understand how any young man who is interested in growth processes occurring in children can possibly avoid having a cephalometer in his office and using it. For instance, how many young men realize that there is a classification of growth trends? How many young men—how many orthodontists—realize that 10% of the patients that come to the orthodontist present what is known as a Type B growth trend which means that midface is growing forward and downward more rapidly than lower face? Do they know that approximately 15% of all children that come to the orthodontist present Type A growth trends in which mid-face and lower face are growing forward in unison? Do they realize that without growth we wouldn't have the reputations that we enjoy; that in approximately 75% of our patients growth is most favorable? That the lower face or mandible is growing forward and downward more rapidly than mid-face; that whether the patient is treated or not there is going to be an improvement

in facial esthetics? How many men realize that it takes twice as long, if not longer, to treat a Type B growth trend case than a Type C growth trend case? How many men know how to give an equitable fee estimate? Do you think that it's fair to charge the same for a Type C growth trend case that can be treated in 12 to 15 months, the same as for a Type B growth trend case that you might spend three years treating? I don't. So, I feel that from a standpoint of growth and development, for a standpoint of working information that a cephalometer is most essential in every young man's office, and that it should be used routinely. I do believe that every young patient that comes into the office should be photographed and a cephalogram made so that sometime in the future, if the occasion arises, one will not have to wait 15 months to pick up the type of growth trend. Because treatment—the length of treatment time, when to begin treatment—will depend largely on the type of growth trend with which one is dealing.

(To be continued in the next issue)

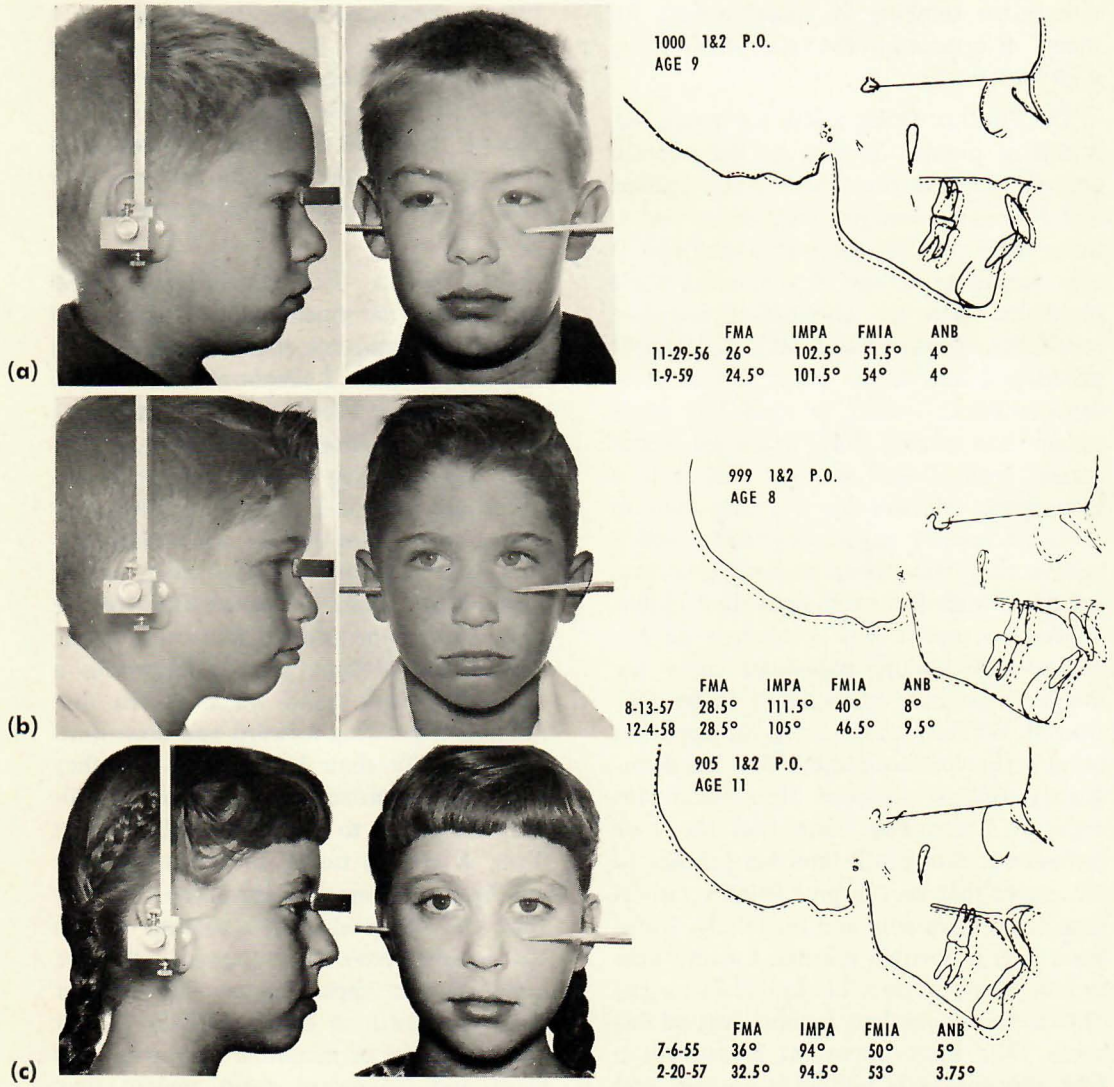


Fig. 3 Initial photos and growth trend tracings. (a) Type A growth trend. (b) Type B growth trend. (c) Type C growth trend. (Charles H. Tweed, Clinical Orthodontics, 1966. Reproduced by courtesy of C. V. Mosby Co., St. Louis, Mo.)