

## Introduction for the iBook of Chris Chang's Angle Cases

This iBook is a compilation of case reports that Dr. Chris Chang presented in partial fulfillment of the requirements to become an active member of the Midwest Component of the Edward H. Angle Society of Orthodontists (EHASO). Understanding this professional accomplishment, as well as Chris's longtime affinity for the ideals of Dr. Angle, is facilitated by the remarks of Dr. George W. Hahn at the 25<sup>th</sup> anniversary of the EHASO.<sup>1</sup>

*Edward H. Angle* was born in 1855 on a farm in Pennsylvania, and grew up showing a range of remarkable abilities, especially the design and construction of mechanical equipment. His mother recognized his talents and arranged an apprenticeship with a dentist that subsequently resulted in graduation from the Pennsylvania College of Dentistry in 1876. Although "orthodontia" was a very young discipline, the art and science was a perfect match for Angle, and he began a long career of innovation, beginning with the jack and traction screw appliance, variations of which are still widely used today. Following a series of academic and private practice ventures, Angle formed several private schools of orthodontia across the country which became the nuclei for the initial orthodontics societies: St. Louis (1900-present, the predecessor of the AAO), 2. New York & New London (1913-39), and 3. Pasadena (1922-30, the original EHASO) (Fig. 1-3).



■ Fig. 1:  
Former home of Angle College of Orthodontia (1922-30) at 550 Jackson Street, Pasadena. Now it is a private residence.



■ Fig. 2:  
After the Angle case exam in 2014, Chris Chang's family visited Dr. & Mrs. Angle's former home (1918-1930) at 1025 N. Madison Street, Pasadena (from left to right: Chris Chang, Barbara Lamprecht and Johnathon Lee).

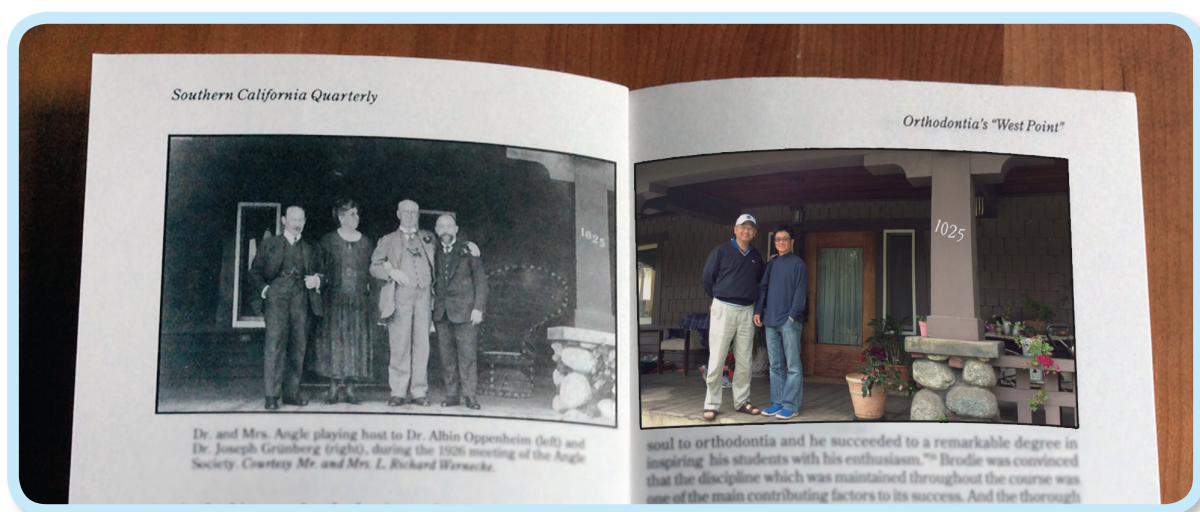


**W. Eugene Roberts,**  
Consultant, *International Journal of Orthodontics & Implantology*

**Edward H. Angle Society of Orthodontia:** the society was reorganized in its present form at the Lake Shore Athletic Club in Chicago on November 17, 1930. At the same location 25 years later, Dr. Hahn<sup>1</sup> recounted that the EHASO believes in the idealism that Angle held, taught and lived. His goal was perfection in everything! To emulate the ideals of its founder, the Angle Society must remain a working society, for Angle had no time for sloths. All candidates and members must have something to offer for what he/she receives. Merely being a good clinician and/or a politically correct practitioner does not merit membership in Angle's inner circle.

Hahn<sup>1</sup> lamented that the personal touch of Angle would decline with the attrition of his students, but the bright shield of idealism will never tarnish. Progress in orthodontics will be due to improvements in thinking rather than in mechanics. Angle sought earnest and honest clinicians with initiative, who were energetic, ambitious, and "possessed (*above all else*) with the ability to reason."<sup>1</sup> He felt that "well-trained intelligent minds and well-disciplined fingers"<sup>1</sup> will produce nothing short of the best. Hahn<sup>1</sup> concluded that an American Board of Orthodontics (ABO) diploma should hang on the wall of the every EHASO member. In effect, the ABO should be a prerequisite for the Angle Society.

**Enduring Standards of the Angle Society:** There is an ideal, well above average, that is worth living and striving to attain. The professional fellowship of the society involves no selfishness, jealousy, nor deceit. The focus



■ Fig. 3: In front of Dr. Angle's house, a comparison between 100 years ago and today. (note the magic number: 1025)

is on an honesty of purpose in which everyone is "held in that esteem which gives him a feeling of pride tempered by humility."<sup>1</sup> The society offers an opportunity for the full and open exchange of knowledge, with ideas eagerly offered and nothing held back. It is a professional opportunity to escape the realm of mediocrity, and embrace a standard of conduct which makes living and working a pleasure. There is an inspiration that comes from personal contact with others "whose object is not self-glorification but a willingness to give freely of what they have learned with only the thought of helping others."

<sup>1</sup> Never forget Angle's ideal of perfection, which was so characteristically expressed in his motto that hung on the wall of the school in Pasadena, "There is but one best way."<sup>1</sup>

**Chris Chang in the Angle Tradition:** In reflecting on Dr. Chang's career development, I am struck by the parallels to Dr. Angle, and feel Chris is well suited to the rich heritage of the EHASO. After studying oral surgery and orthodontics in Taiwan, Dr. Chang decided that a broad, international perspective was required to



■ Fig. 4: By Chris Chang, Post-impressionism.

reach his career objectives. In retrospect, it is apparent that this intellectual thirst was inspired by his study of Edward Hartley Angle. When Chris arrived at Indiana University to interview as the first PhD/Orthodontics student, he asked to present a lecture to the faculty about Dr. Angle. Chris had studied him intently, visited the sites of the Angle Schools, and presented an outstanding presentation that is well remembered. There are not many applicants presenting for interview who can offer an erudite lecture on the founder of the speciality that they plan to pursue!

**Renaissance Man:** The fact that Chris would not be an average student was reinforced by his agenda for an appropriate education. Like Angle, Chris is a "Renaissance Man," meaning his talents and interests embraced many disciplines. In addition to pursuing a challenging PhD curriculum, he learned to play golf to a near scratch handicap, developed a remarkable ability as an post-impressionist artist, in the van Gogh tradition (Fig. 4), and embarked on violin lessons that culminated in playing formal concerts on campus. It was unclear that he would find time to study basic science and orthodontics! However, according to his own schedule, Chris produced an outstanding PhD thesis on the induced angiogenesis of sutural expansion, resulting in two major referred publications that remain classic references for the perivascular induction of osteogenesis (Fig. 5).<sup>2,3</sup>

**The Cross-Roads:** After graduating from Indiana University, Chris married his soulmate Shufen, a PhD Geriatric Nurse trained at the University of Illinois at Chicago. As the Mother Angle in Chris's life (Fig. 6), Shufen plays a strong role in all his accomplishments. Together, the Changs embarked on remarkable series of achievements: a wonderful family, savvy investments, Beethoven Orthodontics Center, Newton's A, the Dental Education Center, and a host

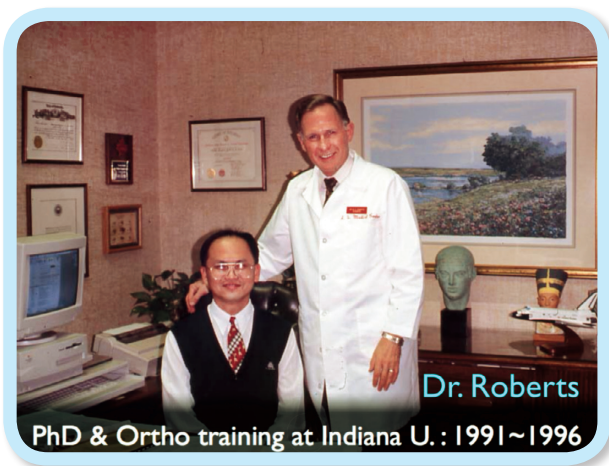


of other enterprises. As previously noted, Chris is a gifted golfer, who has closed many business deals on the golf course! With this level of professional and personal accomplishment, many gifted orthodontists lose site of Angle's vision of excellence. When approached about pursuing the ABO and eventually the Angle Society, his initial response was typical: *"it would take so much time."* However, he again reflected on Angle's idealism, which applies to all aspects of life, including orthodontics. With Shufen's support, Chris soon accepted the challenge and was well on his way. He passed the ABO with flying colors, and in the process discovered the ABO system of clinical assessments, which he now pursues on every patient and fervently teaches his students. I am sure Chris felt that the reward of ABO certification greatly exceeded the effort.

**The next step was the real cross-road:** would he pursue membership in the Angle Society after achieving the ABO? This proved no problem for Chris because he had professional momentum in the Angle tradition. Although he could have pursued a component with less rigorous admission requirements, Chris accepted the challenge of the Midwest Component, which still imposes the rigor inspired by Dr. Alan G. Brodie.

Immediately after achieving ABO certification, Dr. Chang presented five of his board cases to satisfy the candidate requirement for Angle Midwest. This shortcut was possible because his board cases had been finished in the past five years. Had he waited, the ABO cases would have expired, requiring the work up of new ones.

**The Clinical Qualification:** The following year Chris brought records for 10 more cases that he had recently started. He was instructed to bring cases of moderate difficulty that could be finished to an ideal result. However, many of the cases he brought were extremely difficult. There was considerable concern among the membership that he had misunderstood that a very good result was expected. Chris's response was *"these are routine cases in my practice."* Six of the patients were selected for the annual presentation of progress records, that would be carefully examined by expert clinicians on the Admissions Committee. In addition, records were collected for the other four cases because they could be substituted if there were any problems in completing the six cases selected. In the end, Chris completed his clinical requirement, achieving very good results for a challenging series of patients. The case reports are forthcoming in this



■ Fig. 5: Chris Chang and Dr. Roberts at Indiana University



■ Fig. 6: Chris Chang's family

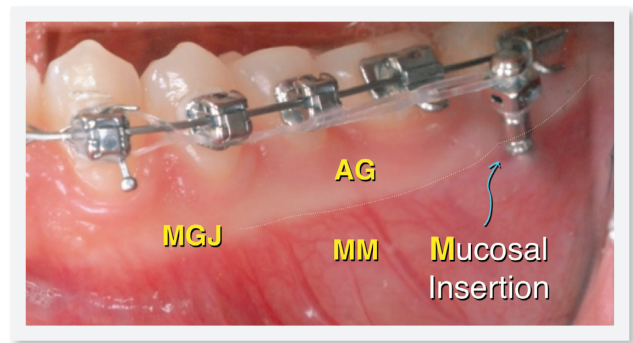
iBook. Note that Chris has a strong preference for nonextraction treatment, which would certainly set well with Dr. Angle!

**The Study Requirement:** The admissions process for Angle Midwest requires an original research project involving a testable hypothesis with statistical analysis of the data. Chris decided to assess the failure rate of all temporary anchorage devices placed in the buccal shelves of the mandible. The preliminary data is published in the International Journal of Orthodontics and Implantology (Figs. 7-9)<sup>4,5</sup>, and his formal presentation of the project is scheduled for the 2015 Angle Midwest meeting in Naples, Florida.

**The Charge:** Please enjoy and learn from this interesting series of Angle cases. Hopefully the case reports will challenge you to greater heights in a pursuit of excellence, worthy of our icon, Dr. Edward Hartley Angle.



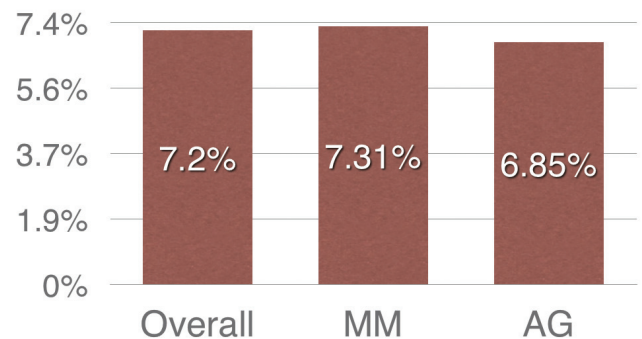
**Fig. 7:** There is a safe zone between the 1<sup>st</sup> and 2<sup>nd</sup> molar roots because the inferior alveolar neurovascular bundle is apical to the roots of the teeth.



**Fig. 8:** Mucosal insertion refers to the position that the buccal shelf screw is inserted in the movable mucosa.

## References

1. Hahn GW. A history of the Edward H. Angle society of orthodontics. Presented at the 25<sup>th</sup> Anniversary of the EHASO in 1955. Copyrighted and published online by E. H. Angle Education and Research Foundation in 2001.
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**Fig. 9:** The overall failure rate was 7.2% for the entire sample (n=1680). In the movable mucosa (MM) group, 94 out of 1286 (7.31%) failed; 27 out of 394 (6.85%) failed in the attached gingiva (AG) group.