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The Bremner Award for Undergraduate Dental Students

A CERTIFICATE, $500 CASH PRIZE, AND UP TO $300 FOR TRAVEL AND RELATED EXPENSES WILL BE AWARDED TO THE WINNING, PREVIOUSLY-UNPUBLISHED ESSAY ON:

1.) A subject relevant to the history of dentistry,
2.) That is the result of an original research effort related to dental history, and/or is
3.) A composition revealing an uncommon appreciation for, and understanding of, historical items related to dentistry.

Eligibility: Contest is open to all predoctoral students of dentistry in the United States and Canada, including undergraduate students preparing for admission to dental school.

Purpose: To encourage the study of, and research in, the history of dentistry. Entries must be original essays on a subject relevant to dental history and should not exceed 5,000 words.

Selection: A special committee of the Academy will judge all entries received prior to February 24, 2008, for award for the current year. The winner will be announced prior to April 2, 2008, so that said winner may attend the annual meeting of the Academy.

Application: Send essays (in triplicate) following Instructions to Authors for the Journal (see inside back cover of this issue) accompanied by a statement of authenticity certified by the Dean or responsible faculty member. Papers must be received by February 24, 2008. The award is presented at the annual meeting of the American Academy of the History of Dentistry.

PAPERS MUST BE RECEIVED BY FEBRUARY 24, 2008.

Please direct correspondence to:
Dr. Arden G. Christen
7112 Sylvan Ridge Road
Indianapolis, IN 46240
The dissertation, here rendered, was published at the gymnasium of Hof in 1669. It is remarkable that the respondent, who was probably also its author, declared in the title page that he intends to do his task “following the custom of the blessed Hebrews and any other conventions of true Israelites” and cites in the following text repeated proverbs of Rabbis. Therefore, we suppose him to have been a Jew converted to the Christian faith. His Odontology is a large collection of knowledge about the teeth, the etymology of this term, the question of them belonging to the bones, their anatomy and fixation in the jaws, and their tasks in the crushing of foods and helping in pronunciation, and in animals for self-protection. With respect to their removal, he emphasizes that one read Sennert’s Institutiones Medicae.

The points of view discussed by the author depended more heavily on philological than on medical authors. Nevertheless, there are mentioned also “paramedical” opinions of the general population. The monograph seems to us important for the history of dentistry.

The Translators’ Commentary

Medical dissertations were hitherto rarely observed as sources for the history of dentistry. We have collected more than seventy of them with titles that seemed to be interesting from the dental point of view, translated them from Latin, and evaluated their value for the history of dentistry. The first may have been written by Petrus Monavius, later the personal physician of Emperor Rudolf II, and published at Basle in 1578. From the later theses, one appeared to be unusual for several reasons:

First, Johannes Loew, whom we consider as the real author of this study, was not a student of Medicine.

1 Dental Clinic of Justus-Liebig-University at Giessen, Germany

ii Saarlouis, Germany
On the contrary, he was a pupil of the final class of the gymnasium of the town Hof\(^1\) which school was highly regarded. The structure and content of this analysis follow more philological than medical points of view. The importance of the president’s opinion is shown by the fact that the president’s name appeared in the title before that of the “respondent” whose only task was to defend the thesis. As an interesting incidental remark concerning the following dissertation, we may point out that the term Odontology appears to be used here for the first time in the dental literature.

Second, differing from other dissertations, we find some hints to the Jewish religion in this one that we will mark using italics. We believe that this treatise was written by a Jew who converted to the Christian faith in the Lutheran denomination. This assumption is based on the fact that Friedrich Wilhelm, the Great Elector of Brandenburg, allowed not only Huguenots in his lands but also Jews who had been expelled from Vienna in 1670; and he preferred the service of strangers in his administration rather than that of his stubborn subjects. In other German courts, the situation was not dissimilar.

Originals of this dissertation are in the possession of the Niedersächsische Staats-und Universitätsbibliothek Göttingen, the Universitätsbibliothek Tübingen and the Universitätsbibliothek Erlangen where the dissertation has the signature H00/schulprogr. Hof (Curia) 54. Later, the respondent Johannes Loew studied law and wrote a second thesis in Altdorf at the University of Nuremberg in the year 1671 with the theme: “About the agreement of the right of peoples with the natural right.” We have shortened the philological portion of our dental monograph with its extensive footnotes which we believe would only have bored the dental reader. We also have omitted the questions asked in the examination portion that only concern general education. We, however, present the whole thesis as interesting from the dental points of view.

In order to distinguish the footnotes made by the author from those made by the translators, we have used letters in the footnotes made by the author and numbers in the footnotes added by the translators. Concerning the author’s footnotes, we were obliged to confine ourselves—in those cases where it was not possible to clarify which edition he used—to a quotation in accordance with him. Because we consider the following text first of all as a translation of the shortened dissertation, we have used only the original subheadings and avoided adding new ones.

\(^1\) The town Hof, now belonging to Bavaria, came as a part of the principality of Bayreuth of the Franconian line of Hohenzollern to the Brandenburg line in the year 1603.

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**Foreword**

“In the beginning was God. However, we are not ignorant of our weakness, thus we confess it liberally, for that reason we especially adore God with ardent hopes that He would help us gently with his anticipating and accompanying favor and with the inspiration of the Holy Spirit.” “Hence I use the formula familiar to the first writers of elegies: be favorable Phoebus, a new priest enters your temple.”

§ 3. “When we therefore newly ascend to the teacher’s desk, we are not doing so in pursuit of profit or hollow imagination, but only by the demands of the new exercise.... All living beings try to get food, because life without food is not possible. The teeth receive the food, break it into pieces and digest it. Therefore, we describe intercession by the teeth created by divine reason, if we observe them with the will and favor of God as more exactly, and more detailed, as is possible. In nature nothing is idle, even the teeth.”

§ 6. The word tooth, in Latin, means “the eating” because the Latin word for tooth, dens, dentis, supposedly refers to “edens” from “edo,” “I eat.” The same is true in Greek. Loew mentions that the German word, Zahn, and the word Teen, of the people of lower Saxony, seems to be derived from the Hebrew תֶּבַשׁ תֶּבְשַׁ, according to the philologist Helvigiuss. After having discovered the etymology, Loew discusses homonyms wherein he goes into names being derivate of the Latin word, dens. For example, “bidens” for a tool used in wine growing. But the word “bidens” is difficult to understand for a sacrificial animal in which the place destined for sacrifice was consequently called “Bidental.” He also mentions the word, “Tridens,” for the scepter of Neptune. The Greek word, Θρίας, was also used for the pestle serving as a tamper in a mortar. Loew passes over synonyms of little significance and turns immediately to Pragmatology.

**Pragmatology**

§ 1. Here Loew defines the teeth as very hard, very dry, inside small bones, fitted out with veins, arteries and nerves, set into alveoli of the jaws by gomphosis, bound with membranes and flesh, and produced by nature to separate food into small pieces, to speak, and to protect animals.

§ 2. Concerning their nature, he considered them as a kind of bones: “However, this seems to be without any

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\(^a\) Tibull I 2 El 5.

\(^b\) Helvigiuss, A.: *Etymologiae, sive Origines Dictionum Germanicarum*; Ex tribus illis nobilibus; Francofurti Hommius 1611.

"To A and Ω, the beginning and the end, the true and only God-man, Jesus Christ, the delight of the human race, the supporter of our welfare, the invincible lion of the tribe of Judah, the image of the invincible God and the splendor of His glory and character of His personality, the most beautiful of the sons of men, whose teeth are whiter than milk, King of Kings, Lord of Lords, always venerable chief of Zion, and true supernal King of the inhabitants of Jerusalem, his most gentle chief and Lord gives Johannes Loew the first small fruits of his studies, following the custom of the blessed Hebrews and any other in the covenants true Israelites swear to, and obtained with humble mind and devoted soul and with gentle commendation of his eternal salvation. What God may bless!"

doubt and controversy, but there are some who raise a great debate asking whether the teeth should be counted as bones. We affirm this. However, since they have no marrow, they are bones of a special kind."

§ 3. In order to point out the extremely difficult ruin of the teeth, Loew quotes Julius Caesar Scaliger as an argument. Scaliger said, “in a stony sarcophagus the whole body apart from the teeth is destroyed within forty days. Therefore,” he concludes, “they are something different.”

§ 4. “We consider that argument charming rather than powerful. They are indeed something different, because they have a special property. Not because they cannot be burned easily by flame and fire, but because when dry, hard and solid they cannot be burned as easily as the rest of the body. Plato, the philosopher, also states this and calls the teeth bony. Later he said that teeth would emulate the nature of bones, but the great Scaliger demonstrated nothing but that teeth are hardly perishable but not indestructible. Well, really teeth have something different from the rest of the bones and many times, they naturally fall away from the nature of the other bones.”

§ 5. “First: After seven years they exfoliate for the first time, and after that others appear in their place. The rest of the bones do not naturally fall out and if lost through violence no others rise in the place of the first.”

§ 6. “Second: The teeth are free from periosteum, a skin or membrane, with which all the remaining bones are covered, and they are bare bones. Just as the perios-

2 Genesis 49:9. 3 Revelations 5:5.
teum gives a very pleasant sensation, the reasons for it are not precisely known; when the matter requires it, we save it. In this way, the teeth would be prevented from continuous pain during mastication of food and the heat and cold they encounter; or they could not do their assigned duty.”

§ 7. “Third: They differ from the hardness of the remaining (other) bones, but we do not like to declare that fire could be ejected from them as from flints or they would resist the sharpness of iron. However, we consider their substance hard, dry, and less porous than other bones. Therefore, they are very fit to chew solid food. By determining that the teeth are some kind of hollow bones, we understand that the cavity which is in the region of the roots is surrounded by a substance similar to a very thin membrane, which is able to provide a pleasant feeling.”

§ 8. “For that reason the veins, arteries, and nerves are described. Veins provide their food, which is manifested by the fact that we detect blood flowing from a broken tooth. Arteries provide the means by which their heat is maintained. Nerves are inserted into the lower roots which anatomists have demonstrated to the world.”

§ 10. “But the most particular characteristic of the teeth is that they differ from all other bones, and are alone among bones that allow nerves into their cavity. Mister Neander of immortal fame confirms, in school and in writing, that only the teeth among the bones of animals have feeling because they have nerves. Nature has made them that way so that they can chew food which is suitable or noxious for them.”

§ 11. “We know very well that this will result in a very heavy controversy about sensation of the teeth and whether or not they have natural perception of touch and pain. Nevertheless, we believe that we can demonstrate by positive arguments that odontology effectively taught this to us. The sons of science argue it earnestly, and experience confirms it beyond all exception and doubts. Men who contradict this, Scaliger judges, deserve to be whipped. However, I am not so uneducated that I ascribe sensation to the stem of the tooth (the root), which the philosophers call harsh, according to Cardanus. However, to the upper and prominent part of the teeth I assign it clearly, to the lower (part), I assign the nerves, veins and arteries.”

§ 12. “The large number of authors and attestationss we cannot achieve by labor, nevertheless we would adjudge this necessary. We believe that everyone who weighs the matter with an unclouded mind should be able to add a further stone. However, one finds pleasure in citing Bartholinus’s *Institutiones Anatomicae* 14c 12. ‘Teeth among bones were provided with feeling and are attached to pain,’ testifies Hippocrates himself, sect.V, Aph.18. Cold declares war on the teeth and bones.”

§ 13. “Where, therefore, more organs of touch are touched, more sensation is intended.”

§ 14. “We wonder that Sengverdus, the most celebrated philosopher in this age at the famous College of Amsterdam, would ascribe feelings to the teeth or the substance of the tooth. This assertion is laughable to Scaliger: ‘Push, rush, beat, rive, seize, rub and do away with the tooth; the tooth is not moved, feels nothing, is bone, having no part then of pain, does not feel like bone, but accordingly consists of nerves. Not from bony substance but from nerves stuffed into substance which nature did not make in vain.’ ”

§ 15. “We think the softer, inner, more porous, more marrow-containing part of the tooth has feeling because of a fine membrane. This membrane surrounds the inner cavity and touches it lightly. The esteemed Sengverdus, after having said that teeth are not entirely of, or wholly deserted by, the perception of touch, seems thence to agree that they have organs of touch. We do not disagree; if he declares it not from the outer and prominent part, but from the interior part containing more marrow and neighboring to the fine membrane.”

II. Pathology of the teeth

“As proof, the example of the extreme and violence of the tooth’s reaction to heat and cold as well as of the burning iron, and condensed ice is well known. But, as we have explained before, we believe this sensation should be ascribed either to the tangible qualities of the gum or better to the neighboring membrane. We say the jaws are receptacles and domiciles of the teeth in whose cavities they are affixed like keys and so straight on that they cannot move without an enormous sensation. You say, however, the gymnosophis, contacts, and attachments to them will be lost. I do not disagree but I found that pain is injuring the connection in this manner. The teeth, by reason of lacking in nutriment, grow weaker or we see the jaws being harmed by the illness. In this manner, the epidemic illness, scurvy, brings all to the point. This doubtless is not an infrequent occurrence in Belgians, Swedes, Danes, Westphalians, and neighboring peoples. You can find men whose teeth have scurvy (the peculiar and epidemic illness of the said nations) consumed in such a way that you can

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remove all teeth together with one little fingernail, of which many authors have written. These cavities of the jaws or hollows, however, in which the teeth are held are called by the Latin, “praesepiola,” which means stables. Others call them little dishes, or caskets (the suitable derivation of which word I cannot locate).”

§ 17. “But because Nature does nothing in vain according to Aristotle1. We also have to inquire into the use of teeth. We recount three, but this naturally is not to the exclusion of other points: 1.) to chew foods, 2.) to have speech, and 3.) to protect animals.”

§ 18. “It now pleases to mention the brutal misuse of teeth. This has been documented by Laurentius Hoffmann, an unparalleled Doctor, in his treatise regarding the proper usage and the brutal misuse of medico-chemicals.”

§ 19. “The teeth serve to crumble nutrients into pieces. Digestion (Pepsis) commences in the mouth and food is prepared for the stomach. So therefore, as one swallows, the teeth serve little old women what they can not consume; nevertheless their teeth are well conserved, and here the gums instead of the teeth are used by babies and some old men.”

§ 20. “In order to better explain letters distinctly and well, it is credible to say how much success they bring, which can be seen in old political agitators whose proclamations can hardly be understood. Pliny says in Book 7, Chapter 16, ‘they (teeth) are necessary because the lack of teeth—not only for nutriment and food, but also for guiding the voice and speech by a certain stroke of the tongue and fitting together of the front teeth—causes problems. Pliny, elegantly, in Book 7, Chapter 37 separates the teeth into saw-shaped, contiguous, and thrusting forth. The saw-shaped come together in the form of a comb but they do not rub against the opposite ones when coming in contact as in snakes, fish, and dogs. They are contiguous as in men and horses, thrusting forth as in hippopotamus and elephant. But they are very necessary for the pronunciation of the letters רָבִּיס as the rabbis have long since observed. You can try to pronounce a letter, whatever it may be if you close the mouth and begin to say the letters in alphabetical order; then the mouth begins to conform starting from the tongue with the exception of the ly Resch; so it is desirable that there are teeth in order to form the speech (but this is so in passing).”

§ 21. “The teeth protect the animals too. This is especially (true) for carnivorous animals: rapacious wolves and lions. Nature always gives protection to the weak that safeguard themselves and attack enemies, who grow more formidably, which is reported by Martial, the Roman. Because of the tooth, the boar is feared; the horns defend the stag; we, like peaceful deer, are only victims. Since the lightning of the Meds war, the Athenian soldier, Cynegirus, in a manner similar to a wild beast, after having driven the fleeing enemies to their ships, held the loaded ship with the right hand and did not let it go earlier; then he lost his hand. After having lost it (the ship), he seized upon it with the left hand; and after having that one cut off too, he detained it by a tearing bite of the teeth like a wild beast. For more about this, see Pliny, Book II, Chapter 37, page 208.”

§ 22. “The abuse we will describe. If indeed we wish the tooth of Theonin (dens Theoninus) to be given to anyone and together with Zoius, Mopsus and Momus we curse anyone, but we shall attach below a review of the direct superstition around the teeth. Meanwhile, we recognize the accursed tooth and the unbridled tongue, the foolishness, the evil, and the stench of men as equally as from eyes, words, and voice.”

§ 23. “In the meanwhile, we will exhort whom you consider friendly, that he should use precautions against a bad or haughty tooth from an abusive, Theoninuss, or an envious tooth. In this way, toothed may know, that is to say, biting, who put in motion the matter with a smooth plate, that they will do that not unpunished. Our Saviour certainly, whose teeth are whiter than white milk, will punish them by suitable measures, if however not here certainly in eternal fires with chattering of teeth and howling in the extreme dark. He will distort them greatly, the most just judge who sits and feeds the world with the horns of unicorns as well as the eggs of insects, as the Rabbis say.”

§ 24. “But let us go to the causes. Causes are internal, partly external. External: affecting limiting. Internal: matter and form. Affecting is God from whom is all, as well as creation and preservation. Preservation is the continuation of being. The internal affect is that THE tooth is producing energy, as the wine is produced on the branch of the vine. Others call the affecting cause diaplastic strength and Capivaccius alone called the tooth producing strength that requires stronger heat. Heat is indeed the instrument of living air according to Scaliger. Matter is the viscous and pithy nourishment produced in each jaw, the form is well known to everyone. The purposes that have already been described are first, the chewing of food, second, protection of animal, and third, production of speech.”

§ 25. “Teeth are formed in the fetus while it lies in the womb of the mother. However, in human beings they do not break through the gums until after the fetus is brought forth into the sun for some months. Of

1 Aristotle: 1 Politica.
8 Horaz I, sat 6.
course, it has been admired! Provident mother nature does nothing in vain. The damsel and the little boy recently brought forth into the light of the sun no longer need the womb. Other living beings appear in the light with teeth. They are never needed neither for speech nor in order to prepare the food for the stomach because the child does not take solid food, but is nourished by milk of the mother. Sucking from the breast neither the most experienced physician can teach the child nor the most skillful or the most complaisant mother. Nature has implanted this, at which the most illustrious Haurtus wonders in his most intellectual work about things to be carefully sought for, Marc 7. For all he had done beautifully, he says, ‘This dentition occurs accordingly while the teeth in their alveoli start to break through. This occurs not without the sharpest pain. At the same time, in fact, when the other beings appear into the light with teeth, only man is mostly defrauded of them at that time…. From this results that the densest grown gum sometimes causes the greatest torture when it is punctured by the teeth. In this situation, the boy may bite on a wolf’s tooth according to the advice of van Heurne, Tractatus de dentium morbis CXI 88 (Monograph on the illnesses of the teeth). Further remedies by Lemnius, the Aesculapius of Zipiza, or rather, Pliny, ‘Judge well that all that ripens early disappears quickly. In this manner children, who begin to get teeth early eject, cast out their teeth earlier.’’”

§ 26. “Nature (which is the ordinary strength of God), however, did not like to adorn and present the child with teeth immediately from birth least they would injure spongy, fungous nipples of the mother by their sharpness. According to the word of Scaliger, ‘Nothing nature sets in motion before time, place, and other conditions is advantageous to perfection. Meanwhile, all systems of future man are comprised in the seed. The proposition of the beard and the grey hair has not yet been born. The features of the body and the following lifetime are indeed present in the child, but are hidden.’”

§ 27. “From this formation of the teeth, nature—the most skilful mistress of plays—sometimes goes away and is negligent of the ordinary laws and the fetus marvelously is fitted out with teeth. Pliny from Book 7, Chapter 16 testifies that Papyrius Carbo and M. Curius were born with teeth, therefore, also called Curius Dentatus.”

§ 28. “I attach special properties to teeth. Marvelous is, of course, the hardness of the teeth as testifies Neander, because these would be long lived and provided with a long unique firmness through the strong and dense teeth. This is also said by the highest philosopher and philologist, Francis Bacon Lord of Verulam, ‘Firm teeth, not feeble and rare, promise long life. Moreover, much rarer, if any new tooth appears in old age.’”

§ 29. “The rarity of teeth we do not often observe. The fewer teeth anyone has, the shorter his life is judged to be, as the extolled Neander and Francis Bacon testify. Experience, which is the infallible criteria of certainty, testifies this until this day. The sons of art like to predict a sickness of mind and other calamities from the rarity of teeth. In the case of the Emperor Augustus who had few and small teeth, however, he is reported to have reached over seventy-six years, but this does not stand against the rule that ‘one swallow does not make a summer,’ so one example does not break the rule. Herodotus is the author who wrote that in the Persian destruction were found men with only one tooth. Compare this with Jan van Heurne: ‘There are said to be teeth of giants of an almost incredible size that diggers found in the Krembs town of lower Austria, which was held at the time by the Swedes. One of them weighed five and the other five and a half pounds. So at the time of the Emperor Tiberius in Sicilia carcasses were dug up, one of which had a tooth longer than one foot.’”

§ 30. “Not less deserving of admiration is their regeneration. Alone among the bones, they appear in senility. Where the other bones are produced from the moisture in the mother’s womb, the teeth are produced from the moist nourishment which is renewed and increased day by day. The other bones end their growth when they have reached the top. Pliny reports that the latest—which are called back teeth—grow in men around the twentieth year until often about the eightieth, and in women too. However, to whom they are not given in the age of youth, they fall out in old age and, it is sure, that they would soon spring up again. They say Zancles was a citizen of Samothrace to whom the teeth were given again after one hundred and five years.”

§ 31. “Thirty-two indeed, are imputed to men, to women twenty-eight. The bite of a man is considered among the cruellest. But the bite of snakes heals by the meal of a crushed human tooth.”

§ 32. “One can hardly admire enough the most famed of the Neapolitan lawyers because while sneezing in Hippia he lost a tooth which seemed to be a bad foreboding. Book 2, Chapter 36, p. 101.”

h Bacon, F. Scripta in naturali et universalali philosophia, Amstelodami, 1653 (HV and Mp 42).

i Sueton in the biography of Augustus.

k Heurnius, J. : De morbis, qui in singulis partibus

Plentiniana F. Raphelius, 1599. (D & CXI p. 80).

§ 33. “In human beings, certain slime is inherent, as Pliny testifies: ‘for mirrors dull the splendor when uncovered opposite to them.’ ‘It kills the fetus of unfledged pigeons,’ as I remember to have read by a young and most noble author of today. ‘That on an island, (I do not know which one), the furious females could inflict their husbands with festering wounds through their bite. This (has been observed) in the manner of the women of the Triballi family to whom they looked as notoriously clear and bewitched.’ as Pliny testifies, Book 7, Chapter 2. The famous Havemann, in his accumulation and with no feeling for art, made Amusion tell us (p. 104) that to a friend of the Muses, the best care of the teeth is necessary and very useful. Martinus Schoockiarius, sun and splendor of the Groningen Academy, is the author of Diatriba de Butyro, a better remedy with which the teeth can be elegantly conserved is not found than they should be rubbed with cheese every morning. Opium is a little less unwise than the custom of the Spaniards who wash them every day with urine as is testified by Hedouillus in Ephemideren, the works of the educated, XIII, part 1, p. 134.”

§ 34. “But it is pleasant adding to any Physiognomy mostly by wondering why Claramontius, who, in judgment of the great Johannes Cortun, was well versed in this argument, did not add anything about teeth.

1. Firm dense eye teeth prove a good constitution of health.

2. Withered, vacillating, loose, rancid teeth signify a shortness of life, abundance of fluid, and a choleric constitution. Accidents to the teeth are anodontia, dislocation, and trauma.

3. Infrequently, teeth signify a weak and faint temperament and less than favorable health.

4. A dislocation of the teeth, in which one more from the row are prominent or have taken their position outside the line seems to prove a tottering, pompous, and unusual manner of speaking. The Judgment of Modenarius is best acquainted in these matters.

5. A combination of teeth is, when the complete series of teeth stands together in a sole continuum and an entire orbicular and is in accordance with the proportions of the jaw bone. This makes a courageous, brave, military, martial, and high-minded man. So toothed were Xerxes, Darius of the Persians, and Tigrane, king of Armenians, as history reminds us.

6. There is also mention of the double- or triple-order of the teeth, such as Realdo Colombo narrates in Book 1, Chapter 10. His son, Phoebus, an unusual boy, had this condition which is a great sign of richest natural quality.”

§ 35. “It is to be remembered that in the year before the year 96 (BC) of the past and iron century5, a certain Silesian boy of seven years grew a golden tooth in the place of the last molar tooth about which Gregorius Horstius6 wrote. But actually this was artificial—not natural—as was written by Daniel Sennert, the German Hippocrates, Med. pr. p. 2.12, Chapter 15, and C.L. Sagittarius also Illustr. Phi Dec. 5 Q 5 Pöhys, 7.81. This could better be traced back to the Papaistian fictions about the great Christophorus, about the protecting goodness and other things of this kind. I do not really like to pronounce this superstition of old women, who if a tooth is drawn out of someone take it and throw it behind the furnace saying: ‘Mouse, there you have one of a stone, give me back one of bone.’ And can anyone tell me the physical reason why a bread crust nibbled by a mouse should stop toothache?”

§ 36. “Wouldn’t they like to seek an unhurt tooth in order to enable you to be comparable and like a mouse, eat a bread crust?”

§ 37 “Men who find in their bodies nothing more valuable than the teeth have judged, their misunderstanding of the account of the inhabitants of Gvancalviles where the custom prevailed—as Heinrich Salmut in the Golden Commentary to Panciroll, Book 2, Tit. 1, p. 53 testifies—that they themselves took out their teeth and offered them to their idols. Certainly asserting just the best to be presented to the gods. For auguries belonging to the teeth in Roman times we refer the reader to Pliny 7.1.”

§ 38. “The subject of pulling out, however, whose inventor is said to have been Aesculapius (as Cicero testifies on the godliness of div. Pol. Virg. De Rer. Chap. l. c.p.m., inventor of these matters) we cede to the bone-, stone-, hernia, and belly cutters. Anybody who wishes to inform himself about this matter can look at the great Sennert in Institutiones Medicæ, Book 5, Section 2, Chapter 12, p. 953, and the sons of the physicians in common advances.”

§ 39. “The divisions of the teeth (four or three are proposed) according to proof are indeed the fingers of the educated, as it means a proverb of the Rabbis, here also of equable qualification. We believe that the teeth can properly be divided into three orders, incisors, canines and molars.”

§ 40. “Incisors, Incisorii, they are called from the task in which they are engaged to first cut through the nutrient, of course, which is received by the mouth. Therefore, young women like to hang a wolf’s tooth of the medical faculty in Giessen, when this University was founded there in 1608, but rather by Jacob Horstius.
around the neck of their little children so that the gum should be rendered more and more adapted to produce these incisors according to Pliny, Book 11, Chapter 37, p. 208 l 40. The right canine of the wolf is considered a great aid. Jan van Heurne calls them *temnici*, others name them *anteriores* for the location, or the first because they come out first, or come up first before our eyes. They are also called the sharps because they are thin at the top. By the Greek’s Γελασιανός, because they are seen first while laughing, Demokritos was named the laughing Demokritos because of his continuous laughing which he performed for the reason of his senseless philosophy and duty (always the laugher or laughing Demokritos). A tractate was given out, printed at the twelfth in Cologne with the title, The laughing Demokritos, against which the legally most deserved Schuppius, a theologian of unlimited prudence translated into German, Lucian, p. 813. This generally known proverb, ‘by laughing you have to recognize much foolishness.’ From the teeth, to speak the truth, eight occur in the mouth, four in each jaw. This perhaps teases about the proverb of the Germans, ‘You laugh about a tooth, that all the others are to see each other....’ And directed toward a prince, (we have) one of the rare Epigrams: ‘The face, missing a dimple in the cheek produced by smiling, is not pleasing.’ By which is shown neither laughing nor talking in public happens to those who are lacking laughter. A controversy arises here because the incisors break through quicker than all other teeth. There are people who insist that this happens due to the sharpness with which they dissect the gum. More convincing, however, seems the purpose of being more necessary than the others to the voice and because what is devoured is cut easier than being ground.”

§ 41. “The canines have their name from the similarity they have to the teeth of dogs. Therefore, says also Guiliemus Gratralorus in *Physiognomn*, Chapter 16, p. 56, ‘the pointed teeth.’ If the canine teeth are long and strong, exposed outwardly, they show a glutinous, choleric, licentious and bad man. This (is) related to bears and dogs, which Moldenarius in *Exercitbis Physiognominis*, Book 1, Chapter 14, p. 57, interprets as a sign of health and disposition. They sometimes are called eye teeth, partly from the location they have under the eyes, partly by reason of the motor nerves since in these canines the motor nerves lead to the eyes. The ambulators and empiricists do not weigh them highly enough and draw them out with great detriment and danger. In order to remind these

§ 42. “The molar-teeth are so called from grinding and crushing which we have already said. Others call them *maxillaries* and *mandibulares*. Because they occupy the greatest part of the jaw, the Greeks call them γόμφοι. They have no defined number, like the incisors and canines. Usually, however, we find five in every part of the jaw, all together, twenty are counted when the wisdom teeth are included.”

§ 43. “This sentence is published abroad everywhere: ‘When I lose a molar tooth, it indicates the death of a friend or relative.’ In the study of dreams, I have found little (to corroborate this, and) I attribute this, with justice, to old-womanish jesters....”

§ 44. “Wisdom teeth are called *Genuini* in Latin. They are the farthest back. The Greeks call them καρνήρες, just wisdom teeth, because they break through at the time when men begin to be prudent after years of puberty. Pliny, Book 11, Chapter 37, reports that they break through after twenty years. These breakthroug, for the most part, cause great pain. They are hidden and secret, and are not accessible to the eye as are the other teeth. Here is the sentence from the Latin: ‘When the wisdom teeth waste away—the signs of which are unknown—lower anyone’s estimation just so to infix anyone’s wisdom tooth.’ So Peers. In Satyr.1 Lucilius has cut off the tongue. You wolf, you dope, you brute, you have broken the wisdom-tooth. I do not add more, tooth pick, tooth-powder, toothache (the reason for it is bad fluid ) and the fist we leave to the sons of physicians, in order to avoid introducing our sickle to strange standing corn.”

“Glory to God!”

Discussion

The old question, appearing in the Theses of Petrus Monavius, are whether the teeth are bones, occupied

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our author too. He concluded, they are also bones of a special kind without marrow and free of periosteum, only a very thin membrane in the region of their roots provides a pleasant feeling. Veins, arteries and nerves are inserted into their lower roots. Further, Johannes Loew brings out very clearly the reaction of the teeth to burning iron and condensed ice.

We are confronted by him again with the well known statement that the teeth are affixed in the cavities of the jaws like keys. He knows that illnesses like scurvy are injuring this connection and that old men and women are chewing with toothless jaws and also only with their gums. He is well acquainted with the fact that the teeth are developing while the child is in the womb of the mother, and with their exfoliation at the age of seven years. There is no thought to the theory of Andreas Vesalius that permanent teeth are the epi-
physes of the milk-teeth. Gabriele Fallopia already refuted this in 1564 but sometimes later appeared again in isolated publications. From the so called giant teeth of Krembs in Austria we could, with the help of the archive of this city, find a picture by M. Merian in his Theatrum Europaeum 1667. Later this object was identified as a mammoth tooth.

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7 Vesalius, Andreas: De humani corporis fabrica. Basileae 1543 Book 1 p. 46.
8 Fallopia, Gabriele: Observationes ad Petrum Mannam medicum Cremonensem Venetiis / Coloniae 1562 pp. 38-43.

While attending the 56th Annual Meeting of the American Academy of the History of Dentistry, take time out to visit San Francisco’s Palace of Fine Arts, the last remaining building constructed in 1915 for the Panama-Pacific International Exposition, featuring a classical Roman rotunda with curved colonnades in an idyllic park setting.
Lorenz Heister and Oral Disease with the Original Text from His Papers

Gerald Shklar, DDS, MS, MA and David A. Chernin, DMD, MLS

Abstract

Lorenz Heister (1683-1758) was the major academic surgeon of the eighteenth century. He served as an army surgeon in a number of campaigns and eventually became the professor of anatomy and surgery at Altdorf University. In 1739, he published a comprehensive book on surgery that became the standard text on the subject. It was widely reprinted and translated into many languages. The English version was the first systematic treatise on surgery to appear in that language. The book has many chapters devoted to diseases of the mouth and their treatment.

Lorenz Heister was the major academic surgeon of the eighteenth century. His treatise on surgery was the classic of the age and translated into all major European languages. He was born in Frankfurt am Main in 1683, son of a lumber merchant. His early education was at the Frankfurt Gymnasium and he received additional lessons in French and Italian. In 1702, he studied medicine at the University of Giessen under Georg Christoph Möller. In Giessen, Georg Theodoe Barthol (1669-1712) gave him the opportunity to do human dissection in the study of anatomy. In 1703, Heister followed Möller to the University of Wetzler where he completed his studies in medicine in 1706. He then went to Leiden and to Amsterdam, where he continued his studies in anatomy and surgery. He took a degree at Leiden in 1706, where Boerhaave was the recognized leader in medical teaching, and he then studied anatomy under Frederik Ruysch (1638-1731) in Amsterdam. Another of his teachers in Amsterdam was Johannes Jacobus Rau (1668-1719). He then served as an army surgeon in Flanders during the War of the Spanish Succession, where he received training and experience in the field hospitals of Brussels and Ghent. He returned to Leiden for further study in anatomy under Bernard Albinus (1653-1730) and Govert Bidloo (1649-1713). He obtained his MD degree at the University of Harderwijk in 1708. Heister visited England and became acquainted with many of the English surgeons. In 1709, he rejoined the Dutch army as a field surgeon during the siege of Tournai. In 1710, at the age of 27, Heister was appointed Professor of Anatomy and Surgery at the University of Altdorf in Bavaria. In 1718, he published his outstanding and profusely illustrated book on surgery, based on his extensive study of the foremost French authorities. It quickly became the major surgical textbook in Europe and was translated from German into French, Italian, Spanish, Latin, Japanese and English. In 1720, Heister was appointed professor of anatomy and surgery at...
Helmstädt near Wurzburg. He also taught theoretical medicine and botany at various times. Heister died in 1758 at Helmstädt. In addition to his textbook and lectures on surgery, Heister maintained a long and extensive correspondence with a student, Christoph Jacob Trew (1695-1769), who became a renowned physician and scientist in Nuremberg. Heister was a very well educated man and had a library of over 10,000 volumes. He developed a botanical garden known for its beauty and its variety of herbs. Heister describes his life in detail in the preface of his book.

“After having studied Physick [medicine] with great assiduity above four years in our German universities, my affections, being strongest for anatomy and surgery, led me to the then celebrated professors Ruysch and Raw at Amsterdam in the year 1705; whose anatomical and chirurgical demonstrations I diligently attended for about the space of a year. During this time I was also employed in frequent dissections and in trying chirurgical operations upon dead subjects; in the meantime omitting no opportunities of being present at the performance of any considerable operation by these professors, or by other eminent surgeons of the same city, as Verduin, Bortel, Koenerding, etc. By which means, joined with an attentive reading of the best writers, I acquired a considerable knowledge in surgery. But being desirous of all helps to render myself more expert and successful in the practice of this art. There being at that time a sharp war in Flanders betwixt and French and Dutch, in the summer following, in the year 1707, I went from Holland to the Dutch camp in Brabant that I might inspect and observe the practice of the English, Dutch and German surgeons who there attended. Thus, through many dangers and hardships, I spent this whole summer in the hospitals of the camp for the sake of improvement. But in autumn I went from Brabant to Leyden, and spent the whole winter in attending the lectures of the then celebrated professors in that university, Albinus senior, and Boerhaave: and thus I continued till the beginning of the summer 1708. After which, having taken my degree of doctor, I returned again to the camp, where I found large opportunities of learning and improving myself in surgery from the multitude wounded in the several bloody fights, particularly at the siege of Lisle and the battles of Oudenarde and Wynnendale. Upon the approach of winter again, I was determined to settle in the practice of surgery in Holland, at Amsterdam, partly from the delight I had in the country, and partly through the solicitations of the famous Ruysch, who respected me as a son. Here, therefore I stayed the winter, and part of the ensuing spring, teaching anatomy and surgery to students and gentlemen, as Raw had done before me, who was now rejected for his ill conduct or misbehavior…. In the beginning of the spring 1710 I was, beyond all expectation, called by the Republic of Nurembeg to teach anatomy and surgery as public professor in the University of Altdorf. Being therefore unwilling to neglect this honorable invitation, having obtained leave from the Republic, I first made a tour into Great Britain where I was, from spring to autumn, collecting everything new in the several branches of Physick. And then, returning to Nuremberg and Altdorf, I assumed my new professorship....”

In Heister’s outstanding and authoritative book on surgery, there are a number of chapters devoted to oral diseases and their treatment, but they represent a relatively small portion of the book—some 20 pages out of 850 pages in the English edition of 1768. The chapters on oral diseases have the following headings:

Chapter 58—Of Cauterizing behind the Ears for the Tooth-Ache
Chapter 75—Of the Hare-Lip
Chapter 76—Of a Cancer in the Mouth and Lips
Chapter 77—Of Chirurgical Operations in the Teeth
Chapter 78—Of cleaning black and foul Teeth
Chapter 79—Of Hollow and Decayed Teeth
Chapter 80—Of the Chirurgical Methods for easing the Tooth-Ache
Chapter 81—Of rectifying Irregularities of the Teeth, which lacerate the Tongue and Cheeks
Chapter 82—Of drawing Teeth
Chapter 83—Of Artificial Teeth
Chapter 84—Of Lancing the Gums in Dentition
Chapter 85—Of Epulides or Excrescences of the Gums
Chapter 86—Of Parulides, or Boils and Absesses [sic] of the Gums
Chapter 87—Of depressing the Tongue
Chapter 88—Of dividing the Frenulum [sic] of the Tongue
Chapter 89—Of a Ranula or Tumour [sic], and Calculi under the Tongue
Chapter 90—Of a Scirrhus and Cancer of the Tongue
Chapter 91—Of Ulcers in the Palate
Chapter 92—Of stopping of Perforations of the Palate into the Nose
Chapter 93—Of Chirurgical Operations on the Uvula and Tonsils

Heister’s advice on operations in the mouth and on the teeth owe a great deal to Fauchard’s book, Le Chirurgien Dentiste, of 1718. His advice on oral surgery represents much of the general medical ignorance and superstition of the time, such as bleeding and purging to cure systemic disease problems. However, he offers
A GENERAL SYSTEM
OF SURGERY,
IN THREE PARTS.
CONTAINING THE
DOCTRINE and MANAGEMENT
I. Of Wounds, Fractures, Luxations, Tumors,
and Ulcers, of all Kinds.
II. Of the several Operations performed on all Parts
of the Body.
III. Of the several Bandages applied in all Operations
and Disorders.

To which is prefixed,

An INTRODUCTION,
Concerning the Nature, Origin, Progress, and Improvements of Surgery.
With such other PRELIMINARIES as are necessary to be known by the
YOUNGER SURGEONS.

Being a Work of THIRTY YEARS Experience.

Illustrated with Forty Copper-Plates, exhibiting all the Operations, Instruments, Bandages, and Improvements,
according to the Modern and most approved Practice.

By Dr. LAURENCE HEISTER,
Professor of Physic and Surgery in the University of HELMSTADT,
Fellow of the Royal Society, LONDON, and of the Royal Academy at PARIS, &c.

Translated from the Author’s last Edition, greatly improved.

LONDON,
Printed for J. WHISTON, L. DAVIS and C. REYMERS, B. WHITE,
H. WOODFALL, R. BALDWIN, W. JOHNSTON,
T. LOWNDES, L. HAWES and Co. T. CASON,
Z. STUART, W. LAW, W. KEARSLEY.
MDCCLXVIII.
Figure 2—Illustration of the instruments used by Heister (Vol. 1, Tab. XX).
Figures 13-26 demonstrate instruments used in the treatment of dental problems.
many sensible improvements in oral surgical techniques and overall management. He understood that true malignant tumors cannot be managed with local medicaments and must be surgically removed. He also understood that they recur if incompletely removed.

HEISTER—
A GENERAL SYSTEM OF SURGERY IN THREE PARTS.
Translated anon. from the Latin edition of 1739.

SECOND PART, SECTION TWO, CHAPTER 76.
OF A CANCER IN THE MOUTH AND LIPS

I. There are two species of cancers in the lips, as in other parts of the body, viz. latent and ulcerated. By a latent cancer is meant a hard, painful tumour[sic] in the lip. The ulcerated cancer is when the tumour degenerates into a spreading fetid ulcer, discharging an acrimonious matter, which corrodes not only the lips, but every part of the face it touches. This species of the cancer is generally seated in the lower lip.

II. This lamentable disorder commonly arises, like other cancers, from a peculiar acrimony in the blood, and an obstruction of the spongy glands in this part; from whence proceeds a livid and painful tumour or wart that by degrees turns to an open cancer or malignant ulcer, which quickly divides the lip as if it were slit. This disorder may also frequently arise in bad habits from an accidental blow, bite, or puncture of the lip, &c.

III. The use of medicines in this case is generally of little or no service; and almost the only relief that can be expected and hoped for must be had from the knife. If this be not applied in time, there will be great danger of the disorder spreading itself into the other glands of the neck, mouth and fauces, so as to strangle the unhappy patient, as I have sometimes observed. But when the vitiated parts are timely removed, there may be then some hopes of a cure; especially if the offending humours[sic] in the blood are at the same time corrected, and carried off by a proper diet and medicines; which being generally extremely difficult to obtain, is frequently the cause of the disorder returning again soon after. However, the disorder is more likely to be cured in young than in old patients, and in those the most easily curable are such as proceed from external causes; and most dangerous and obstinate, when they owe their rise to and acrid and vitiated blood.

IV. The cure of a cancer in the lips is to be performed in different methods, according to the particular condition of the disorder. For, when only a small chop or fissure infests the upper part of the lip like a painful and inflammatory ulcer, the cause of the disorder being external, from cold, or the like, it may then be proper to treat it with mel. rofar. bals. peruv. or ung. saturnin. feu diapompol. cum merc. pauxillo, and afterwards to cover it with a plate of lead that has been rubbed with mercury, or with a piece of emplast. diapalma, continued and renewed till the disorder disappears. In the meantime a proper regimen, diet, and course of medicine, ought not to be neglected. I have by experience learned, that the liquor exprest from rotten apples, and mixed with merc. dulc. assisted with internal medicines, afforded great relief to a certain young woman troubled with this disorder. We also read of a cancer in the mouth cured by vitriol. coerul. either with or without olive oil, ephem. nat. curios. cent. 6 obs. 43. But when neither these nor other medicines afford any relief, and we perceive the disorder growing daily worse and worse, the chief and only remedy is to extirpate the indurated and cancerous part of the lip by two or three incisions with a scalpel or lancet, observing rather to remove some of the sound parts, than to leave the least bit of the cancer behind, which Le Dran confirms; and then you may conjoin the lips by two needles or fibulae, like as in the hare-lip; or when the fissure is but small, by the sutura nodosa. By this method I succeeded in curing the cancer represented in Tab. XX. Fig. II.

V. But when the cancer of the mouth is not yet ulcerated, but infests the part of the lip next to the skin with a very hard and painful tumor, you are in that case advised by some physicians to remove it by Escharotics, healing up the wound after the tumor is destroyed. This practice may indeed succeed sometimes when the cancer proceeds only from external causes, or an encysted tumor; but as the application of caustics is generally dangerous in these cancers, I should rather advise, with the most prudent physicians, to extirpate the same by the scalpel or scissors. There are two methods of amputating these cancers, according to their particular natures: for those which are removable, you are to make an incision through the skin with a scalpel; and, after freeing the tubercle from its adhesions with a knife or scissors, the wound is then to be healed in the usual manner: but such as are fixed and immovable are to be extirpated together with part of the lip in which they were contained, treating the wound afterwards by suture as in the hare-lip. But in whatever method you proceed to cure the patient, it will be all to no purpose, if he does not observe a proper regimen of diet and medicines, with bleeding and lenient purges, to prevent a speedy return of the disorder, which I have observed, oftener in this case than in a cancer of the breast.
CHAPTER 78—OF CLEANSING BLACK AND FOUL TEETH

I. As the teeth are frequently infested with a yellow, livid, or black crust, it gives not only great deformity to the patient, but also infects his breath, and loosens or decays the teeth. We shall therefore here describe the methods of scouring the teeth, and discharging their morbid crust. For this purpose we are furnished with various instruments, which may be properly called *scalpra dentalia*, Tab XX, Fig. 14, 15, 16, 17, some of which are furnished with narrow points, others with broader, and with edges; and some again are falciform, as that of Fig. 17. But all of them are adapted to one and the same handle, Fig. 14. Lit. B or, if you please, you may have them fixed, each in a distinct handle, like that at Fig. 16 and 17 in Fauchard’s *Chirurgien Dentiste*. These instruments being applied to the teeth near the gums, serve to scrape off the foul crust from their outside, while you support them within by the fingers of your left hand, taking care not to wound the gums, or loosen and displace the teeth. In this case it will be also serviceable to rub the teeth and gums well with the tinct. gummi laccae cum mel. rosar. & sp. salis, aut vitriol. gut. which will not only whiten the teeth, but also render the gums more firm. I remember to have seen an operator for the teeth, in Saxony, who, though he was furnished with various instruments, did not use any of them in my presence upon several patients, but that of Fig. 17.

II. But to prevent the black and morbid crust from spreading over the teeth again, it will be necessary to supply the patient with a mild dentifrice, with which he may frequently rub his teeth every six or seven days, and render them white and splendid. But the too frequent rubbing of the teeth with strong and acrid dentifrices, does the teeth as much or more harm than neglecting them. The common dentifrices for this purpose are composed of powder ex pumicibus, lateribus, coralliiis, tabaccaeque cineribus, &c. But these by their roughness wear away the teeth; and the acrid spirits, as those of Vitriol, and common salt, dissolve and eat them away by degrees. Therefore it will be safest to use dentifrices composed of softer substances, as the ocul. cancror. mater. perlar. corn. cervi.creat. pp. cum rad. florent. or myrrh. &c. When the gums are loose and flaccid, you may add a few drops of sp. salis or vitriol. or the following mixture:


The ashes of tobacco are very efficacious in cleaning black teeth, if they are not used too often; so is also the following mixture:


In these may be dipped a bit of linen to rub the teeth with every day till they are whitened, but so as to have some other dentifrice to be used every sixth or seventh day in its stead; otherwise you will corrode and destroy the teeth by too frequent use of acids; especially the sp. sal. and vitrioli, which is the common and pernicious practice of quacks. Therefore, if you are afraid of injuring the teeth with these, you may frequently wash them off with cold water, after the use of them. And, lastly, one of the best preservatives for the teeth is to wash them with cold water, and rub them with the fingers, not only every morning, but also in the day-time, and in the evening, adding sometimes a little common salt, which will both preserve them clean and white, and prevent them from aching and decaying.

CHAPTER 79—OF HOLLOW AND DECAYED TEETH

Those teeth which are hollow and decayed are usually carious, and admit some part of the food into their cavities, which by degrees putrify, become acrimonious, and not only farther destroy the teeth themselves, but also irritate the internal periosteum, and small nerves of this bone, so as to excite intolerable pain: to prevent which various methods have been contrived. The first is to cleanse the cavity of the tooth with a needle, tooth-pick, or some other convenient instrument, Tab. XX, Fig. 19, 20, 21, and then to fill up the space with white wax or mastich, as often as you shall see occasion; by which means the teeth will be preserved from founfulness and farther decay. When the caries is but superficial, it may frequently be removed by the rasp. But when the disorder is in the larger grinding teeth, especially in the middle, it will be best to fill them as exactly as possible with a bit of lead or gold, by means of the instruments, Tab. XX, Fig. 20, 21. But when the caries has reached the root of the tooth, so as to excite intense pain, the patient may be relieved by filling the tooth with ol. caryoph. cinnam. vel. lign. guiac. &c. and if these do not prove strong enough, it may be convenient to cauterize the tooth with a red-hot instrument for this purpose inserted into its cavity, Tab. XX, Fig. 20, 21, by which practice you will free the patient instantly from his pain, without giving him any great additional torture, provided you do not burn any of the adjacent parts of the mouth. That the teeth which are thus cauterized, may be guarded from a return of the pain, they should have their cavities filled with lead or gold as before; and if this last method proves ineffectual, or if
the cavity cannot be filled with wax, lead, or gold, there then remains but one remedy, which is to extract the tooth, as we shall presently teach.

CHAPTER 80—OF THE CHIRURGICAL METHODS FOR EASING THE TOOTH-ACHE

Sometimes the tooth-ache is so obstinate and intense, as to yield to no remedy; and therefore the patient must have recourse to the surgeon’s assistance, who may relieve him sometimes, 1. By scarifying the gums, as Pliny has long ago observed, and which has been confirmed by frequent experience; or, 2. By inserting an actual cautery, or hot iron into the cavity of the tooth, in the manner directed in the preceding Chapter; or, 3. You must scarify or cauterize behind the ear, under that part which anatomists call antitragus. Or, according to Schelhammer, you must strongly press the part with the fingers; or, lastly, 4. The decayed and aching tooth is to be drawn.

CHAPTER 81—OF RECTIFYING IRREGULARITIES OF THE TEETH, WHICH LACERATE THE TONGUE AND CHEEKS

Sometimes the teeth stand more out or in than they ought; and sometimes the sharp points of a broken tooth stand out unequally. These accidents not only impede the mastication of the food, and formation of the voice, but frequently lacerate the tongue, lips, or cheeks, from whence very often proceed inflammations, tumors, ulcers, and sometimes a cancer. To remedy which disorders it will be necessary to file away the inequality by the instrument represented Tab. XX. Fig. 22 or, when that is impracticable, to draw the tooth.

CHAPTER 82—OF DRAWING TEETH

I. Tooth-drawing, according to Cicero, (De Natura Deorum, Lib. iii. Cap. 22) was first invented by Aesculapius; in whose temple the ancients hung up a pair of leaden pincers, to signify, as I think, that it would be dangerous and improper to extract any teeth, but such as might be removed with leaden forceps; that is, such as are loose, and almost ready to fall out; for they do not consult their own welfare, who imprudently remove their teeth without absolute necessity, whilst they are sound and entire. For evulsion of the teeth is not only a dangerous and painful operation, but has even sometimes hazarded the patient’s life; at least they deform the speech, and impair the act of mastication by this means, more especially in adults, in whom we can have no hopes of others growing up in their room; however, it is sometimes absolutely necessary to draw teeth.

II. In infants, for removing the deciduous or lacteal teeth; which, being loosened by the fingers, may be extracted with a thread, or a pair of crow’s bill forceps; for when these teeth are left too long in the sockets, they may displace and turn the new ones awry. 2. It will be proper to extract those teeth in infants which grow out of the palate, or some other improper part of the mouth, which both hinder their speech and sucking. 3. Extraction is often the only method of relieving the tooth-ache, which is very intense, proceeding from a caries in the teeth, and incapable of being eased by any medicines. 4. Those teeth ought to be drawn, which, by their irregular figure and position, wound and lacerate the tongue, lips, and cheeks. 5. It is often absolutely necessary to draw a tooth for curing a fistula, or ulceration of the gums next the teeth.

III. The method of drawing them is as follows. If the tooth to be drawn is fixed in the lower jaw, the patient must be seated on a low seat, or on the floor; but when in the upper jaw, he must be seated on a high stool; after which the surgeon takes his instrument best adapted to the case, and thereby draws out the tooth, as if extracting a nail out of a piece of wood, drawing the upper teeth downward, and the lower teeth upward; yet there is a particular slight to be used, to avoid breaking the teeth, as you may see described more at large in M. Fauchard’s book, entitled, Le Chirurgien Dentiste.

IV. The instruments used for tooth-drawing are so many and various, that almost every operator is furnished with a particular one of his own. But those most in use are the pelicanus, forfex, and crow’s bill, and less common, but more commodious, are the instruments represented in Tab. XX. Fig. 23, 24, 25 though the uses of them can be much sooner showed to the eye, than described by words. There are also various instruments for drawing stumps of teeth, which cannot be extracted with the forsex, particularly the goat’s foot, and that at Fig. 26. That end of Fig. 23 marked A, also serves for this purpose.

V. We shall conclude this chapter with observing, that though it is often absolutely necessary to remove or extract the teeth, yet you ought not to perform the operation while the patient’s gums, and parts adjacent, remain inflamed and tumified [sic]; for there is great danger in these cases of throwing the patient into violent tortures, and indeed of worse symptoms ensuing, and sometimes very dangerous hemorrhages. But, above all, we should particularly dissuade women with child from this operation.
In the October 1915 issue of The Michigan Dental Journal (Vol. 1, No. 1), two cartoons, drawn by Strong in 1910, appeared on page 7. The upper cartoon depicts an obviously successful dentist who “believes in, supports and attends the Dental Societies.” The lower cartoon shows a slip-shod dentist who completely disregards professional ethics, sanitation requirements, hands-on expertise, patient comfort and common sense—the bedrock characteristics of good dentistry.

The successful dentist, impeccably dressed, is shown examining a patient in his upscale dental office at 11 AM. The room is fastidiously neat and well appointed. Filmy, lace-bordered curtains cover the lower half of the tall window which supplies daylight for the operatory. A modern cuspidor, complete with running water, is attached to the left side of the chair. Several pictures adorn the walls, and a whirling ceiling fan above the doctor and patient circulates the air. An elegant, ornamental bracket table is attached to the wall, within easy reach of the dentist. In the back of the treatment room, standing at a full military brace, is a uniformed dental attendant,
resplendently dressed in a military-style jacket with eight large buttons. His pillbox hat is secured to his head by a strap and is held in place under his nose. His alert stance suggests that he is ready to be of assistance to the dentist at a moments notice. The smiling dentist, who has a distinguished balding pattern and a meticulously manicured moustache, is confidently inspecting the patient’s mouth. In the dentist’s right hand, he holds a long-handled instrument that he discretely hides from his patient’s direct view. On the dentist’s right little finger is a shiny, diamond ring, another sign of his self-made affluence.

The patient, a large man, is elegantly dressed in a dark suit. His well-shined, pointed shoes are elevated, and his feet and lower thighs rest on a tasseled pillow. He is seated in a comfortable contoured dental chair. (Of historical interest, the reclining, contoured dental chair—with an articulated seat and back—was actually developed years later, in 1958, by John L. Naughton of Des Moines, Iowa). Relaxed, with eyes closed, the patient is smiling widely. In his left hand he holds a lit cigar. Apparently, he trusts that the dental procedure will be over quickly enough for him to still enjoy his “stogie.”

The unsuccessful dentist, dressed in typical work-a-day clothes, (including baggy pants held up by suspenders), has his shirt sleeves rolled up to his elbows as he attempts to yank out his patients tooth at high noon. (The heat is on!)

The unsuccessful dentist’s ill-equipped, unsanitary office is in complete disrepair, with broken plaster on the walls, disheveled and soiled window curtains, and a calendar and wall picture—both hanging crookedly. No dental assistant is present. Not having a bracket table, the dentist places his tools on a small, low stool, inconveniently located behind the dental chair. A pail full of water, containing a floating cup, has been placed on the floor in close proximity to a dead rat. A sign on the pail reads, “DRINKING WATER. DON’T SPUT IN HERE.” A scrumny cat, sitting on the opposite side of the pail, is closely observing the commotion. (Perhaps the cat is kept in the office for rodent control and has become accustomed to such bedlam.)

The dentist’s ill-fitting, oversized glasses are precariously perched on his nose; and he is furiously smoking a corn cob pipe. His bushy sideburns, two stray hairs sprouting on top of his head, and his shadowed lower face suggest that he is in dire need of both a haircut and a shave.

The terrified patient, with his hair standing on end, is clothed in patched pants. (A sign of low social class?) His legs are futilely lifted up in a running position. (“Let me out of here!”) With his left forearm pressed tightly against the armrest of the dental chair, the patient seems to be fortifying himself against the crude and painful “attack.” Clutching an oversized extraction forceps with both hands, the expressionless dentist is in the process of pulling out a central incisor. In the process, he is leaning precariously backward to gain enough traction to complete the job. As the dentist tugs, the panicked patient kicks over a tobacco cuspidor, meant to perch on a soap box to the left of the chair. Unlike a sanitary dental cuspidor used for mouth rinsing, this filthy, slimy receptacle (commonly made of brass) is a spittoon that collects globs of airborne spit: salivary phlegm and tobacco juice expelled from the user’s mouth. With no fan overhead, the patient secretes a large drop of sweat. Or is it a tear?

In this cautionary, comic comparison, the exemplary dentist attracts and keeps patients because of his close alliance with the Dental Societies. They offer professional guidance, and set high standards and values, for the practitioner: exacting requirements that point toward status, wealth, and material fulfillment. In contrast, the slovenly and unmotivated dentist has chosen his own ill-begotten fate. By failing to honor, support, and comply with the Dental Society’s commendable standards, the unsuccessful dentist is—and will remain—a disgrace to dentistry: A “professional failure.”

The analysis of these two cartoons is provided by:

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Be sure to visit the Bookshop on page 98 of this issue.
If you would like a book that you have edited or written to appear there, please send a brief description and ordering instructions to Dr. David A. Chernin at editor@histden.org.
George Leslie MacKay was born in Oxford, Ontario, Canada, in 1844. He spent most of his life as a missionary in Taiwan and died there on June 2, 1901, from cancer of the throat. MacKay went to Taiwan in 1872 and was involved in many different activities to improve living conditions in the area. He was not trained in medicine and was active in his missionary work, yet he performed a variety of simple medical and dental procedures such as dental extractions.

In 1879, he established the “Huweikai Clinic” which was later renamed in his honor as MacKay Hospital and helped many people in the remote areas, including many leprosy patients. The clinic tried to introduce Western medical sciences in the area. In 1882, MacKay established the Grand School of Sciences, and in 1883 established the Tamsui Girls’ School that pioneered education for girls in Taiwan. The Grand School of Sciences was later renamed Oxford College.

MacKay introduced different European vegetables and fruits to the island, and also helped native farmers increase crop production. On June 1, 2001, Taiwan honored MacKay with a stamp to mark the centenary of his death. The stamp shows his picture, and on the background shows scenes of his activities including a dental extraction and the building of the Oxford College. (Scott 3365).

Hannelore T. Loewy, CD, PhD and Aletha A. Kowitz, MA

Charles Millstein, DMD, MPH

Abstract

In 1970, there were few fully-educated endodontists and formalized endodontic programs in the United States. Dr. Alvin Krakow began a teaching/clinical program that combined the best in technical education and research for academically-minded young clinicians. The Forsyth Dental Center hosted the program while the Harvard University School of Dental Medicine (HSDM) offered the prerequisite courses in basic science. The program ended in 1987 and was reinstated in 1993. Today, the program continues to graduate a small group of diversified and educated clinicians. A number of graduates in the original group have made significant contributions to the specialty. This historical perspective focuses on the early years of the combined program.

Historical Perspective

In 1970, two affiliated institutions in Boston, Massachusetts, the Forsyth Dental Center and the Harvard School of Dental Medicine created opportunities for competent, proven clinicians to enroll in a strong postgraduate program in endodontics (the H/F program). Initially, both schools underwent revolutionary changes starting first with the Forsyth Dental Infirmary for children in 1954 followed by the Harvard School of Dental Medicine in 1967. With the fluidity brought about by change, endodontic education became a reality. In each case, a well-chosen, well-educated visionary leader guided his institution through chaotic times to its present, desirable status. With technology and science melding in the second half of the twentieth century, this specialty area of dentistry came of age.

Following the death, in 1950, of dentist-scientist Percy Howe, the legendary director of Forsyth, the Trustees appointed Dr. Howard Majerison to continue its mission of dental care for inner-city children. Majerison realized that Forsyth needed a new direction and a fixed association within the larger academic world. He facilitated the affiliation between the Harvard School of Dental Medicine and Forsyth. Several months later, in 1955, Majerison died unexpectedly; and the same board selected a new director, Dr. John MacDonald. Dr. Roy Greep, an endocrinologist who had been Dean of the dental school since 1952, greatly influenced the search committee’s decision.
In Dr. John MacDonald, the group found an accomplished candidate with impressive leadership skills. A Canadian by birth, he obtained a dental degree from the University of Toronto in 1942 and a PhD in bacteriology from Columbia University in 1952. He founded a small bacteriological department at the University of Toronto. With his insatiable curiosity, he hoped to identify the essential components of mixed anaerobic infections in periodontal disease. These discoveries led to greater understanding of the pathways of oral disease and ways to eliminate them, and served as a basis for his future work at Forsyth.

In 1956, MacDonald was offered a co-appointment as full Professor of Bacteriology at the Harvard Medical School and a laboratory in a strong department that included two Nobel laureates (John Enders and Thomas Weller) that he readily accepted. His first duty was to evaluate most of the remaining Forsyth staff and replace them, as necessary, with experienced oral biologists as well as a young faculty with respectable credentials and academic/research potential. Using the Harvard review process for new staff, MacDonald chose a cohesive, talented group with good prospects. Most of the appointees remained at Forsyth for their entire professional careers.

The Harvard affiliation frequently resulted in appointments at both institutions and enabled the new unit to develop an environment dedicated to research and graduate education. His appointments included experienced researchers such as Professor Coenraad Moorhhees of Forsyth, Finn Brudevold, James Irving, Alistair Kerr, and Benjamin Amdur as well as untested scientists including Ronald Gibbons, Sigmund Socransky, Johannes van Houte, and Leon Dogan.¹

Dr. MacDonald received a substantial grant from the National Institutes of Health. In his own bacteriology laboratory, he worked closely with Gibbons and Socransky who helped to maintain this NIH funding after 1962 when he left for the Presidency of the University of British Columbia.²

Clinical Scholars

At the time, the concept of educating clinical scholars in dental specialties was a novel idea not yet accepted within the profession. The dental school sought to develop three-year advanced education certificate programs that would train future full-time teachers and researchers in all of the dental specialties. Spurred on by Dr. Reidar Sognnaes, they carefully screened the applicants who desired to become clinical scholars. One of their earliest choices was Sigmund Socransky. After Sognnaes left in 1960 and MacDonald followed in 1962, Paul Goldhaber of the dental school became director of the Certificate Program in which capacity he served until 1974. Subsequently, James Shaw, PhD, a full-time researcher in nutrition, was designated as Chairman of the renamed Committee for Postgraduate Education.

The clinical scholar program stressed an individually-designed curriculum for each student that would qualify him or her to undertake related clinical research. Forty years earlier, dental research had focused on the basic sciences. As the trend shifted to research germane to clinical treatment, many dental educators began to look at the new concept realistically. In 1963, Dean Greep received a federal grant of $883,000 to provide fellowships over a five-year period in the clinical specialties of orthodontics, periodontics, pedodontics, and oral medicine.³

Dr. Harold Berk, a former Forsyth intern as well as a Northwestern University graduate, inspired his close associate, Alvin Krakow, to pursue the course of study in endodontics. After Krakow completed the endodontic educational program in 1962, Forsyth’s oral surgeon, James Springer, introduced him to the clinical director, Finn Brudevold. Krakow joined the Forsyth faculty and supervised the teaching of interns. At this same time, John Hein, a graduate of Tufts College Dental School (1944) and a recipient of a PhD in Chemistry from the University of Rochester (1952), accepted the Directorship of Forsyth, a post he held for the next twenty-nine years. By continuing MacDonald’s work and expanding the scientific staff in disciplines such as immunology, pharmacology, physical chemistry, and electron microscopy, Forsyth grew in stature to become one of the most prestigious private dental institutions in the world. In addition, he fostered strong bonds with the National Institute of Dental Research and pharmaceutical corporations. Later, in 1976, he presided over the American Association of Dental Research.

During the 1960s, the dental school began a gradual decline that led to Greep’s resignation in 1967. A number of problems surfaced including too few students and a two-year medical program that was no longer relevant for dentistry. Through the intervention of Dean Ebert of the medical school and President Pusey, the university formed an ad hoc committee whose mission was to review the future of dental education at Harvard. With unanimous approval, the committee voted to continue the school but to change its method of operation.

Several interesting patterns appeared during these challenging times. If the committee followed Harvard’s medical school model, clinical education could take place at the satellite, hospital-based sites. The hospitals served the inpatient and outpatient needs better than a
newly built, isolated dental clinic could.4 Since Harvard administered several of the post-doctoral specialty programs at affiliated institutions, these centers became more significant to the new concept of training undergraduate students in existing clinical settings. The following successful programs were already in place: Oral Surgery (Massachusetts General Hospital), Pediatric Dentistry (Children’s Hospital), Orthodontics and Periodontal Research (Forsyth). Endodontics did not become an accepted specialty until 1964 when it was recognized by the ADA. Harvard created a new model in dental education fashioned after its medical paradigm.

Secondly, the committee realized that the dental school needed more autonomy from the medical school, as well as a core course in dentistry given during the first two years. The ad hoc group chose Dr. Paul Goldhaber to take the Deanship. He was a well-known periodontal researcher at the school who was highly regarded at the National Institute of Dental Research. He set about remodeling the clinic, increasing the size of the student body, and restaffing the clinic with highly educated teachers and specialists. Goldhaber selected Dr. Leon Dogan of Forsyth to head the department of operative dentistry because of his background in materials research.5

Goldhaber is best remembered for saving the pre-doctoral School of Dental Medicine from extinction. He restored its purpose and pride in being the nation’s first university-affiliated school of dentistry. During his tenure, Dr. Walter Guralnick established the novel program of granting MD degrees to oral surgeons after they completed their additional general surgery residency training. Goldhaber’s expansion of the academic, research, and theses requirements for the post-doctoral clinical specialty training programs allowed students to qualify for the older Doctor of Medical Sciences and the newer Master of Medical Sciences in Oral Biology in 1980-81. In addition, he introduced additional post-doctoral clinical specialty programs offering a healthcare delivery research track in combined degree programs with the Kennedy School of Government and the School of Public Health. To bring to a close a successful deanship, he presided over the International Association of Dental Research at its meeting in The Hague in 1986. He retired on June 30, 1990 after 22 years of service.6

In 1970, Dr. Alvin Krakow developed the Harvard/ Forsyth Postdoctoral Endodontic Programs, which were of two-, three-, and four-year duration, bolstered by grants from the National Institutes of Health. In spite of the fact that none of the other specialty programs was less than three years, there was an acute shortage of fully educated endodontists and advanced education specialty programs in the United States. Accordingly, the two-year program was included to address this need. Nevertheless, it contained a research component that required thesis preparation and defense.

Alvin Krakow became overall director of the post-doctoral program and Dr. Joel Dunsky, his partner at Limited to Endodontics, a private fee-for-service group practice, became director of the undergraduate program at Harvard. Both had completed their endodontic education at the Boston University School of Graduate Dentistry. In 1962, Dr. Robert Matusow, then director of undergraduate endodontics at Harvard, left to conduct microbiological research and to teach at the Boston University endodontic program. Dr. Paul Gron, a full-time researcher in the Chemistry Department at Forsyth and Director of the Infirmary Division, supervised the research components of the Postdoctoral Endodontic programs.

The new post-doctoral undertaking at Harvard/ Forsyth started as two- and three-year programs. Forsyth collected patient fees and thus was able to pay the expenses of the clinic. Harvard procured the tuition, administered the program, and taught the courses in basic science. Revenues exceeded expenses in the new venture, and the two institutions divided budgetary surpluses.

Krakow chose students with a strong interest in research for his incoming classes. The four-member class would also teach the pre-doctoral students at the dental school. Krakow always stressed the importance of clinical care management in their education. He inaugurated short courses in vital pulp therapy for pediatric endodontics, the psychosomatic considerations of endodontics, and the interrelationship between periodontics, orthodontics, prosthodontics, and practice management. These educational endeavors complemented the clinical education and helped ensure the future success of these students as clinicians and educators.

During the first year of the course, each student was involved in an ongoing basic research project at Forsyth. To ease the initial cost, each student would choose to work in a laboratory and become a member of the research team. For example, if Socransky’s laboratory received a grant in periodontics, the endodontic student could study in an allied field that could result in separate research findings and lead to a possible publication. Prior to graduation, each student had to write an acceptable and defensible thesis. MacDonald’s successor, Dr. John Hein, funded clinical projects in endodontics from his general research funds. When resources became scant, Krakow established teaching/research funds at both institutions. These two subsidies evolved into the Krakow Harvard Forsyth Endowed Research Fund that continues to support endodontic investigations at both institutions.7

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The initial staff consisted of formally-educated endodontists from varying graduate programs. Dr. Shepard Goldstein attended Albert Einstein Medical Center with Dr. J.B. Bender, Drs. Edward Mehlman and Jay Marlin matriculated at Boston University with Dr. Herbert Schilder, Dr. Robert Kittredge studied at the University of Buffalo with Dr. James Guttuso, and Dr. Thomas Winkel studied at the University of Indiana with Dr. Harry Healey. Dr. Charles Millstein completed a two-year program at the University of Pennsylvania with Dr. Louis Grossman.

By the late 1980s, the initial objectives of establishing postdoctoral education and educating board certifiable endodontists were established. Krakow was ready to move on to new challenges. Coupled with the limited budgets with which to hire an adequately-trained successor, the governance of both schools decided to disband the program, and it was closed in 1987.

A number of the graduates of this program have contributed over the years to the growing field of endodontics. Dr. Leif Bakland earned his Certificate in Endodontics from the H/F program in 1973. He accepted a faculty position at his dental alma mater, Loma Linda University, in 1976; and a year later he became the first chairperson of the newly-created Department of Endodontics. Working with George M. Lessard, PhD, Bakland was instrumental in developing the new Clinical Research Center in 1992. Today, he is Professor and Chair, Department of Endodontics, and soon will be stepping down as Associate Dean, Advanced Education and Research. He has actively spent his time upgrading the specialty. During the year of 1986-87, he presided over the California State Association of Endodontists. In 1991-92, he led the Pulp Biology Group of the International Association of Dental Research. Bakland was President of the American Board of Endodontics in 1992-93. Later, he served as Secretary-Treasurer of the International Association of Dental Traumatology. From 2000-01, he was President, College of Diplomates, AAE. Bakland published more than fifty articles in the science-based disciplines of endodontics, traumatology, and immunology. In addition, he is co-author, with Dr. John Ingle, of the fourth and fifth editions of the classic text, *Endodontics.* For his work as an exemplary educator and teacher, he was honored with the Distinguished Service Faculty Award from Loma Linda University in 2001, the Alumnus of the Year in 2002, and the I.B. Bender Lifetime Educator Award of the AAE in 2004. The latter award states that he “...has demonstrated his status as an outstanding full-time educator and mentor for at last 15 years by earning the esteem and respect of his colleagues and students, by the quality of former students and their impact on endodontics, and by earning a national reputation as an outstanding contributor to the art and science of endodontics as evidenced by invited presentations, the extent of scholarly research and continuing education involvement.”

Bakland attributes his opportunities for career success to Krakow. “Al Krakow was a HUGE influence in my professional life (he actually asked me to be the course director for orofacial pain during my first year in the endo program—that gave me an opportunity to meet many of the ‘bright lights’ at Harvard to invite them to speak to our endo program. He also appointed me to the American Board of Endodontics when he was president of the ABE). I also had the pleasure to teach half time at Forsyth for the 3 years between completing the program and moving to Loma Linda. So as you can imagine, there is a very warm spot in my heart for HSDM/Forsyth.”

Dr. Mahmoud Torabinejad teaches and conducts research with Bakland at Loma Linda. He earned a Certificate in Oral Pathology at the University of Illinois in Chicago in 1972-74. For the next two years, he furthered his education in endodontics at the University of Washington in Seattle, graduating in 1976 with an MSD. After an interview with Alvin Krakow at the annual AAE meeting, Krakow arranged for him to spend the following year at Forsyth under the guidance of Ziedonis Skobe, PhD, Department Head of the Electron Microscopy Department. This led to the paper by Torabinejad, et al. “Scanning Electron Microscopic Study of Root Canal Obturation Using Thermoplasticized Gutta Percha,” published in 1978 in the *Journal of Endodontics.* It served as an analysis of an earlier paper by Yee, et. al., “Three Dimensional Root Canal Obturation Utilizing Injection Molded Thermoplasticized Dental Gutta Percha,” also published in this journal. A third original report by Marlin, et al. in the *Journal of Endodontics* in 1981 chronicled, “Clinical Use of Injection Molded Thermoplasticized Gutta Percha for Obturation of the Root Canal System: A Preliminary Report.” All three publications had a significant impact on the development of the commercial product, Obtura.

In a letter from one of the key participants, Dr. Jay Marlin recalls the history of injectible thermoplasticized gutta-percha, which evolved into the Obtura device as originating from three sources:

“The first source relates to Schilder’s technique of vertical condensation of warm gutta-percha. The second factor involves the seamless relationship that existed between Harvard’s Postgraduate Endodontic Residency Program and the research facilities at Forsyth Dental Center. ...Alvin Krakow, Chair of the Graduate
Endodontic Department at Harvard, arranged for me to become faculty advisor to Fulton Yee, a student interested in pursuing an experimental methodology to test the concept. Dr. Yee and I worked closely together and devised a methodology using a pressure syringe filled with gutta-percha and heating it in a glycerine bath to 160 C degrees. ... Third, was my success in the mid-70s of finding electrical and mechanical engineers, Martin Stiglitz and Don Herskowitz of Lincoln Labs, who created the first clinically practical prototype [in 1979].

"...In 1980, Unitek Corp. started to manufacture and market a unit, which they named 'Obtura,' and is almost identical to today's model by Obtura Corporation. Presently, a new design is patent-pending utilizing 2004 technologies in place of 1970s engineering.”

By 1977, Torabinejad joined Bakland at Loma Linda University where both have taught and researched. Over the next twenty-five years, he focused on the biological basis for endodontic disease and improvements in its treatment. Today, Torabinejad is Director of Graduate Endodontics. From 1986-90, he chaired the Research Committee of the American Academy of Endodontics. During 1993-95, he presided over the Southern California Academy of Endodontists. In 1995-96, he led the AAE Foundation. For a three-year period, he was a working member of the AAE Board of Directors, leading eventually to his Presidency of the AAE in 2003-04. His lengthy curriculum vitae highlights his research efforts that include more than 150 published papers and 137 presentations worldwide. He emphasizes the causes of the immune reaction to human peri-apical lesions, the role of sealers, and especially the use of mineral trioxide aggregate in repairing furcal tears, apical lesions, the role of sealers, and especially the use of metal technology as it relates to nonsurgical root canal treatment and retreatment. Ruddle lectures frequently and is cited in numerous articles.

Since 1989, Ruddle’s teaching center, Advanced Endodontic Seminars, has educated international clinicians in the use of the dental operating microscope and related techniques. He developed the world’s first dental microscope simulation laboratory for teaching the latest technical endodontic hands-on courses. In 1995, he was one of the lead clinicians who gave a three-day course entitled “Teach the Teachers” to the postgraduate endodontic directors from North America. This course led directly to the integration of the operating microscope into all post-doctoral teaching programs in 1996. His creativity resulted in a number of patented instruments used at his clinic and worldwide.

Dr. Barry Korzen earned his Certificate in Endodontics from the H/F program in 1973 and established a private group practice in Toronto, Ontario, Canada. Soon after, he accepted a position as Associate Professor and Head of Endodontics at the University of Toronto. Today, he is Associate Professor and Assistant Dean of Development and Continuing Education. His publications include work on the latest in canal cleaning and obturation. As one of the earliest, formally educated endodontists in Canada, he has lectured in most of the provinces and has served as President of the Ontario Society of Endodontists and the Canadian Academy of Endodontists.

Dr. Mitchell Levine was a graduate student in the program with Barry Korzen. As clinical associates, they complemented one another in their private group practice and as dental educators at the University of Toronto. Like Korzen, he spread the rationale of endodontic therapy and surgery to the many organizations and study clubs throughout Canada. In addition, he served as member of the committee that helped establish the Krakow Endodontic Research Fund.

Philip Stashenko, DMD from HSDM and PhD from Harvard University, originally came to Forsyth to work in the Periodontal Disease Research Center in order to engage in full-time research. Two years later, he entered the H/F program as a half-time student, finishing in 1984. In a letter to the author in 2004 he states:
“Although I did not end up as a full-time practicing endodontist, the Krakow program had a profound effect on my research career. Through the literature seminars, the clinical training, and the interactions with faculty and other graduate students, I was introduced to a set of biological and clinical problems that I had not thought much about before. Specifically, I became very interested in the mechanism(s) underlying the bone resorption that accompanies periapical lesion development, as well as in the elements of the host immune response that protect against pulpal infections. This was an area in which I was already interested, in the context of periodontal disease research, but which had not been studied in endodontics.

“One of the seminal literature review papers was the classic study by Kakehashi, et al. (1965), which showed that rats with a conventional oral flora developed periapical lesions, whereas animals maintained under germ free conditions did not. Lesion development was rapid in this model, occurring in 1-4 weeks after pulp exposure, suggesting that this would be a perfect system to analyze the pathway(s) that stimulate bone resorption. This was borne out in one of our earliest studies, in which we showed that protein extracts of rat periapical lesions contained bone-resorption activity (Wang & Stashenko, 1991), which we identified as the cytokine interleukin-1 (IL-1). Subsequent studies have investigated the roles that Th1 and Th2 cytokines play in modulating IL-1 expression. In addition, we have done extensive work to identify the anti-microbial mechanisms that localize these infections to the root canal system, and prevent their dissemination into tissues of the head and neck and even systemically. This work has resulted in 27 publications in peer-reviewed journals and has been recognized by receipt of the IADR Pulp Biology Research Award in 2000.

“I wrote my first successful grant application to study these mechanisms in 1989. That grant is still active today, albeit with a new title that reflects a different focus as the work has progressed (‘Immuno-modulation of Inflammatory Bone Resorption’). Two of my other current NIH grants also use the periapical model system (‘Immunity to Disseminating Dental Alveolar Infections’ and ‘Innate Immunity and Periodontal Disease in Mice’).”

As Senior Member of Staff at Forsyth (1989), Associate Professor at HSDM, and founding head of the Department of Cytokine Biology (1992), Stashenko has published more than 150 scientific articles, abstracts, reviews, and book chapters. His students have received awards for research excellence from the American Association of Dental Research, the AAE, and the HSDM. He currently serves on the editorial boards of several scientific journals, is a reviewer for more than 20 publications, and is a grant reviewer for a number of NIH study sections. His numerous awards include membership in Phi Beta Kappa, research fellowships from the NIH, the Distinguished Faculty Award from Harvard School of Dental Medicine (1995), membership OKU (1996) and the Pulp Biology Research Award from the IADR (2000).

In 1980, Dr. Behbehani (DMSc 1978) was responsible for inviting Director John Hein to Kuwait City to meet with Dr. Abdul Rahman, the Minister of Health. Subsequently, Hein presented him with a plan to potentially eliminate dental disease in the native-born schoolchildren by the year 2000.

Two of Forsyth’s clinical scientists, Dr. Paul DePaola (pedodontist-epidemiologist) and Dr. Pramod Soparkar (orthodontist) were instrumental in establishing a program in preventive dentistry. Today it cares for 250,000 schoolchildren aged 5-15. A separate pediatric facility reaches out to 3,000 handicapped children. The Ministry of Health and the Forsyth Institute jointly manage the initiative, now known as the National School Oral Health Program. The government hires and pays for the services of 120 dentists, 260 assistants, and a managerial staff.

In addition to his services as an endodontist, Behbehani was dean of the new Kuwait school of dental medicine and remains a friend of the program. Soparkar shuttles back and forth to Kuwait as a consultant who works with the Ministry of Health to insure the ongoing success of this self-sustaining health service.

The successful tenures of both John Hein and Paul Goldhaber set the stage for the success of the Harvard/Forsyth program. The environments that they promoted produced an unfettered scholastic ambiance without which the curriculum could not have had the impact that it did.

The H/F program presented its first certificate in 1972 and its last degree in 1987. Harvard awarded 39 certificates, 14 MMSc degrees, and 3 DMSc degrees over a 17-year period. All 56 students researched and successfully defended their written theses to a combined Harvard/Forsyth faculty. The endodontic program matriculated individuals from the following countries: Canada (5), Mexico (2), Kuwait (2), Greece (2), the Netherlands (2), Iran (1), and Israel (1)."
Fifty years ago, the clinical practice of dentistry melded with science to bring about the reality of preserving our functioning dentitions for a healthier lifetime. Forsyth and Harvard were part of this vanguard. Educated dentists with doctorates in basic science recognized the needs of the profession by creating an environment and funding opportunity for those pioneering, innovative students. The initial Harvard/Forsyth Program was able to meet a need for trained clinical endodontists as well as inspire others to contribute to the much-needed research effort. The new program continues this endeavor to train clinical scientists through the affiliation between HSDM and the Forsyth Institute.

References

2. Ibid. pp. 47-79.
5. Ibid. p. 118.
Theodore Roosevelt’s “Presidential Smile” and Questionable Dental Health

Arden G. Christen, DDS, MSD, MA and Joan A. Christen, BGS, MS

Abstract

Theodore (“TR” or “Teddy”) Roosevelt (1858-1919), who served as the twenty-sixth President of the United States from 1901 to 1909, was an “Icon of the American Century.” Characterized by immense energy, numerous skills, zest for life, and enduring accomplishments, he made an impressive ascent to political importance. However, he also experienced serious, chronic, oral and systemic health problems. In spite of these significant health obstacles, he chose “the strenuous life,” and cultivated a lifetime of joy, laughter and humor. TR was known as “the first president that smiled,” and he was typically photographed and illustrated grinning from ear to ear. His flashing white teeth, wide smile, and engaging openness became welcome symbols of national and international acceptance. When Roosevelt died, suddenly and prematurely at the age of 60, dentists and physicians of that time began to investigate the probable medical causes of his untimely demise. The “focal infection hysteria” of the early 1900s convinced some of these health professionals that “a bad tooth,” that previously had been endodontically treated, was the probable cause of death. Much of the early 20th century evidence—supporting the notion that oral sepsis was a “cause” of local or systemic disease—has now been proven, on closer inspection, to be anecdotal or of questionable scientific merit. Nevertheless, during those early days, it was common practice to extract all endodontically or periodontally involved teeth to eliminate any possible foci of infection that many clinicians believed could cause disease.
**Introduction**

“Whatever you do, enjoy it.”

“The joy of living is his who has the heart to demand it.”

—Theodore Roosevelt

Theodore (“TR” or “Teddy”) Roosevelt (1858-1919), can be described as a “bigger than life” individual who was characterized by his immense energy, numerous skills, zest for life, and enduring accomplishments. The Smithsonian Institute has called the twenty-sixth President of the United States (1901-1909) the “Icon of the American Century.” They explain that: “Roosevelt was the wielder of the Big Stick, the builder of the Panama Canal, an avid conservationist, and the nemesis of the corporate trusts that threatened to monopolize American business at the start of the century. His exploits as a Rough Rider in the Spanish-American War and as a cowboy in the Dakota Territory were indicative of his spirit of adventure and love of the outdoors. Reading and hunting were lifelong passions of his; writing was a lifelong compulsion. Roosevelt wrote more than three dozen books on topics as different as naval history and African big game. Whatever his interest, he pursued it with extraordinary zeal.”

At age 42, Theodore Roosevelt was the youngest man ever to have served as President of the United States. His progressive ideas about representative democracy, social justice and America’s role as a world power have significantly helped to shape our national character.

During his second term as President (1906), he won the Nobel Peace Prize for his role in mediating an end to the Russo-Japanese War. He was the first American to win a Nobel Prize in any category. Theodore Roosevelt was gifted with the “common touch”—he never forgot that he was basically an average citizen, temporarily elevated to serve in a high office.

**Childhood and Education**

Roosevelt, born in New York City on October 27, 1858, was the second of four children. His mother, Martha Bulloch (1834-1884), was a beautiful former southern Belle, raised on a Georgia plantation where she acquired Confederate sympathies. His father, Theodore Roosevelt, Sr. (1831-1878) was a wealthy New York merchant—a partner in a glass-importing firm (Roosevelt and Son)—and a philanthropist.

As a sickly and asthmatic youngster, “Teedie” (Roosevelt’s childhood nickname) was forced to sleep either propped up in bed or slouched in a chair. A pale, thin boy, he was small for his age, with toothpick-shaped legs, a sunken chest, knobby knees, and scant, sandy hair. Additionally, he had protruding teeth and a speech defect. In spite of poor health, he was hyperactive and frequently mischievous. In an effort to combat his physical limitations, his father compelled young Theodore to exercise in Wood’s Gym. Additionally, the boy worked out at home, and he took boxing lessons. These physical disciplines motivated and challenged young Roosevelt to become a lifelong sports and outdoor enthusiast.

Although Theodore was too sickly to attend public school, he was taught at home by a series of skilled, private tutors. These individuals taught him French, German, and Latin; and they encouraged his interest in natural history and zoology. When he was only seven, he obtained a dead seal’s head at a local market, dissected it, and noted the animal’s distinctive anatomical features—including its teeth. He started his own makeshift museum, called it the “Roosevelt Museum of Natural History,” and filled it with many animals that he caught, studied, and prepared for display. At age nine, he codified his observations on insects with a paper entitled, “The Natural History of Insects.” Later, this precocious young man learned the art of taxidermy; and he became an expert bird watcher and an authority on North American game mammals.

In 1875, when Theodore was 17, he entered Harvard University where he switched his career intentions from natural history to politics. During his undergraduate years, he continued boxing, and was the runner-up (second to C.S. Hanks) in the Harvard boxing championship. His sportsmanship displayed in that bout was long remembered. TR graduated Phi Beta Kappa and magna cum laude (21st of 177 students) from Harvard in 1880. He studied law at Columbia University from 1880 to 1881, and then entered the political arena. He began writing his first book, The Naval War of 1812, when he was twenty-one. Today, it is still considered a classic.

**TR’s Political Accomplishments**

After his university years, Roosevelt began his rapid political ascent. He became: a member of the United States Civil Service Commission (1889-95); president of the New York Board of Police Commissioners (1895-97); Assistant Secretary of the Navy (1897-98); governor of New York (1899-1900); and vice president of the United States (1901). Ten months after Roosevelt was elected to this last position, President William McKinley was assassinated in Buffalo, New York. On September 14, 1901, Theodore Roosevelt became the twenty-sixth President of the United States (1901-09).
TR Wears the “Presidential Smile”

Grinning is the facial expression of smiling broadly while showing one’s teeth. Prior to the 20th century, politicians, lawyers, religious leaders, teachers and others of public prominence were generally expected to be grave and somber in demeanor. As a consequence, these individuals rarely showed their teeth in public; smiling was reserved for their private lives. Typically, only those who were regarded as pompous, excessively proud, foolish, or unreliable displayed the uncouth behavior of openly grinning. Another perspective of those times held that, “These days, there is precious little to smile about.”

However, President Roosevelt permanently changed this long practiced custom. One reporter stated that “those flashing white teeth won him millions of friends.” Frequently, Teddy was photographed and illustrated grinning from ear to ear. In Europe, his teeth were described as magnificent. His engaging facial appearance became a symbol of national recognition: postal mail that had no conventional address—but rather a drawing of teeth, a smile and spectacles—arrived at the White House without delay.

Today, perfect teeth, a well-formed body, and a neatly coiffeured, full head of hair have become enduring symbols of beauty. According to Curtis: “While President Clinton suffered public chastisement for indulging in a haircut by a Hollywood hair stylist right on the tarmac at LAX, no one faulted him when he flew home to Little Rock for his dental care.”

Power lunches and power ties empower the business classes and power haircuts make the military; but power teeth are the mainstay of American political culture—“Teeth are important in America,” observes a young Czech girl who comes to New York in the 1897 movie, Anna; “Everybody in America has big, white teeth.”

In the 1960’s, the press often emphasized the sparkling nature of President John F. Kennedy’s smile, and of his “Kennedy teeth,” frequently displayed by other offspring in the Joseph Patrick Kennedy clan.

The Basis of Roosevelt’s “Grin”

“Joy in life” is a phrase often used by biographers to characterize the essence of Theodore Roosevelt. With his “animal zest” and immense energy, he loved to: spend time with his family, play with his children, camp, climb mountains, engage in politics, fight wars, give speeches, hunt, talk about a wide range of topics, travel, ranch, and write. He pursued all of his interests with extraordinary zeal. “I always believe in going hard at everything,” he exclaimed, time and time again. He lived what he called “the strenuous life,” and he exhorted both American citizens and the nation to do likewise. While he relished being at the center of power and bearing the enormous burden of the Presidency, he also possessed certain childlike characteristics. “You must always remember,” said his friend, Cecil Spring Rice (a British diplomat and best man at Roosevelt’s wedding), “that the President is about six [years of age].”

TR, who was both charming and clever, enjoyed his life at the White House so much that American citizens, as a whole, were pleased to have him there. At that time in history, he was clearly the most flamboyant, visible and accessible chief executive that America had yet
known. The press and the public were magnetized by his entire persona. Of him, it was written:

“Everything that he said or did intrigued the American public. With his Wild West, Rough Rider picturesqueness, his multifarious enthusiasm, his cropped hair, incongruous spectacles, and ferocious smile, and the almost absurd vehemence of his life, he was the answer to the cartoonist’s prayer—Roosevelt was perhaps the first man in American history to enjoy being President. He communicated his enjoyment, his bubbling energy, his righteous wrath, and his sense of the fitness of all that he did in every possible way.”

Typically, TR expressed his joy of living through laughter. He was reported to have a total lack of inhibition, “which was much discussed at Washington dinner tables.”

“A hundred times a day the President will laugh, and, when he laughs, he does it with the same energy with which he talks. It is usually a roar of laughter, and it comes nearly every five minutes. His face grows red with merriment, his eyes nearly close, his utterance becomes choked and sputtery and falsetto, and sometimes he doubles up with paroxysm. You don’t smile with Mr. Roosevelt; you shout with laughter with him, and then you shout again while he tries to cork up more laughs and sputters: ‘Come, gentlemen, let us be serious.’”

**Roosevelt’s Oral Health**

As he approached early adulthood, TR made a conscious decision to grow a “walrus mustache” to cover his prominent, but attractive set of teeth. He had a sizable diastema between #7 and #8. There was no evidence that he suffered from periodontal disease. His jaw was broad, with a cleft in the middle of his chin. Later photographs of Roosevelt show that his large, well-formed teeth have an unusual amount of incisal and occlusal wear—perhaps indicating that he was a bruxer.

During his two terms in the White House, TR enjoyed the sport of boxing. As a result, he received a number of facial blows, which probably affected both his mouth and his dentition. On one occasion, during a friendly match with a young naval officer (a relative of his wife), he received a sharp glancing blow to his left eye. Several days later, he complained about seeing floating objects, and soon, he developed clouded vision. An ophthalmic examination revealed that the boxing blows that he had incurred caused arteries in the retina to burst. Vision in his left eye remained blurred. Four years later, this eye had become almost sightless due to retinal detachment.

Focal infection is defined as: “...any infection caused by the dissemination of either bacteria or their toxic products from a distant focus of infection.” The oral focal infection theory, promulgated by W.D. Miller in 1891, and formally introduced by Billings in 1912, stated that infected teeth and tonsils were responsible for causing or complicating many systemic conditions, including appendicitis, arthritis, endocarditis, nephritis, osteomyelitis, pneumonia, septicemia, and rheumatism, as well as a host of other known or unexplained diseases.

In 1911, the physician, William Hunter, publicly denounced American dental practices that emphasized placing restorations and bridges over diseased teeth and gums, and he severely chastised dentists who used this method, claiming that they were contributing to certain poor health conditions among their patients who received this treatment. Dr. Hunter referred to these ill-placed bridges and restorations as “mausoleums of gold over a mass of sepsis.”

Many physicians and dentists accepted this criticism with vigor. From 1911 to the early 1940s, health professionals typically implicated endodontically treated or periodontally involved teeth as a major source of oral infection. If the cause of any illness could not otherwise be identified, it was often assumed that it was due to “focal infection.” By the 1920s, “focal infection hysteria” stimulated an orgy of extractions. As a result, an untold number of patients were dispossessed of their teeth.

**The Focal Infection Hysteria of the Early 1900s**

In 1899, when he was 41 years old, TR had a “badly abscessed tooth” extracted. Published accounts do not reveal whether or not it was an anterior or posterior tooth. Also, numerous sources have indicated that, close to the time of his death, TR had a root canal performed on a “pivot tooth.” Some dentists of that era hypothesized that this tooth may have harbored a hidden or latent abscess, that eventually could have contributed to TR’s sudden death. He died on January 6, 1919, at the age of 60.
That same year, several sensationalized dental sources unequivocally blamed Roosevelt’s early demise on a concurrent “periapical dental infection,” that had occurred twenty years previously.\textsuperscript{7,10,25-26,30} At that time, practitioners thought poisonous material and bacteria from an abscessed tooth could absorb into the blood stream and localize in various parts of the body.\textsuperscript{10} Also, dental professionals typically believed that this process was hastened when these contaminated patients were weakened by “nervous strain.”

However, in a June 1919 editorial published in the prestigious \textit{Journal of the National Dental Association}, King stated that it was premature to blame Roosevelt’s death solely on dental conditions. He said, “It is safe to say that no reliable dental or general surgeon would subscribe to the assertion quoted.”\textsuperscript{29}

The day following Roosevelt’s passing, a statement issued by his three attending physicians appeared in the \textit{New York Times}. They asserted that the primary cause of TR’s death (which occurred in his sleep), was an embolus (a blood clot) that traveled to his coronary artery.\textsuperscript{27} An additional comment, issued by one of his attending physicians, Dr. John H. Richards, reads:

“This statement is that bacteria or pus germs got into the blood stream from an infected tooth. While this tooth was removed, it was not removed until a large dose of germs had entered the blood stream and been carried to the wrist. This was responsible for the so-called attacks of rheumatism from which Colonel Roosevelt suffered during much of 1918.”\textsuperscript{9}

As Wold has finally concluded:

“Inflammatory rheumatism was not a contributing cause; however, the abscessed tooth and the numerous previous infections suffered by Roosevelt, including tropical fever, mastoid infection, a fistulous abscess in his thigh, probably hastened his end.”\textsuperscript{7}

On a positive note, the subsequent publicity surrounding these theories alerted many Americans to the vital importance of personal dental care and to the negative effects poor oral hygiene may have on overall systemic health.

\textit{Postscript}

In the 1940s, further dental research led to the downfall of the focal infection theory. For the next twenty years, dentists considered this theory to be irrelevant. However, since the late-1980s, there has been renewed interest in understanding the oral-systemic disease connection. In 2000, a report of the Surgeon General entitled “Oral Health In America,” provided numerous valid reports of investigations into positive associations and interactions between oral disease—particularly periodontal disease—and coronary heart disease, stroke, adverse pregnancy outcomes, diabetes, and bacterial pneumonia.\textsuperscript{33} In a special 36-page supplement to the \textit{Journal of the American Dental Association} (October 2006) the focal infection theory was revisited and the six papers stressed that:

“Much of the evidence presented in support of the [early] concept of focal infection proved, on closer inspection, to be anecdotal or of questionable scientific merit.”\textsuperscript{34-39}

This review emphasized that many epidemiologic studies have suggested a positive association between periodontal disease and a number of systemic diseases. However, they conclude:

“…the strength and nature of this association are not yet clear, because in some cases it might result from confounding by smoking or other variables…. It is important to recognize that causality cannot be established definitively through epidemiologic studies…. Randomized controlled trials (RCTs) are used to test therapeutic and preventive measures and can provide presumptive evidence of disease causation in certain instances.”\textsuperscript{39}

\textit{References}

27. Theodore Roosevelt dies suddenly at Oyster Bay home; nation shocked, pays tribute to former president; our flag on all seas and in all lands at half mast; embolism caused death; blood clot, physicians announce, killed col. Roosevelt in his sleep.” *The New York Times,* Volume LXVIII, No. 22,263, p. 1, Tuesday, January 7, 1919.

At sunset, San Francisco’s Alcatraz Island looks more like a resort than a former prison. A sightseeing ferry is visible in the foreground.

Photo courtesy of SFCVB
19th Century Dentistry
Advertising Trade Cards

Theodore P. Croll, DDS
Ben Z. Swanson, Jr., DDS, MPhil

Authors’ Note

This smiling simian spoofed Charles Darwin’s (1809-1882) theory of evolution while promoting Merchant’s Gargling Oil Liniment.

This remarkable preparation came in a “Yellow Wrapper for Animal and White for Human Flesh” and is a classic example of the outlandish claims that Victorian Era manufacturers of patent medicines made about their products. Besides toothache, the liniment “is good for” burns, chilblains, tumors, garget in cows, cracked teats, horn distemper, abcess [sic] of the udder, farcy, thrush, foot rot in sheep, roup in poultry, lame back, hemorrhoids, rheumatism, mange, sore nipples, corns, cramps, epizootic, cracked heels, spavins, sweeney, boils and numerous other disorders. The smiling primate visage is genuinely endearing. Are all those squared-off incisors real, or is this merely an example of a 19th century extreme cosmetic monkey makeover?

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FROM THE ARCHIVES

Volume 1, No. 4       June 1953

BULLETIN OF THE HISTORY OF DENTISTRY

American Academy of the History of Dentistry

HISTORY OF CONNECTICUT STATE DENTAL ASSOCIATION

A history of the Connecticut State Dental Association is now in manuscript form. Research in newspapers, transactions, and other records has failed to discover any meetings of the Association between 1878 and 1888. However, Dr. R. W. Brown of New London, Connecticut, who was elected president in 1878, resumed that office in 1889.

Evidence of the existence and activities of the Connecticut State Dental Association during the period 1878-1888 is desired. Information should be sent to Dr. Jacob Sharp, historian of the Association, 902 Chapel St., New Haven, Connecticut.

THOMAS D. DOW, DENTAL HISTORIAN IN THREE STATES

A sketch of the various activities of Thomas D. Dow of Ada, Michigan, in the field of dental history appeared in the April 1953 number of the University of Michigan Alumni Bulletin of the School of Dentistry (p. 13-15). Dr. Dow, who has for many years been historian of the Michigan State Dental Association, has one of the most complete collections of American dental journals in the world. As historian of the Alabama Dental Society, he has written a history of that society. He is now writing a history of the Tennessee Dental Association.

DENTISTRY IN INDIANA

An interesting account of several phases of dentistry in Indiana, which might escape the notice of the dental historian, appears in the late Dr. Thurman B. Rice's history, "One Hundred Years of Medicine Indianapolis, 1820-1920," published in installments in the Monthly Bulletin of the Indiana State Board of Health (1949-1953).

Chapter 15 (June 1950, p. 13-16) deals with "Early Indianapolis Dentistry." Chapter 32 is entitled, "The Organization of the Indiana State Dental Association" (Aug. 1951, p. 183-186). Chapter 34 gives an account of "The Founding of the Indiana Dental College" (Oct. 1951, p. 229-232). Dentistry is mentioned passim in other chapters. The activities of such outstanding characters in early Indiana dentistry as Phineas G. C. Hunt and John F. Johnston are related in Dr. Rice's narrative. Dr. Rice died at the close of the year 1952, and the last chapter completed was published January 1953.

RECOGNITION FOR J. MEnZIES CAMPBELL

An honorary degree of Doctor of Laws was offered J. Menzies Campbell of Glasgow, Scotland, by the University of Toronto in 1952, in recognition of his historical researches in the field of dentistry. Because of ill health Dr. Campbell was unable to attend the convocation and receive the distinction.

It is unusual for a dental historian to receive academic recognition for his historical work alone. Lillian Lindsay, who among her many services to the British dental profession contributed much to its history, received an honorary degree, Doctor of Laws, in June, 1946, from her alma mater, the University of Edinburgh—54 years after she entered its dental school as the first woman student.

Dr. Campbell is a dental bibliographer and historian, and has collected many museum and literary items related to the history of
dentistry. His collection of dental pelicans is the basis of his most recent article (Dental Magazine and Oral Topics for June 1953). He possesses the manuscript of Eleazer Gidney's book, "A Treatise on the Structure, Diseases and Management of the Human Teeth", published in 1824 (Utica, New York). Dr. Campbell is now engaged upon a new study of Huspini, eighteenth century dentist in England. In 1950, Dr. Campbell was the first person to give lectures on the history of dentistry at a Scottish university, Edinburgh University.

A bibliography of Dr. Campbell's writing would include more than 65 items, of which the following articles are of historical interest:

3) One hundred years of British dentistry. D. Items Interest 62: 228-234, Mar. 1940.
FROM THE ARCHIVES

Volume 1, No. 5

July 1953

BULLETIN OF THE HISTORY OF DENTISTRY

issued monthly
American Academy of the History of Dentistry

ANNUAL MEETING OF A.A.H.D.

The American Academy of the History of Dentistry will hold its annual meeting at Cleveland, the Hotel Statler, Parlor C, September 26.

THE AMERICAN INSTITUTE OF THE HISTORY OF PHARMACY

Among the vocations and professions with which the dentist has had important contacts is that of the pharmacist. It is for that reason that the Bulletin is glad to present the American Institute of the History of Pharmacy as an elder sister of the American Academy of the History of Dentistry. Glenn Sonne decker, secretary of the Institute, has written the editor a friendly letter with regard to the Academy and the Bulletin, enclosing an interesting brochure entitled "The American Institute of the History of Pharmacy—Its First Decade, 1941-1951," with extensive bibliography. This organization, founded by Edward Kremers, celebrated its tenth anniversary at its birthplace (and present headquarters) in Madison, Wisconsin, May 10, 1951. The Institute publishes from four to six historical booklets each year, copies of which will be exchanged with the Bulletin. The Institute has in project several historical studies, including brief histories of pharmacy in the various states of the nation. George Urdang is director of the Institute.

DR. LAPIRA AND DENTISTRY IN MALTA

Under the title The History of Maltese Dentistry, Dr. J. Fiorini, in a brochure of 30 pages (Malta, 1953), gives an account of the career in dentistry of Dr. Edgie Lapira. Dr. Lapira, according to his biographer, is to be completely identified with the development of the dental profession in the island of Malta from 1922 to date.

UNIVERSITY OF PENNSYLVANIA SEVENTY-FIFTH ANNIVERSARY

The University of Pennsylvania School of Dentistry, celebrated the seventy-fifth year of its founding, June 10 to 12. On that occasion the University published a brochure with a historical sketch of the dental school, with many illustrations. The name "Thomas W. Evans Museum and Dental Institute" was prefixed to its official title in 1912 when the two institutions were affiliated. The school was opened as a department of the University in 1878, and has had on its staff and as graduates some of the most distinguished dentists of this country. Charles J. Essig, Edwin T. Darby, James Truman, Edward C. Kirk, Matthew H. Cryer, and Charles R. Turner were among its most famous men.

PERCY HOWE AND THE FORSYTH INFIRMARY

A readable two-hundred page book entitled Dr. Howe and the Forsyth Infirmary, by Rollo Walter Brown, has been published by the Harvard University Press, 1952.
HISTORY OF LOCAL ANESTHESIA

An illustrated historical sketch of "The Development of Local Anaesthesia" is published in Dental Magazine and Oral Topics 70:92-102 April 1953.

HISTORY ESSAY CONTEST IN GEORGIA

A state-wide contest for high school students on the history of dentistry has just been completed in Georgia. The winner was Hazel Conner of Monroe High School who submitted "A History of Dentistry in Walton County" (J. Georgia D. A. 27:8-10 July 1953). The chairman, W. Edgar Coleman, reported that 67 essays were submitted but commented: "It is surprising and disappointing, that out of approximately 430 white high schools in the state only seven should have created enough interest among junior and senior students to have one or more essays submitted."

EARLY HISTORY OF MEXICAN DENTAL JOURNALS

Dr. Samuel Fastlicht of Mexico City, who has written several articles on the history of dentistry in Mexico, contributes an article in Spanish to Revista de la Asociacion Dental Mexicana, March-April, 1953, entitled "Las primeras revistas odontologicas publicadas en Mexico" (The First Dental Journals Published in Mexico). The Mexican journals mentioned were El-Arte Dental, founded in 1887, La Revista Dental Mexicana, begun in 1893, and continued from 1899 as La Revista Medico-Mexicana to 1903. Dr. Fastlicht adds some notes on early dental journals of other Latin-American countries.

AN UNPUBLISHED LETTER FROM JOSEPH FOX

Among the interesting documents regarding the history of dentistry which hitherto remained unpublished is the following letter, owned by Northwestern University Dental School, from the British dentist Fox to the chemist W. H. Pepsy, Jr.:

My dear Sir

I have the pleasure to present you with my book, accept of my thanks for your kindness in contributing to its perfection -- I shall be much obliged if you will let me have by Thursday a scoop director for using the fusible metal as on Friday I wish to shew its application at my lecture -- The sheet was printed in which the fusible metal is mentioned before I saw you -- but I have inserted your name in the advertisement.

I am very truly
Yours

Jany. 6, 1806 --

Joseph Fox

These words might be something else -- "sirup," "dissector." The instrument has not been identified.

The fusible metal referred to was probably d'Arco's metal, an alloy of lead, tin, and bismuth, that melted below the boiling point of water. Before the silver amalgams were employed, fusible metal was introduced molten into the tooth cavity where it cooled instantly and according to Fox, made the most perfectly adapted filling.
With no medical school in the early American colonies, the populace depended mostly on quacks, charlatans and other untrained practitioners. However, a few individuals, who had received formal medical education in France or Scotland, immigrated to America. In 1755, one of Europe’s most celebrated physicians, Dr. Charles F. Wiesenthal, settled in Baltimore, and was immediately in demand as a preceptor to those practicing medicine that yearned for more education. Accordingly, he built a little two-story laboratory behind his house where 10 or 20 students paid him $10 to attend his lectures. The school was greatly successful, but in December 1788, when he and his students were dissecting a murderer whose "corpse they had purchased from the public executioner," the building was stormed by an angry mob protesting human dissection. They destroyed the furnishings and "dragged the body through the streets." It was thought that charlatans had inspired the raid, since the school was a threat to them. Nevertheless, the school survived and Baltimore began its long history as a center of medical learning with the chartering, in 1799, of the Medical and Chirurgical Faculty of the State of Maryland. It was not only with this medical endeavor that Baltimore led the way in education, for in 1839 a charter was given to a group of highly motivated and ethical dentists to establish the first dental school in the world in that city. With this story, Dr. Hyson begins his remarkable book, which is not only the story of a school, but of the history of the dental profession from its earliest beginnings in America to its status today as one of the most respected members of the healing professions.

Four individuals, whose names shall forever be enshrined in the pantheon of dentistry, were primarily responsible for getting this new adventure off the ground. They were Chapin A. Harris, Horace Hayden, Solyman Brown and Eleazar Parmly, with the first two often given the major credit. Initially, there was no building to house the school, so classes were held in private homes and a church. Nevertheless, the first commencement, in March 1841, saw two men graduate, Dr. Richard Mackall and Dr. Robert Arthur. The latter made numerous contributions to the practice of dentistry, not the least of which was his discovery that annealed gold foil made the whole process of filling with gold easier and more certain, but he also went on to serve the Philadelphia College of Dental Surgery as Professor and as Dean. From this beginning came an unbroken stream of graduates who went on to make notable contributions to the field.

Unfortunately, there was a great deal of controversy over whether dentistry education be provided in medical school, with dentistry being taught as a subspecialty of medicine. Nevertheless, these intrepid pioneers stuck to their guns, realizing that if dental education were subservient to medical education, the result would be practitioners who were neither good physicians nor good dentists.

Things were not always easy in the early days. Even the great friends, Hayden and Harris fell out over a dispute concerning a lecture each gave about pathology of the maxillary sinus, and the feelings were so bitter that Harris, as editor of the American Journal of Dental Science, refused to print an obituary of his erstwhile friend Hayden! Such acrimonious feelings notwithstanding, the school started the profession on the correct path of scientific grounding and led the way to the point where, today, esteemed on a par with the other healing professions. Chapin Harris was prescient when he said, in 1841, that the establishment of the school "constitutes an era in the history of a
most useful and valuable department of medicine; and if it be properly conducted, cannot be otherwise than productive of great good."

Dr. Hyson organized his book according to the various periods in the history of American dentistry as well as the tenures of the many deans who have served the school from its founding to today, more than a century and a half later. It is the author’s ability to link what went on in the school with the progress of the profession through those years that makes the book so outstanding. One need not have been a graduate of the BCDS [Baltimore College of Dental Surgery] to find the story fascinating. There are also a number of appendices that include graduates of BCDS who went on to become deans of dental schools, served as presidents of the American Dental Association, and names of faculty emeriti and various publications of the school. He also provides the admission requirements and the length of the dental curricula over the years.

Dr. Hyson, a graduate of the BCDS in 1950, is especially suited to write this book. He has published extensively—both books and journal articles—and in addition, was Associate Professor in the Division of Health Services Research, Department of Health Promotion and Policy at the Baltimore College of Dental Surgery. Moreover, his interest and knowledge of dental history led to his appointment as Curator of the National Museum of Dentistry in Baltimore, a position he held until his retirement.

If one is to find fault with this fine work, it is the fact that there is no index. Consequently, one has to labor through the twenty-one chapters and appendices to find some particular information. However, the copious notes at the end of each chapter ameliorate the search somewhat. One of the most remarkable parts of the book is the extensive bibliography taking up twenty-three pages, a testament to the extensive research Dr. Hyson did in producing this worthy addition to the history of dentistry. It is a book that belongs in every health science library. Additionally, anyone interested in the growth of the dental profession in the United States would benefit greatly by consulting this book.
BOOKSHOP

The Dental Patient’s Little Book of History, Humor and Trivia™

By Don Dible

Extensive press coverage on this new 228-page soft cover book from the coauthor of Chicken Soup for the Dental Soul included an article in the ADA News. The book features 366 quatrains—one for each day of the year (including leap year) and is loaded with fun-filled facts plus 36 drawn-for-this-project illustrations. This light-hearted, compact tome comes complete with an excellent bibliography (including key websites) plus an index. As a result, seasoned dental historians will definitely find this work helpful in their teaching and their research.

Available (U. S. funds only) from: DMD House, 29925 Rose Blossom Drive, Murrieta, CA 92563 USA or order online at www.dmdhousebooks.com or phone 800.852.6203. VISA/MC

Chicken Soup for the Dental Soul

By Jack Canfield, Mark Victor Hansen, and Don Dible

Each Chicken Soup for the Soul® book is a compilation of short, true-life vignettes. For the most part, the stories are written by ordinary people who wish to share with others a special moment in their lives. In 1998, Don Dible was invited to compile stories for a book focusing on the “we-love-our-patients, feel-good” side of the dental profession; and Chicken Soup for the Dental Soul is the result. A volunteer panel of 85 dentists selected the stories in this book from more than 1,200 submissions authored by dentists and other dental team members.

Available (U. S. funds only) from: DMD House, 29925 Rose Blossom Drive, Murrieta, CA 92563 USA or order online at www.dmdhousebooks.com or phone 800.852.6203. VISA/MC

A Source Book of Dental Medicine

By Drs. Shklar and Chernin

Being a Documentary History of Dentistry and Stomatology from the Earliest Times to the Middle of the Twentieth Century. 864 Pages

The aim of this book is to make available to the profession of Dental Medicine and other interested parties the extensive literature of the past dealing with the diagnosis, description, causes, treatment and prevention of oral diseases. Drs. Shklar and Chernin are presenting the original texts concerning the diagnosis and management of oral diseases ranging from ancient Egypt through the world of the 20th Century. Until the 19th Century, the management of oral disease was an essential part of medical practice, and the texts on oral disease are to be found in the major medical and surgical treatises. The very first books on dentistry, such as the Artzey Buclein of the 16th century, were mere compilations from the classical physicians of Greece and Rome, together with some Arabic texts that have been translated into Latin.

Many of the basic texts of the past have already been translated into English, French and German from the original Sanskrit, Greek, Latin, and Arabic. However, a number of important texts have never been translated into English. The authors are presenting all these materials to the English reading professionals in Medicine and Dental Medicine in this 864-page reference book.

Price: $90. Available from: Maro Publications
Maro Pub. Ltd., P.O. Box 145, Waban, MA 02468
A Little Treatise on the Teeth: The First Authoritative Book on Dentistry (1563)

By Libellus De Dentibus. Bartholomaeus Eustachius (Latin and English on Facing Pages)

"Bartholomaeus Eustacius (1520-1574) was one of the great anatomists of all times. In many ways his anatomical studies were more detailed and comprehensive than those of his more famous contemporary Andreas Versalius (1514-1564), but his major studies remained unknown until their eventual publication in Amsterdam in the beautiful edition of 1714.... Eustachio's contributions to the development of dental science were substantial. In addition to the many conceptual advances concerning tooth development and function, based on anatomical dissections, he also presented more detailed plates of the musculature of the face, floor of the mouth and the neck as well as detailed plates of the tongue and of the crowns and roots of the teeth.... In addition to the first clear description of dental pulp and root canal, Eustachio described the periodontal membrane for the first time and thought of it as a gomphosis type of joint. [He] understood that the crowns of the teeth were composed of enamel overlaying dentin and this was the first description of the two separate tissues of the tooth. Occlusion was described in detail in man as well as animals. The permanent teeth were found to develop from dental follicles, and not from the roots of deciduous (primary) teeth as postulated by Vesalius."

Price: $60. Available from: Maro Publications
Maro Pub. Ltd., P.O. Box 145, Waban, MA 02468
www.maropub.com

Painless Parker: A Dental Renegade’s Fight to Make Advertising Ethical

By Arden G. Christen and Peter M. Pronych.

Throughout his professional life, Painless Parker—a self-promoting dental crusader and patient advocate—sought to gain respectability from the profession of which he was a member. Instead, he was rejected by his colleagues because he used the unacceptable practice of advertising blatantly to the public. The ultraconservative Profession of Dentistry regarded Painless as an outlaw, a renegade, a fraud, a charlatan, a quack, a scoundrel, a thorn in the side, and above all else—unprofessional. However, Painless may have been years ahead of his time as he can be credited with pioneering many innovative practices now accepted by modern dentistry. He developed and perfected the concept of group dental practice. As he stated, “You (the dentist) have to be organized, systematized, capitalized, advertised, standardized and specialized.” This 491 page book tells Painless’ story as he wanted it told—from his perspective, using many of his own words.

Complete Cost: $25, Postage Paid.
Available (U. S. check only) from: Dr. Arden G. Christen,
7112 Sylvan Ridge Road, Indianapolis, Indiana 46240-3541

Limericks With A Smile: Dental, Oral and Facial Limericks of Yesterday and Today

By Joan A. Christen and Arden G. Christen.

After reviewing more than 10,000 limericks, the authors found about 188 previously-published works that are specifically related to dental, oral and facial themes. Within these three distinct categories, they offer an additional 384 personally-composed limericks. The 575 basically humorous limericks within this collection may be called bawdy, whimsical, ludicrous, cynical, comical—or they may be identified by any other descriptor that the reader chooses. These limericks, though simple in format, are amazingly able, in a few words, to crisply communicate a strong, and sometimes paradoxical, message. 159 pages with complete index.

Complete Cost: $15, Postage Paid.
Available (U. S. check only) from: Dr. Arden G. Christen,
7112 Sylvan Ridge Road, Indianapolis, Indiana 46240-3541
Flower of Remedies Against the Toothache

By M. Arnauld Gilles, Operator for the Aches of the Teeth

The first French text on dentistry and the diseases of the teeth. This work was published in 1621, more than 100 years before Pierre Fauchard’s classic work Le Chirurgien Dentiste. This work is known to exist in only two locations. Re-discovered by Dr. Jacques R. Foure, who translated the work into English, he has provided us with an insight into the clinical treatments that were available in early 17th century France. Prior to Fauchard, it was generally believed that any dentistry was performed by traveling mountebanks, charlatans and quacks. M. Arnauld Gilles was a Parisian dental practitioner who was fully recognized by the state licensing authorities as “Operator for the Ache in the Teeth.”

The printing of the book has the left-hand pages as an exact facsimile of the original French text, with the English translation on the right facing page. The work is divided into six chapters such as “How the teeth come and what is a tooth,” “The cause of the pain of the teeth,” “Why and what are the considerations to draw the teeth and which is necessary to pull them.”

Price: $25. Available from Maro Publications
Maro Pub. Ltd., P.O. Box 145, Waban, MA 02468
www.maropub.com

A History of the Unified Department of Dentistry of Montefiore Medical Center and the Albert Einstein College of Medicine

By Dorothy Levenson and Norman Trieger, DMD, MD

Dentistry at Montefiore Hospital began almost as an afterthought in 1890. This small, philanthropically-sponsored home for chronic invalids added a dentist to its roster and grew over time to become one of the largest and most comprehensive post-doctoral and graduate educational programs in the USA. Dr. David Tanchester gathered a number of well-known dental educators who volunteered their expertise to teach how to care for medically-compromised patients. He retired after 50 years and was followed by Dr. Norman Trieger who continued to develop general as well as multiple-specialty programs over the next 32 years. The Department of Dentistry is affiliated with the Albert Einstein College of Medicine (AECOM) and provides comprehensive oral health care for in-patients and ambulatory patients as well as providing undergraduate, graduate and post-graduate education. This book includes numerous illustrations and a listing of staff and alumni. Proceeds go to the "Oral Diseases Research Fund" at AECOM.

Price: $125. Available from: AECOM of Yeshiva University
Office of Institutional Advancement
165 Morris Park Avenue, Bronx, NY 10461

Love Is the Best Medicine® for Dental Patients and the Dental Team

By Donald M. Dible, MS, and Richard H. Madow, DDS

This is the “sequel” to Chicken Soup for the Dental Soul. It was produced in response to many requests for a “Dental Soul II.” Love Is the Best Medicine®, co-authored with Dr. Richard Madow, editor and co-publisher of The Richards Report, contains 101 dental stories selected from a field of more than 800 candidates by a 100-member volunteer panel of dental professionals.

Available (U. S. funds only) from: DMD House, 29925 Rose Blossom Drive, Murrieta, CA 92563 USA or order online at www.dmdhousebooks.com or phone 800.852.6203. VISA/MC
Dear Colleagues and Friends,

It gives me great pleasure to invite you to attend the 56th Annual Meeting of the American Academy of the History of Dentistry, September 30th through October 2nd, 2007, in beautiful San Francisco, “Everyone’s Favorite City.”

Please join us. Partake of the cosmopolitan flair, spectacular scenery and cultural diversity that make San Francisco one of the top destinations in the world. Bring a guest and encourage your colleagues to attend.

Join us for the uniquely warm Academy camaraderie. The Annual Board Meeting will take place at the Marines’ Memorial Club on Sunday evening September 30 from 7:30 to 9:00 PM. Come early to join the Board for an informal dinner at 6:00 PM. All members are invited to attend both the dinner and the Board meeting. There will be a charge for those members who wish to attend the dinner.

Participate in an outstanding two-day colloquium devoted to Ethics in Dentistry: Its Evolution and its Future. Note that our program is a departure from previous sessions of the Academy. We have chosen to thoroughly investigate this single subject of great currency in dentistry.

The topic of dental ethics has come “front and center,” as evidenced by recent public revelations of sophisticated student cheating scandals, tales of over-treatment in clinical settings, and increasing reports of conflicts of interest associated with the commercialization of dental research.

The stellar faculty will be led by Professor Albert R. Jonsen, widely acknowledged as a founder of modern Bioethics. The eight colloquium speakers include experts in philosophy and psychology; dental research and practice; social medicine and the humanities; as well as authorities in the history of science, dentistry and medicine. Fourteen Continuing Education credits will be awarded.

Our Annual Banquet and Open Bar will be held at the Marines’ Memorial Club on Monday evening. Experience the richness our Academy brings to the profession of dentistry. Develop new and strengthen old relationships in a relaxed atmosphere. Spouses and guests are warmly welcomed.

The 2007 Dr. Frank and Phyllis Orland honoree, Dr. Arthur Dugoni, Dean Emeritus of the Arthur A. Dugoni School of Dentistry at the University of the Pacific, San Francisco, will address us at the luncheon on Tuesday.

The registration fee includes the stimulating two-day Colloquium, two continental breakfasts, two mid-morning and mid-afternoon refreshment breaks, plus luncheons on Monday and Tuesday. Note that the evening banquet and the accompanying complimentary bar are also included in the registration fee.

I look forward to seeing you this Fall 2007 at our Annual Meeting in the exciting city of San Francisco. I promise you a grand experience.

Morton G. Rivo, DDS
Program Chair
Ethics in Dentistry: Its Evolution and Its Future
A Two-Day Colloquium offering Fourteen CE Credits

PROGRAM

SUNDAY EVENING, SEPTEMBER 30

OPTIONAL BOARD DINNER
BOARD MEETING—OPEN TO MEMBERS

MONDAY MORNING, OCTOBER 1

CONTINENTAL BREAKFAST

PAPER: The Sins of Specialists
ALBERT R. JONSEN, PHD
Professor Emeritus of Ethics in Medicine
School of Medicine
University of Washington

In medieval times, moralists compiled lists of sins that certain types of persons, such as clerics, lawyers, kings and physicians, were prone to commit. These persons were set aside from the ordinary crowd by their special duties, skills and knowledge. Today, we might call them “specialists” or “professionals.” These sins reflected failures to attain the ideals that the specialists were held to. Among the most common sins were actions that took advantage of those who depended upon the specialist’s ability to respond to calls for help. While the lists of sins did not include dentists, who did not exist as specialists at that time, this lecture will pursue the theme of the medieval moralists into the time when dentistry emerges as a specialty form of care. In essence, it asks how professional ethics protects patients or clients from exploitation.

Refreshment Break

PAPER: Professional Ethics and Professional Etiquette in Dentistry: Are They Compatible?
ERNEST NEWBRUN, DMD, PHD
Professor Emeritus
University of California
San Francisco School of Dentistry

The definition of professional ethics in dentistry may vary, but the ADA Code of Ethics includes five principles: patient autonomy (“self-governance”), non-maleficence (“do no harm”), beneficence (“do good”), justice (“fairness”) and veracity (“truthfulness”). Professional etiquette concerns how dentists relate to each other and is governed by the ADA Code of Professional Conduct, an expression of specific types of conduct that are either required or prohibited. Sometimes these two, ethics and etiquette may conflict. We will discuss the problem of financial issues conflicting with ethical ones and the issue of commercialism in the practice of dentistry. Large debts accrued by dentists while still in dental school adversely affect the professional behavior of young dentists. Specialists may provide all sorts of “goodies” for general dentists who refer patients to them, including continuing education courses, gifts, trips and kickbacks. They may also fail to inform the patient of improper or poor quality treatment by the referring general practitioner. These issues are not unique to dentistry, but apply to all healthcare providers.

MONDAY LUNCH

BUSINESS MEETING
2007 BRENNER AWARD PRESENTATION
HAYDEN-HARRIS AWARD PRESENTATION
MONDAY AFTERNOON

PAPER: What Have Teeth Taught Us about Culture? Opening Up Ethical, Historical and Anthropological Frameworks for Dentition

BRIAN DOLAN, PhD
Professor of Social Medicine and Medical Humanities
University of California, San Francisco
School of Medicine
Editor, Social History of Medicine

Teeth cut across cultures. They transgress cultural boundaries but also define social boundaries. They provide information about what goes into the mouth, and how the mouth is appropriately used. Scrutiny of teeth identified a new biomedical space in which to analyze pain, and created a new culture of medicine for such practices. This paper uses the evolution of dentistry since the eighteenth century to look at how our social and scientific understanding of teeth has shaped cultural attitudes about pain, politics, beauty and prophylaxis. It then raises questions about how these attitudes, in turn, create ethical contexts for the practice of dentistry around the world.

REFRESHMENT BREAK

PAPER: Ethics v Informed Consent Law: A Distinction without a Difference

EDWIN J. ZINMAN, DDS, JD
Dentist, Attorney at Law

Both the Code of Ethics and the legal doctrine of informed consent are premised on the principle that a dentist must always protect the patient’s best interest. A negligent customary practice is no defense no matter how few or how many practice such customs. Thus, pursuing a dentist’s best financial interest is a negligent custom that too often is honored in pursuit of profit rather than the patient’s interest. Examples of Ethical Code provisions and jury instructions will be compared for similarities along with the historical roots of each.

PANEL DISCUSSION: DRS. JONSEN, NEWBRUN, DOLAN AND ZINMAN

MONDAY EVENING

COMPLIMENTARY BAR
ANNUAL BANQUET

TUESDAY MORNING, OCTOBER 2

CONTINENTAL BREAKFAST

PAPER: Early Struggles to Identify Ethical Standards in Dentistry: The Amalgam Wars of the 1840s

PETER G. MEYERHOF, PhD, DDS
Dental Practitioner, Historian

Dr. Benjamin Boyer Brown (1809-1863) was a leading physician and dentist in St. Louis during the 1830s and 1840s, well known for his charitable and educational works. He was a founder of organized dentistry, first editor of the Dental Register of the West, a respected researcher and educator in dentistry, and a member of the American Society of Dental Surgery, a forerunner of the American Dental Association. This society declared the use of amalgam to be not only unethical but malpractice, and members were forced to sign a pledge not to use it. Although many dentists opposed this decision and ignored the pledge altogether, Dr. Brown was morally unwilling to remain quiet. He vocally opposed the decision of his colleagues to ban amalgam on both scientific and humanitarian grounds. Despite his appeal for reason and his high profile, he was one of the few dentists expelled from organized dentistry. He moved in disgrace to California during the height of the gold rush to begin a new life. Dr. Brown’s experience illustrates several issues in dental ethics that remain with us today.

PAPER: Painless Parker’s Legacy: Commercial and Healthcare Perspectives in 21st Century Advertising

BRUCE PELTIER, BS, ME D, PHD
Professor of Psychology and Ethics
University of the Pacific School of Dentistry

This presentation will review the life and contributions of Dr. Edgar Parker, the infamous and controversial pioneer who specialized in a precarious straddling of the ethics of the commercial marketplace and the ethics of care. Something of a Rorschach test, he was alternatively referred to as a charlatan, the first people’s dentist, a renegade, a crusader, a quack, the Henry Ford of dentistry, and “a menace to the dignity of the profession.” He eventually owned and managed thirty dental offices, several in San Francisco, as well as the Parker Dental Circus. Because many young, twenty-first century practitioners have little problem with slick advertising, it seems appropriate to revisit Painless Parker’s career and contribution to the current state of affairs.

REFRESHMENT BREAK
PAPER: An Ethical Lesson Learned from the Equestrian Sculpture, “The Torch Bearers,” at the University of Madrid Dental School

ARDEN G. CHRISTEN, DDS, MSD, MA
Historian, Ethicist, Professor Emeritus
Indiana University School of Dentistry

As dental professionals, we continue to learn ethical lessons throughout our careers and beyond. We may experience them in our day-to-day involvements with peers and patients, or they may present themselves under more unusual circumstances. The maturing and growth of clinicians can at times be accelerated by an encounter with the need for basic ethical decisions. Thirty-three years ago this month, a deeply impressionable object lesson was delivered at the base of an equestrian, aluminum, larger-than-life sculpture, “The Torch Bearer,” in front of the school.

TUESDAY LUNCH

THE DR. FRANK AND PHYLLIS ORLAND LECTURE

DR. ARTHUR A. DUGONI, DEAN EMERITUS
Arthur A. Dugoni School of Dentistry
University of the Pacific, San Francisco

TUESDAY AFTERNOON

PAPER: Factors Attenuating the Concept of Professional Ethics in Dentistry

SHELDON BAUMRIND, DDS, MS
Professor of Orthodontics
Director, Craniofacial Research
Instrumentation Laboratory
University of the Pacific School of Dentistry

Since the end of World War II, the practice of dentistry has been largely transformed from a “calling” into a cog in the ever-expanding “Healthcare Industry.” In the process, the distinction between professional ethics and the ethics of commerce has been attenuated and, to a large extent, lost. Today’s dentist is faced with an inherent conflict between the pledge of the health professional to hold the patient’s interests primary (and above all, to do no harm), and the self-protective commercial principle of caveat emptor. Pressures towards commercialism come from the government and the insurance industry, the increasingly unfavorable ratio between professional fees and the cost of production, and the high cost of dental education. Viewed simplistically, much of dentistry today has an outward form resembling commodity production. Recognizing the substantial forces tending to attenuate ethical standards in our profession may aid us in resisting their encroachments.

REFRESHMENT BREAK

PANEL DISCUSSION:
ENTIRE COLLOQUIUM FACULTY

COLLOQUIUM ADJOURNS

WEDNESDAY, OCTOBER 3

OPTIONAL ESCORTED NAPA VALLEY TOUR TO THE FOLLOWING WINERIES:

Domaine Carneros by Tattinger: Tour and Tasting of Three Sparkling Wines

St. Supéry Winery: Tour, Tasting and Memorable Napa Valley Picnic Lunch

Clos du Val Winery: Tour and Demonstration Vineyard/History/Tasting of Four Wines

Program subject to change. Visit www.historyofdentistry.org for updates.

Marines’ Memorial

Club & Hotel

The venue for this year’s meeting is located just off Union Square, The City’s most desirable dining, shopping, and entertainment area. (See page 107.) Guests are steps away from the Powell Street Cable Car that whisks visitors to Nob Hill, Fisherman’s Wharf, and Market Street—just a few blocks from Moscone Center, site of this year’s ADA Annual Session. The theatre district, art galleries, museums, and Chinatown are a short walk away. The property features 138 tastefully-renovated guestrooms. Rates include a full American breakfast, two-hour hosted cocktail reception nightly, complimentary guestroom Internet access and a complimentary 24/7 business center.

AAHD guestroom rates are $179 standard and $194 deluxe, single or double, plus 14% hotel tax. Suite rates on request. For reservations, call 800-5-MARINE (800.562.7463) and request the group rate for the American Academy of the History of Dentistry. Cutoff date is August 31, 2007. For more hotel information, visit www.marineclub.com; group rates not available on website.
AAHD Registration Form

Ethics in Dentistry: Its Evolution and Its Future
A Two-Day Colloquium Offering Fourteen CE Credits
San Francisco, California, September 30-October 2, 2007

Sunday, September 30
Optional Board Dinner at 6:00 P.M.: ____ $45 per person $ ________
Board Meeting open to members: 7:30-9:00 P.M. Included

Monday, October 1
General Meeting Admission, Continental Breakfast, Mid-morning Refreshment Break, Luncheon, Mid-afternoon Refreshment Break, Annual Banquet with Complimentary Bar Included

Tuesday, October 2
General Meeting Admission, Continental Breakfast, Mid-morning Refreshment Break, Luncheon and Dr. Frank and Phyllis Orland Lecture by Dr. Arthur A. Dugoni, Mid-afternoon Refreshment Break Included

Wednesday, October 3
Wine Country Tour: ____ $115 per person $ ________

Fees for General Meeting
October 1-2, 2007—8:00 A.M. to 5:00 P.M.
Late registration fees apply after September 14, 2007.
Member: $395, Late Registration: $595 $ ________
Non-member: $595 (No late registration penalty.) $ ________
Spouse/Student: $250, Late Registration: $395 $ ________
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Announcing a new publication from
The Angle Society and The Angle Foundation

The World of Edward Hartley Angle, MD, DDS:
His Letters, Accounts and Patents

From the Archives of the
Edward H. Angle Society of Orthodontists (EHASO)
A 4-volume set compiled and edited by Sheldon Peck
Published by The E. H. Angle Education and Research Foundation, Boston. 2007

“The definitive work...an incomparable resource...
the new standard for dental historical research.”
Dr. David A. Chernin, President, American Academy of the History of Dentistry

About this monumental sourcebook on the beginnings of modern orthodontics...

This is a 4-volume limited-edition hardcover book set of 3439 pages. Dr. Angle’s correspondence and business accounts from 1899 to 1910, among his most creative years, are included. In addition, all of his patents—45 USA patents and 1 Canadian patent—from 1889 to 1934 (posthumous) are reproduced. These historic materials were preserved by Dr. Anna Hopkins Angle and are now part of the archives of The Angle Society. Typed and handwritten documents have been retyped for legibility and arranged chronologically.

The book set is published on a non-profit basis by The Angle Society for reference libraries, educational/research institutions, and individuals. The 4-volume set is priced at US $2000, plus shipping.

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