Dr. William B. Downs: A Man and His Work

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The year was 1947, the place was the seminar room of the orthodontic department on the fourteenth floor of the dental school at 808 South Wood Street. The door opened and in walked a man of medium build, sparse sandy hair, a trifle heavy in the jowls, wearing a long white heavily starched, unbuttoned coat with a towel sticking out of the pocket. His words of welcome did not come easily and he appeared almost embarrassed to be there. He removed the towel from his pocket and started to wipe the polished table top which really didn't need it, as we had already taken care of that little chore. (I think, in retrospect, that if I had my days at the University of Illinois to live over, I would have studied half as much and cleaned twice as hard.)

The first session was not a memorable one as he struggled through the "Line of Occlusion," "Angle's Classification," and some rather vague references to function and harmony. It was rather obvious that Friday morning was not going to be a memorable experience. I think the change of pace was all the more evident due to the fact that in the course of our first week as graduate students, we had the privilege of listening to Drs. Brodie, Sicher, Schour, Weinmann, Massler, Moore, and Renfroe. The impact of this team was awesome in its knowledge and delivery. However, I suspect that into each of our lives sometime an individual appears who leaves an indelible print on us as one of the most unforgettable people we have known. So, in spite of such an inauspicious beginning, I think that Dr. William B. Downs was such a man.

Read at the January, 1975 meeting of the Midwestern Component of the Angle Society.

This was our introduction to Dr. Downs, but I am getting ahead of my story. Let me take you back to the turn of the century. Our subject was born in Chicago, the oldest of three children, the son of a general practitioner of dentistry who settled in the community of Batavia. It was not a son following his father's footsteps because young Bill followed Horace Greeley's advice to "Go West Young Man"; he journeyed to Montana where he managed a sheep ranch for his father. Upon discontinuance of the operation Bill returned to Chicago, matriculated in the College of Dentistry of the University of Illinois, and was graduated in 1926. Not content to just practice dentistry, he joined the staff of the college in the crown and bridge department.

A series of events began to unfold that would have a marked influence on the career of Dr. Downs. Dean Fredrick B. Noyes, a close associate of Dr. Angle, decided that orthodontics should be taught at the graduate level and established the first such department at the University of Illinois. Dr. Noyes chose one of Dr. Angle's recent graduates, Dr. Allan G. Brodie, to head the department. The wisdom of his action was to shape the future course of orthodontics for almost a half a century. Dr. Downs, an ardent admirer of both Dr. Brodie and Dr. Angle, joined the first graduate orthodontic class of the University of Illinois. This was not a year without its incidents, and I think one story bears repeating.

Chet Wright had never missed an opening day of the bass season, and being in the graduate class at Illinois wasn't about to change his pattern. However, he needed a partner and found a willing one in Bill Downs.

They planned to play hookey and be on the water that day, class or no class. Enter Dr. Brodie; he set up an anatomy exam for 1:00 p.m. that very day. But desire is a great force and leads to much ingenuity. Chet and Bill decided to leave the night before, stay in a cabin overnight, and be on the lake at daybreak. Everything cooperated including the weather and the fish. With a full limit and a little reviewing enroute (it was a 150-mile trip) plus a little luck, they arrived in time for the exam which they handled in fine shape. Dr. Brodie's only rebuke came much later when he learned of the adventure and felt he had been slighted in not being asked to join them.

Several years later Dr. Brodie invited Dr. Downs to join the orthodontic staff as an instructor. The next two decades were probably the golden age of orthodontics at the University of Illinois when the department was known as the "West Point of Orthodontics"; Dr. Downs played a large part in establishing that reputation.

The scientific and clinical astuteness of this humble man was awesome in its simplicity. He was slowly methodical, as evidenced by the fact that he would be fussing with an ideal archwire at 5:15 p.m. when he had to catch an elevated train at Marshfield Station at 5:40 p.m. He was extremely imaginative, one of God's rare gifts and an essential ingredient to any successful research man. He never accepted the dogma of others, or even his own, without personally testing the claims set forth. Because underneath his quiet, retiring personality, there was a demanding nature, almost a stubborn streak; Mrs. Downs stated that one of his favorite phrases was, "never say, 'never.'" Dr. Downs introduced many innovations at the school, but never promoted any technique or method that he hadn't personally and thoroughly tested first in his own office. He never used the school as a test ground. It was just the other way around. His quiet dedication in the office had a profound effect on the men who associated with him over the years.

He loved being with students and was quick to encourage and slow to criticize the individual who needed help. I found I fared better when I asked him to look at a case and proceeded to tell him how much trouble I was in rather than how much progress it was making. As one contemplates his student days, it isn't always pleasant to look back; it might even be painful. Our wallets were usually thin, our abodes far from pretentious, and our girl friends less than cooperative. More to the point, having a critical teacher who was not adverse to letting you know that you were less than great in handling the matter at hand was a humbling experience, especially in front of patients. While I am sure Dr. Downs had ample reason to take us all to the woodshed on numerous occasions, to the best of my knowledge he never did this publicly. He had a way of correcting without embarrassing. His corrections were always constructive and never done in front of a patient or a class. He didn't know how to be cruel.

Dr. John Thompson recalled that early in his student days Dr. Downs invited him into the darkroom. Thompson thought he was going to see an interesting head film, but Dr. Downs in his soft-spoken, almost embarrassed manner wishing not to hurt his feelings, advised him that his band construction and placement were not up to his expectations. Dr. Thompson stated that it was effective, and from that day on he knew that correct band and bracket location was basic for the edgewise appliance. Dr. Downs taught by example because he was not graphic in his descriptions.

His Friday morning at the school

began with breakfast at the Union. How we looked forward to joining him for hot oatmeal and cream. Frankly, I couldn't stand the damn stuff, but one makes a few compromises as one goes through life. It was a beautiful thing for him to do because it made us feel so much closer to this fine man. I suspect this imposed a bit of hardship on him to arrive there so early, and yet I always felt that he rather enjoyed it too. I also suspect that he didn't contemplate the next hour or so of lecturing with a great deal of joy because he was not a fluent speaker. Words did not come easily as a classic example will show.

Dr. Downs was president of the alumni group many years ago and, when it was time for him to offer words of welcome to the group, he stood up and nothing came out, so he finally just sat down.

However, as the years passed and his presence in more and more programs was demanded, his confidence before scientific groups seemed to grow. While he would never be a Billy Graham, he did a very creditable job.

He was not a man who was stampeded into action. Thoughtful caution was the rule and not the exception as the following story will illustrate: One of our classmates, Aaron Schaeffer, was spending his last day in the clinic before leaving to go back home and set up his own practice. He asked Dr. Downs to check one of his cases this Friday afternoon and stated that he wanted to know what to do next because he would probably have a similar case to treat someday. Dr. Downs looked at the records, looked at the patient, looked at Dr. Schaeffer, wiped the top of the Angle table with his ever-present towel, and said, "I think I would take more records." Aaron panicked and stated that he was leaving tomorrow, and wouldn't know what to do if a similar case came in and he needed some answers. Dr. Downs again looked carefully at all the pertinent material and, fully aware of Aaron's concern, finally looked over his glasses and said, "I still think I would get more records."

There are many ways to reach a student and each successful teacher has developed his own technique over the years. Perhaps the most instructive teacher is the one who does so without his students ever realizing it. I think most of us didn't fully appreciate Dr. Downs until we had been in practice several years. Many of us constantly strove for his approval because he gave us so much stimulation and guidance. By example, he had a profound effect on both the professional and personal lives of many of us. He was a quiet, self-effacing individual who seldom spoke without giving a great deal of thought to what he was about to say. He never, as they say, "shot from the hip."

Dr. Eb King stated that one Friday when, as was usual, Dr. Downs was in the clinic, he asked him a question about anchorage. Dr. Downs just turned and walked away. Eb was miffed because he had not answered his question, and he even wondered if Dr. Downs had heard it. The next Friday while King was busy forming an archwire, Dr. Downs came over to him and began discussing anchorage. For a moment Eb had even forgotten his question of a week ago, but Dr. Downs had not, for he answered it fully and completely in a very well thought-out discussion. Dr. Downs never used a multitude of words in formulating an answer and weighed both sides of a question before expressing an opinion. I think he and Dr. Broadbent are the most cautious men I have ever known.

Dr. Downs wasn't given to frivolous conversation as the following anecdote

will illustrate. On one occasion a close personal friend brought his daughter, whom Dr. Downs had known since birth, to him for treatment. When the young lady returned home after her first appointment, her mother inquired of her, "What did Dr. Downs say?" The girl replied, "nothing." Following the second appointment which lasted several hours, the mother again inquired as to what Dr. Downs had said. The girl replied, "nothing" to the same question. The mother, exasperated with the girl, said, "You don't mean to tell me that after being in Dr. Downs' office for three appointments and over four hours that he has never once said anything to you?" The girl thought for a moment and then smiled brightly, "Oh yes, he did say, 'open.' "

Dr. Downs' love for fishing was legendary, and for twenty years he joined a group of men from his area and journeyed to Canada. After one trip when he arrived home late, tired and hungry, he proceeded to raid the refrigerator only to belatedly discover that he had deprived the cat of its next tabby dinner. I can see him now pondering how he could have done it. Also, close to his heart was his love of woodworking. Mrs. Downs stated that one of his saddest moments was when he had to leave his lathe behind when they moved to Wildwood Drive, that lovely area that Dr. and Mrs. Downs worked so hard to develop into a fine residential community. Today this area remains one of the finest residential tracts in Aurora.

He was not given to ostentation. I still remember one night in Detroit when both of us arrived late for an A.A.O. meeting only to find our reservations were no longer valid. They finally put us in a cluttered storage room, big on space but low on facilities. It seems so incongruous that one of the most important men in orthodontics should be relegated to such accommodations. Yet he never once complained. I remember talking at some length after lights out and, after getting no feedback, I finally decided to go to sleep. After a short period of silence, I heard him say, "Aren't you going to finish that thought?"

I felt rather close to Dr. Downs, and yet I don't think I ever heard him complain about his health. His back problem and his hepatitis were naggingly demanding on his energy and peace of mind, but he never used these ailments as an excuse when there must have been times when his life's drives were ebbing.

Considering Dr. Downs' great admiration for Dr. Angle and Dr. Brodie, it must have been difficult for him to accept the Tweed concept of reducing dental units. But in true scientific fashion he developed his thinking and based his approach on sound fundamental principles that remain just as valid today as when he first promulgated them. I think in his later years he was moving slightly to right of center from a rather strong left of center position in the extraction controversy. In a letter to a mutual friend, Dr. Newcomb, he stated, "I am sure many of us are overdoing extractions because of our lack of understanding of growth and development. Things that these faces do in maturing are not at all the same in each individual, and if we can ever learn to reliably predict the growth and development of an individual, we will go a long way in analyzing our young patients."

Dr. Downs was not a prolific writer, but it may come as a surprise to some of you that his first published article was in *The Angle Orthodontist* in 1937 entitled, "A Method of Showing and Shipping Models." The box was designed so that no additional handling of the records was necessary, and there was little chance for damage to occur.

Fifty sets of plaster models went to Europe and back without one chip out of a model.

The following year, 1938, Dr. Downs presented his first scientific paper entitled "Mesial Drift." In his usual systematic way, he classified mesial drift of the molars in relation to their alveolar process, the denture base and the cranium. He stated that the ultimate objective of orthodontic treatment was to place the teeth in correct relationship with the cranium according to type so that the patient might have a denture which is maximum in function and esthetics, and stimulating in its reaction to its supporting tissues. This can't always be attained but, if it is, he believed that it is due to two factors:

1. Proper placing of the teeth in relation to each other and their supporting structures making it possible for them to deliver normal stimulation to maxilla and mandible.

2. Nature uses the reestablished occlusion to cause proper growth and development of maxilla and mandible and associated tissues.

I rather suspect that in his later years, he might have questioned the wisdom of some of the statements in this article.

In late 1938 one of the important landmarks in orthodontic research was published in *The Angle Orthodontist* entitled, "Cephalometric Appraisal of Orthodontic Results." Dr. Downs was assigned to analyze the changes that took place in the face and denture during and after treatment in Class I cases. His findings revealed that intermaxillary elastics tend to change the occlusal plane by excessive elevation of teeth at both ends of the elastic traction; however, the plane tends to return to its original position subsequent to treatment. It also disclosed that, cephalometrically, tooth movement was not as great as clinical observation would have us believe and apparently, growth and development account for a considerable part of the change. He concluded that the study would lead to a keener appreciation of anchorage.

The years between 1938 and 1948 were not idly spent and, while Dr. Downs published no additional articles, he was painstakingly collecting, analyzing, and measuring the records that would culminate in the most monumental work ever done up to that time on the relationship of cephalometrics to treatment planning and prognosis. Dr. Brodie stated that when he would "eyeball" a film and state his conclusions, Dr. Downs would be mildly annoyed that this type of information could not be readily transmitted to others. The Chief felt that he almost irritated Dr. Downs into coming up with a pragmatic approach to analyzing headplates.

In Columbus, Ohio, in 1948, Dr. Downs presented his work, "Variations in Facial Relationships: Their Significances in Treatment and Prognosis," which became essentially the "Downs Analysis." The work was not universally accepted or understood, but many clinically-oriented orthodontists saw it as an extremely useful tool to aid and guide them in their determinations. The older, more experienced men probably derived much of the same information from "eyeballing" the lateral films, but were unable to communicate the visual recommendation to their colleagues or younger associates, a statement in keeping with my earlier comment.

Here was a method which we could use in treatment planning, posttreatment analysis, and to some degree to indicate what changes were induced by treatment, by growth, or both. We now had a new orthodontic language. It put a measurable value on an impression that many clinical orthodontists had long understood. With the publication

of the "Variation" paper, the name, "Downs" became an orthodontic household word. The demands on his time and presence grew, and in his typical generous nature he gave copiously of both.

The analysis, measurements, ranges, and methodology are so common to most of you that it would be redundant for me to review them in detail. However, I do think some aspects bear reviewing because they will show to some extent the effort Dr. Downs put forth before coming to his final decisions.

He felt that if an angle was to be meaningful, it must be not only scientifically correct, but also functionally important. In using the facial angle as a measure of the facial profile, he related it to the Frankfort horizontal. This concerned him because he was aware of the variability of the porion as related to the machine and the operator. However, I suspect that the patients Dr. Downs positioned were properly placed. He felt this plane cutting across the face was more logical as a base than the sella-nasion plane or the Bolton plane which were really dividing lines between face and cranium. Also, he was proven correct when he related the various facial angles derived from using all three planes to find that the facial angle to the Frankfort horizontal more positively correlated with the photographs of the patients. This convinced him that it would thus be a more logical choice for studying relationships involving only the face.

Dr. Downs also found the coefficient of correlation between the facial angle and mandibular plane to be very high; that as the facial angle decreases, the mandibular plane increases and vice versa. He also felt that if a face exhibited a Y axis within the ranges of his study, one could expect to treat a malocclusion to a good balance provided a proper relationship is maintained between denture and skeletal pattern.

Dr. Downs compared three of his own angles, the facial angle, the mandibular plane angle, and the cant of the occlusal plane, with Mayne who used 50 cases from 18 to 35 years of age and Bushra who used 40 adults including 20 of Downs' normals. When a compensation was made for Mayne's using gnathion in his facial angle of determination instead of pogonion, it was found that the three angles for all three studies were comparable as far as the mean findings were concerned. However, Mayne's and Bushra's studies showed greater ranges. This may be accounted for in two ways: 1. As additional material is studied, the minimum and maximum extremes can be expected to vary more. 2. They may have been less critical in selecting their material.

It might be worth mentioning how Dr. Downs arrived at the location of the occlusal plane. In the reasonably flat plane he bisected the molar cusps and the anterior overbite and connected them with a line forming the occlusal plane. In contrast, if there was a marked curve of Spee, he used the buccal occlusion as the plane. Again, he showed a high correlation (0.7) between the facial angle and the cant of the occlusal plane.

These were the days when many studies were done involving the lower incisor relationship to the mandibular plane. You are all familiar with Tweed's early reliance on this one measurement. The mean of most reports for the normals was around 90 degrees. Dr. Downs was slightly higher, 91.5, because he used menton, the lowest point on the midsagittal section of the mandibular symphysis anteriorly and not the lowest point on the mandible. Downs didn't like the lowest

point on the mandible because it wasn't midline, usually in the bicuspid area, and there was evidence that some appositional growth occurred during growth increasing the bulge. Dr. Downs also related the lower incisor to the occlusal plane because he felt that this was a functioning surface and also due to the fact that the mandibular plane has such a wide range when dealing with extremes of skeletal patterns.

He felt that a sense of balance and harmony existed in an individual who possessed an excellent untreated occlusion and these could represent standards against which malocclusions and treated cases could be judged. He was a pragmatist. He liked figures because they could accurately measure the degree of change that occurred due to treatment or growth or show where discrepancies were initially present. But he also realized that numbers were not the only criterion, that the functions of teeth and the facial musculature were very important. He also felt strongly concerning our control over denture relationships but held that our ability to alter skeletal relationships was questionable. However, he was never rocked to sleep in the "comfortable cradle of constancy" and firmly believed in the swing of the Y axis during growth. He stressed the importance of this fact in both treatment planning and prognosis following treatment. Where there was a faulty relationship between denture and skeleton, a headplate would be very helpful in locating this problem and the degree of the disproportion. He warned us to look hard and long at the skeletal pattern and be forewarned. Not all cases look alike or treat alike. He was, however, optimistic about our control over the denture in interception, guiding, and correction of malocclusion in the developing child, a point some of us have too long ignored only to have the pedodontist take it over by default. He felt that once we knew where the problem exists, we could make our plans to restore harmony and balance through tooth movement. We could also see what has been accomplished with our mechanics by using oriented serial headplates. In many cases they show beyond any question that our present abilities with an orthodontic appliance are not equal to restoring and maintaining balance and harmony of the component parts of the face without sacrificing dental units. They serve to clarify the possibilities and the limitations of orthodontic intervention. These were some of his strong feelings.

Summarizing his 1948 presentation, Downs stated that there is a facial pattern that represents the mean or average form for individuals possessing excellent occlusions. However, there is a notable deviation on both sides of the mean representing the usual variation, yet still constituting balance and harmony. Extreme deviations from the ranges established would certainly show up as disharmonies with the pattern. Any standardized, oriented, lateral headplate could be appraised against the figures he formulated and be used in forming a method as well as prognosis of treatment. The denture relationships can also be compared to the standards and to the skeletal figures, and treatment can be planned for the indicated tooth movement. These standards permit a definite expression of changes that occur as a result of treatment or growth and development, or both. Out of his experiences comes one of the great statements in orthodontics: The ten figures used in the appraisal do describe skeletal and denture relationships, but single readings are not so important. What counts is the manner in which they are fit together and their correlation with type, function, and esthetics.

The paper which followed this his-

toric presentation was really a rewrite of the 1948 article and therefore, does not require an in-depth review. It was published in *The Angle Orthodontist* in 1949 and entitled, "Variations in Facial Relationship: Their Significance in Treatment and Prognosis."

Dr. Downs later discussed Dr. Newcomb's paper on "Research Prior to 1930" carried in *The Angle Orthodontist*. While this was a short presentation, it carried some interesting thoughts. He bemoaned the unsolved problems of caries, periodontal disease, and malocclusions, but felt that by reading, studying, and exchanging ideas we would eventually control them. Also, it is not necessary to do research under institutional guidance; any individual who has the intuition and drive to investigate is a potential research worker.

Dr. Downs liked and adopted Krogman's statement that one word, symmetry, analyzed the purpose of orthodontics more than any other. It must be both functional and esthetic symmetry. It must look right and work right. Normal is the idea of rightness, of harmony, and of balance. It is the mental summation of the frequency of observed conditions and becomes, in a sense, the usual. Deviation from this becomes the abnormal.

He concluded this paper by jumping to the then present and stated that he felt that the normal occlusion theory had been too much neglected in current thinking. He remained very much a fundamentalist.

"The Role of Cephalometrics in Orthodontic Case Analysis and Diagnosis" published in the *Journal of the American Association of Orthodontics* in 1952 put the Downs' analysis to work again. He wrote once again, "We must consider all the relationships of the component parts of the head and face, status of tissue, metabolism, and the environmental influences of the occlusion." He was expanding his thinking beyond the analysis. He was mildly critical of past investigators who used the maxilla to express the degree of prognathism in the face and tended to ignore the mandible. He did not feel that the prosthion, so often used to measure the prognathism, was a valid point. In discussing the potential of changing the skeletal pattern through functionally corrected dentitions as contrasted to the belief of fixed hereditary potential, Downs took a neutral view. This represented a change in his previous thinking. He alluded to the importance of serial headplates in determining the nature of the developing face and felt that even a single headplate was helpful. He stated that a knowledge of facial type has considerable value in visualizing what one may expect when a patient reaches maturity. He never really said that he could prognosticate future growth, but he came very close to it. He gave Ricketts strong encouragement in his early days of formulating his prediction papers when it was almost sacrilegious to think we could predict the future.

To be specific, when we are dealing with denture relationships and find the AB measurement varies more than one standard deviation from the mean of −4.6, he felt one could experience increasing difficulty. Also, the higher the mandibular plane angle, the more complicated the treatment becomes. He indicated that he felt that the axial inclination of the lower incisor to the mandibular plane is not as important as the lower incisor to the occlusal plane because the latter represents a functioning surface. However, he later modified his thinking relative to the relationship of the lower incisor to the occlusal plane and gave it less importance. It was in this paper that he brought forth the terms "static" and "dynamic analysis" and they are just

what the terms indicate. He enlarged on the so-called "swing of the face" and placed the stability of the pattern work of both Brodie and Broadbent in their proper perspective. He summarized the paper by stating that in studying a malocclusion, one must analyze the dentofacial complex and forces of occlusion that may have contributed to the problem.

As we pass the midpoint of the decade of the fifties, Dr. Downs wrote his final paper, "The Analysis of the Dento-Facial Profile." Downs felt that the Frankfort horizontal was best suited for facial typing as shown earlier, but not for growth studies. However, he found that some facial planes did not fit the facial type when the Frankfort horizontal was used as a reference plane, so he investigated. He used 100 children photographed while looking at their eyes in a mirror. It was found that the Frankfort had an upward tilt of 1.3 degrees with a standard deviation of 5. Using two standard deviations, we can expect the Frankfort plane to deviate as much as 10 degrees up or down from a level position. It was also found that the level deviated up or down with the same patient from picture to picture. When these factors were taken into account, the discrepancies tended to disappear.

Some criticized point A as difficult to locate accurately inasmuch as it is on a curve, and this is a valid point; but Dr. Downs did not like the anterior nasal spine which he felt was too long, part of the nose, and easy to burn out. Point A is on the maxilla in the midline, and the theoretical junction of the alveolar bone and maxillary base and can be influenced by movement of the anterior teeth. Therefore, he stayed with point A and point B.

Dr. Downs took samples of deciduous dentitions including groups of 9 years 6 month, and 12 years 8 month normals and compared them with his 14.6 sample. These showed that in normal growth the lower face moved forward faster than the maxilla, and the angle of convexity decreased. Growth appeared greater at the ramus than at the profile, thus decreasing the mandibular plane angle. The AB and Y axis readings changed the least. Great changes were noted from 9 to 12 years, and those cases that didn't get a favorable direction of growth tended to become more difficult orthodontic problems. In analyzing the denture he concluded that the occlusal plane and the fullness of the denture lessened with growth even though the newly-erupted anterior permanent dentition is much more protrusive than the deciduous dentition. The growth rate of the mandible had a marked effect on the profile, and he held this to be very important in treatment and prognosis. He realized his findings would appear to be in conflict with Dr. Brodie's pattern concept, but felt that many in the profession were misinterpreting Dr. Brodie's findings. They had only been tabulated until 8 years of age, yet many were taking these findings to include the entire growth span. Also Dr. Broadbent's orderly illustrated pattern was based on a cross-sectional study and not on individual longitudinal series.

His sex-linked findings showed that girls had minimal additions after 14, but males might be actively growing until 20. This fact should be kept in mind when using the analysis because it is based on a 14.6 standard and, therefore, later growth may have a marked influence on treatment planning, especially for males.

Dr. Downs' next major contribution was the profile arc. I personally never caught the full significance of this procedure, but he states that the nature of the profile arc can be considered the most important information to be

gained from the lateral headplate and that, once one is familiar with the variations of the arc, measurements are not essential to analysis. It still escapes me.

It was in this paper that he questioned the value of the lower incisor to the occlusal plane. He also questioned Tweed's 65 degree incisal to the Frankfort plane angle. He wanted the incisor related to the profile and not to a cranial plane. He supported Steiner's and Ricketts' approach to this problem. He also preferred the Bolton plane when studying the profile, but he felt the basion-nasion plane was just as good and easier to locate. He concluded this paper with the thought that while individuals vary greatly in facial type and pattern, those possessing optimal oral health, functional balance, and esthetics have certain common profile characteristics.

The profession paid its highest honor to Dr. Downs in 1961 when it presented him the Ketcham Award; Dr. Wylie, one of Dr. Downs' favorites, made the presentation. Dr. Wylie reiterated some of the things that have become synonymous with Dr. Downs such as his high standards of performance and yet, his tolerance of others less qualified than himself. His ability to teach by gentle encouragement and not by browbeating was a trademark. He restated Downs' never failing approach to test and retest any procedure before dissemination but, once convinced, Downs proved to be an able leader.

When it came time for Dr. Downs to respond, he spent almost the entire time paying tribute to Broadbent and Hofrath for their pioneer work in cephalometrics, as well as Noyes and Brodie for their foresightedness in research and education. He praised Lundstrom, a man whose work he greatly admired and Tweed for his courage to face his failures and for reintroducing the principle of extraction and even paid tribute to his students who furnished so much stimulation. How typical of this very modest man in his hour of greatest triumph.

In 1965, health problems forced Dr. Downs to lay down his 142 pliers and retire from active practice. He continued to visit the office almost daily, and received an Award of Merit from the Chicago Association of Orthodontists as late as November, 1965. On January 13, 1966, the eve of one of our component meetings, Dr. Downs died. The entire orthodontic world was saddened by this happening, and especially affected were his lovely and devoted wife, Lois, his two children, Marilyn and William, and his grandchildren.

While we were all saddened by his departure, let us look at the positive side and reflect on how much he gave to help us better understand the intriguing analysis of the dentofacial complex and its management during treatment. He loved his profession, and the profession loved him. To many, he was only a name, to some, he was "Bill," but to me he will always be "Dr. Downs"; in the history of our profession, he will be replaced, but never succeeded.

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