

JOURNAL

American College of Dentists



VOLUME 20

NUMBER 3

September 1953

PUBLISHED QUARTERLY FOR GENERAL CIRCULATION

By

THE AMERICAN COLLEGE OF DENTISTS

\$3.00 A YEAR • 75 CENTS A COPY

JOURNAL

American College of Dentists

Presents the proceedings of the American College of Dentists and such additional papers and comment from responsible sources as may be useful for the promotion of oral health-service and the advancement of the dental profession. The Journal disclaims responsibility, however, for opinions expressed by authors.

Published Four Times a Year—March, June, September, December

Entered as Second Class Matter September 3, 1948 at the Post Office at Baltimore, Maryland under the Act of March 3, 1879
Copyright, 1952, by the American College of Dentists—Made in United States of America

THE WAVERLY PRESS, INC., BALTIMORE, MD., U.S.A.

Address of the Editor:

John E. Gurley, D.D.S. 350 Post Street, San Francisco, 8, Calif.

Entered in the Index To Dental Periodic Literature.

American College of Dentists

Objects: The American College of Dentists "was established to promote the ideals of the dental profession; to advance the standards of efficiency of dentistry; to stimulate graduate study and effort by dentists; to confer Fellowship in recognition of meritorious achievement, especially in dental science, art, education and literature; and to improve public understanding and appreciation of oral health-service."—*Constitution, Article I.*

Announcements

Next Meeting, Board of Regents: Chicago, Feb. 8, 1953.

Next Convocation: Cleveland, (date to be announced).

Fellowships and awards in dental research. The American College of Dentists, at its annual meeting in 1937 [*J. Am. Col. Den.*, 4, 100; Sept. and 256, Dec., 1937] inaugurated plans to promote research in dentistry. These plans include grants of funds (The William John Gies Fellowships) to applicants, in support of projected investigations; and also the formal recognition, through annual awards (The William John Gies Awards), of distinguished achievement in dental research. A standing committee of the International Association for Dental Research will actively cooperate with the College in the furtherance of these plans. Application for grants in aid of projected researches, and requests for information, may be sent to the Chairman of the Committee on Dental Research of the American College of Dentists, Dr. Albert L. Midgley, 1108 Union Trust Bldg., Providence, R. I. [See "The Gies Dental Research Fellowships and Awards for Achievement in Research," *J. Am. Col. Den.*, 5, 115; 1938, Sept.]

JOURNAL

American College of Dentists



Published Quarterly for General Circulation by
THE AMERICAN COLLEGE OF DENTISTS

VOLUME 20

NUMBER 3

JOURNAL

American College of Dentists

Board of Editors (1952-1953)

Officers and Regents of the College, *Ex-Officio*

JOHN E. GURLEY, San Francisco, *Editor*

WILLARD C. FLEMING, San Francisco, *Assistant Editor*

Contributing Editors

RALPH L. IRELAND (1957) Lincoln, Neb.

WILBUR McL. DAVIS (1957) Orlando, Fla.

G. FRED HALE (1956) Raleigh, N. C.

LON W. MORREY (1956) Chicago, Ill.

DONALD W. GULLETT (1955) Toronto, Canada

B. O. A. THOMAS (1955) Seattle, Wash.

THOS. T. RIDER (1954) Missoula, Mont.

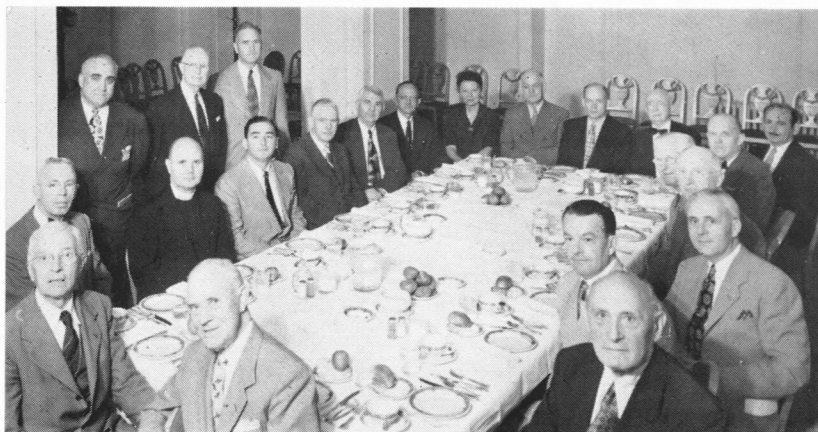
MILLARD D. GIBBS (1954) Hot Springs, Ark.

HARLAN H. HORNER (1953) Albany, N. Y.

JACOB SHAPIRO (1953) Brooklyn, N. Y.

CONTENTS

READING, LIBRARIES AND HISTORY.....	139
THE ROLE OF THE LIBRARY IN DENTAL EDUCATION, <i>Adele Fisher, B.A.</i>	140
THE AMERICAN ACADEMY OF DENTISTRY:	
PRESIDENT'S ADDRESS, <i>J. Ben Robinson, D.D.S., Baltimore</i>	148
THE DENTAL STUDENT AND THE STUDY OF DENTAL HISTORY, <i>Nell S. Talbot, A.M.</i>	153
JOHN HUNTER AND THE PHYSIOLOGICAL BASIS OF DENTAL PRACTICE, <i>L. L. Schwartz, D.D.S.</i>	160
A READING PUBLIC FOR THE HISTORY OF DENTISTRY, <i>George R. Denton, Ph.D.</i>	170
THE AMERICAN COLLEGE OF DENTISTS:	
MINUTES OF THE BOARD OF REGENTS, CHICAGO, FEBRUARY 8, 1953, <i>Otto W. Brandhorst, D.D.S.</i>	180
ST. LOUIS CONVOCATION, SEPTEMBER 1952—REPORTS OF COMMITTEES, <i>O. W. Brandhorst, D.D.S., Secretary</i>	182
BOOK ANNOUNCEMENTS.....	196



First Luncheon Meeting, Academy of Dental History

EDITORIAL

READING, LIBRARIES AND HISTORY

After many years of experience as a member of the Committee on Library and Indexing Service of the American Dental Association, and more or less close association with dental libraries and librarians; and during all of this time, interest in dental literature, and latterly, with reference to dental history; and finally, in association with many members of the profession especially deans and faculties of our schools, and officers and Regents of the College one becomes convinced of a number of facts:

1. There was a time when we had practically no libraries. Today it is surprising to know of the change.
2. There was a time when neither dentists nor dental students spent much time in reading.
3. There was a time when librarians went through a form of cataloging books and literature on their shelves.
4. There was a time when the schools themselves emphasized merely the technical aspect of dentistry.

In the light of these four facts, one could not expect too much in the years gone by, but he can realize what a decided change has been brought about for the present, and out of it he can quite easily foresee what the future may expect.

In the development, particularly in the minds of readers of the Journal, of what the future may have in store, satisfaction is taken in the publication of the following five stories. It is hoped that we may develop a pretty definite idea of the mind of the dentist of the future when we see being impressed upon us at the moment, the role of the librarian, the possible reaction of the dental student, the immediate personal history and/or biography, and finally, the laying before us of a wide expanse of material available. All of this should convince the most skeptical as to the direction of dental education and the dentist.

THE ROLE OF THE LIBRARY IN DENTAL EDUCATION

ADELE FISHER, B.A., *Chicago*¹

G. V. Black, the father of modern dentistry said, "The professional man has no right to be other than a continuous student."² To be a student, in a significant sense, one must be an effective reader. To make the dental student a reader, to make the dentist a continuous reader—to make dentistry a reading profession, is the challenge to and goal of the dental librarian.

Technical skill is involved in a large part of dental practice. Because of the nature of the work, much importance is given manual dexterity. A great deal of stress is put on clinical work and the practical application of the techniques learned in class. The student is taught and is shown how to do things, and having mastered the techniques, he may proceed without further study or endeavor to find out *why* specific procedures are indicated. However, to the extent that the dentist does not find out *why*, he is limited in his professional capacity to comprehend, diagnose, and treat dental disease. The dental profession is making a conscientious effort to raise itself from the technician level to the medical science level where it belongs. Dentists and physicians now recognize that many oral complications are forerunners and manifestations of systemic conditions. To make diagnoses and differential diagnoses, it is most important to understand that the functions of all the body systems are included in the whole gamut of physiological and psychological relationships. With the ever-increasing research programs being carried on in the field of dental science, many of the answers to the problems connected with the oral cavity are being searched out and found. "For the chief malady of man is a restless curiosity about things which he cannot understand; and it is not so bad for him to be in error as to be curious to no purpose."³ Accurate records are as important as careful observations, and the progress that dentistry makes depends a great deal on the adequacy and resources of the dental libraries.

¹ Reference Librarian, Northwestern University Dental School.

² Northwestern University. Dental Research and Graduate Study Bulletin. Nov. 28, 1949. Verso of front cover.

³ Pascal, "The Pacific Spectator, 2, 2, p. 205. Quoted in the Journal of Dental Education, 14: 49, Nov. 1949.

The present system of dental education in the United States is the result of a long evolutionary process. The preceptorial or tutorial method of training for various trades and professions employed by the guild masters in the Middle Ages was transplanted to this country in the Colonial era. Prior to 1840 the young man who wished to become a dentist could secure his training solely through an apprenticeship. The type of training the individual received depended, of course, upon the knowledge and skill of the dentist with whom he was associated. By this process, the training in some instances was excellent, and in others wholly inadequate.

With the gradual development of the scientific foundation upon which dentistry rests, it became apparent to those who carried the torch of the awakening profession that a more comprehensive system of dental education was essential and imperative. The training of dentists in fundamental sciences and in the application of the sciences, as well as training in the art of dentistry, calls for adequate instruction in anatomy and physiology, in general pathology and therapeutics as allied to dentistry. Therefore, the reading side of dentistry is rapidly advancing and the dentist of the future must read more. Increasingly, it is found that conclusions in diagnosis, decisions as to treatment, judgment as to materials to be used, and most important of all, methods of handling the patient, depend upon knowledge gained by reading about the work, findings and experiences of others. These records are found in the journals, text-books and literature of the profession.

Because the professional man in the community is looked to for counsel and leadership in civic and social activities, it is necessary for him to be a well-rounded individual with a good background in the social sciences. It is important for the dentist to have sound knowledge of the health, social and economic problems of his community. The professional man serves humanity, and to practice effectively and successfully, the dentist must keep his finger on the pulse of the community he serves. In this connection also, he will find that the library can serve him well.

As the faculty of the school controls the educative process, the librarian looks to the teaching staff as the motivating force that brings the dental student to the library. Cooperation between the librarians and the faculty is imperative, and the ingenuity of both must be constantly employed to educate the student to the great

importance and serious need of library training. Without this collaboration, the growth and progress of the dental student is necessarily limited. With this active cooperation, the possibilities for giving the student a strong springboard for future development, are infinite.

The work of the librarian is the preservation and dissemination of the human record. The responsibility of the faculty is to give the student the impetus to seek out the library, teach him to evaluate what he has read and guide him to effectively apply what he has found. The duty of the student is to continue to read and use the knowledge he has gained to its greatest advantage. In this way, the combined efforts of all three—librarian, teacher and student—will make the dentist an enthusiastic, meaningful, continually growing asset to his profession and to society as a whole.

Following is an outline of the workings of a dental school library, and its efforts to make dentistry a reading profession.

- I. Stimulate the desire for reading in the student and so motivate him that the "library habit" becomes part of his professional training.
 - A. Get the student to come into library.
 1. Make the library an attractive, pleasant place to which to come, where the student feels he will get willing help and cooperation. Put out the "Welcome sign." It is amazing to learn the timidity with which people at the college level approach books and libraries.
 2. Every encouragement must be given the freshmen students. There must be an active friendliness on the part of the librarians, and a sincere wish to be of help must be in evidence at all times.
 3. Because of the resistance of the dental student to the library, we feel justified in going a little heavy on "extra-library" activities, such as hobby shows, bulletin boards carrying announcements of general interest, general reading material in the way of magazines and newspapers. Distribute fountain pen ink, student correspondence paper, etc. Serve as a center for general information.
 4. Post assignment lists in the library.
 - B. Although he is directed into the library to prepare assignments, we must at this point motivate the student to use the library resources on a maximum level, rather than on a minimum level.
 1. Be prepared for the immediate demands of the student.
 - a. Adequate books and other materials to answer demands of the curriculum and the needs of the student.
 - (1) Consult with heads of departments on book selection.
 - (2) Seek the cooperation of the faculty to give advance notice of assignments.

- (3) Ask the faculty to regularly submit lists of pertinent collateral reading.
 - (4) Faculty should notify librarian of all important new material brought to attention from reading, conventions, meetings and discussion groups.
 - (5) At the beginning of each new quarter consult with faculty as to size of classes and approximate book needs for the coming period.
 - (6) Keep an active "want list" to check with publishers and exchange lists, so gaps in the collection can be filled.
 - b. Keep the circulation filed in such a manner that a book that is not on the shelf can be traced immediately.
 - c. Attach a reserve to the card of the book that is in circulation whereby it will be directed to the student who requested it, when it is returned.
 - d. Temporarily substitute material for the reference that is unavailable.
 - e. Use interlibrary loan facilities to obtain the material.
 - f. If the problem at hand involves telephoning or correspondence, ask the student to return at a later time. If he fails to do so, send him a notice or telephone him to come in to pick up his material.
 - g. Never allow a student to leave the library without some satisfactory answer to his problem. The librarians, above all, must gain the confidence of the students by maintaining and showing a keen, sincere interest at all times in the problems of the student.
 - h. The important thing here is to *follow through*. Do not stop until the student is provided with the material he sought when he came in. This will help him have confidence in the librarian and will stress the seriousness of the assignment.
- C. To evaluate the techniques set up under I.
1. Consult student programs to find out when the students have free periods. At those specific hours every day count the students in the library. Compare the figures at the beginning of the year with those at the end.
 2. Consult circulation records at the beginning and end of the freshman year.
 3. Ask the staff to notice and record number of students who come in to see the hobby shows, consult the bulletin boards, etc. Do they remain to use the library facilities?
 4. Make a record of "reserved" books that are actually called for; i.e. books which have been out and are called in especially for a particular student.
- II. Make the dental student an independent library user. Because the field is a limited one and the librarian can become very familiar with the material, there is a tendency to indulge in too much "spoon-feeding." The student should learn how to search out his needs. Otherwise the whole purpose and philosophy of the library and its role in the educative process is defeated.

- A. The librarian should work *with* the student, not *for* him. She should always remember that her role is that of guide, and she should refrain from "taking over."
- B. Make the free and easy use of the library and the literature of his field, an integral part of the student's education.
 - 1. Promote dental literature courses as a regular part of the curriculum.
 - 2. Encourage the faculty to bring classes into the library.
 - 3. Teach the student to use the resources of the library by library talks and tours. Distribute library manuals to all students. Be as generous as possible with personal help.
 - a. Make the card catalog a simple, easy, effective tool for the student to use.
 - (1) Stress the importance of the catalog as a bibliographical aid.
 - (2) Establish authoritative subject heading list so that subject headings are consistent and material on the same subject will be together.
 - (3) Make adequate cross references.
 - b. Make the Periodical Indexes to Dental Literature easily accessible, and teach the students to become very familiar with it and adept in its use.
 - (1) Indicate the manner in which subject and author material is listed.
 - (2) Indicate new books published and book reviews listed.
 - (3) Indicate the value of obituaries as biographical source material.
 - c. Introduce the student to the Index Medicus and the Current List of Medical Literature for finding medical material and dental articles published in the medical literature.
 - d. Explain the use of the Union List of Serials for locating journals not in the library collection.
 - e. Teach the students the most effective ways of using books.
 - (1) Point out the uses of and the differences between the table of contents and the index.
 - (2) Indicate the values of the bibliographies and where they are usually found.
 - (3) Indicate the value of the background material given in forewords and prefaces. Here are often found historical summaries that show how the latest trends have developed in that particular field. In a concise way, the scope of the work is pointed out.
 - f. Teach the students the value of periodical articles.
 - (1) For extensive information on a special subject that is treated in a limited fashion in the text books.
 - (2) For varied ideas and theories on a certain subject.
 - (3) For current research material.
 - g. Use a stack in the reading room to hold reference books, latest editions of text-books, dictionaries, directories, etc.

- h. Open the stacks to the students and put up signs indicating the location of the books.
 - i. Place vertical files out in the reading room for
 - (1) Current material that is readily outdated, such as public health dentistry, socialized medicine, pamphlets on new drugs, etc.
 - (2) Material which is housed more efficiently in vertical files, such as bibliographies, state board examination questions, charts, etc.
 - C. Encourage initiative to read and study outside of assignments.
 - 1. Use large, well-placed bulletin boards to display book jackets of the new books.
 - 2. Place in a strategic spot a "Have You Read" bulletin board listing material on a subject of current interest. New references should be posted weekly. It would be well to consult the faculty in charge of research and graduate work as to important, timely topics.
 - 3. Distribute semi-yearly lists of recent acquisitions to faculty and students.
 - 4. Maintain an attractive "New Books" display.
 - D. To evaluate the techniques set up under II
 - 1. Make a record of books asked for from the bulletin board listing.
 - 2. Make a record of new books asked for from jackets posted and from book display.
 - 3. Ask staff members to jot down remarks of students with regard to library service.
 - 4. Ask staff members to take general notice of how effectively the students are using the library facilities, and to what extent they are becoming independent in the use of these facilities.
- III. Make the dental student a critical reader, by constantly suggesting to him to watch for the following points:
- A. Books
 - 1. Background of the author which is usually given on the title page or in the preface.
 - 2. Reputable publishers.
 - 3. Physical makeup of the book. Is it cheaply put together?
 - 4. Examine the text carefully.
 - a. Is it well written?
 - b. Is evidence given? How is the evidence used and interpreted?
 - c. Does the evidence support the conclusions?
 - d. Are the footnotes adequate?
 - e. Is a bibliography listed? Is it authoritative?
 - B. Periodicals
 - 1. Is it a trade publication, an association journal or a learned society periodical?
 - 2. What is the background of the editor?
 - 3. Is there a great deal of advertising material?
 - 4. Are the articles a rehash of old material, or are they of a research nature?

5. Examine the text carefully. (Use same points as listed above under "Books.")
- C. To evaluate the techniques set up under III
 1. The development and progress of the students from random readers to discriminating, qualitative readers, should be closely watched and studied by the library staff.
 2. Compare the reading records of the freshmen and sophomores to those of the juniors and seniors.
- IV. The librarians must work to keep the library operating on a maximum level. For the library to play a vital role and become an integral part of dental education, it must be a many faceted entity and should serve as a center of information in an active dynamic sense as well as in a historical, academic sense.
 - A. Greater advantages can be realized if the dental school library is a unit of the dental school, distinct and separate from the other libraries of the university.
 1. Dentistry is a highly specialized subject and needs special handling.
 2. Because it is specialized and smaller in number, the dental collection is apt to be lost as part of a large body of books.
 3. Librarians can become more familiar with the publications in the field and serve more effectively.
 4. New material is more readily brought to the attention of students, faculty and research workers.
 5. Library is able to work more closely with the students and faculty.
 - B. The library holdings should be as complete as possible and the librarians should be on the alert for all new material in dentistry and allied fields.
 1. Copies of a "Want List" should be kept up to date and sent to institutions maintaining dental collections.
 2. The library should participate in the Medical Library Association Exchange program.
 3. A list of duplicate material should be maintained and offered regularly to keep shelves free for new material.
 4. Foreign works should be made available.
 - a. Use Smithsonian Institution, Washington D. C., for exchange of material with foreign libraries as they pay the shipping charges incurred in the foreign countries.
 - b. Use Farmington Plan deposit collection in your area. This plan provides for one library in each specified area to be the depository for foreign dental material.
 - C. The library should establish extensive interlibrary loan facilities.
 1. There should be close cooperation with the medical library and other libraries of the university.
 2. The library resources of the community should be used.
 3. Complete familiarity with special dental and allied subject libraries.
 - a. Library of the American Dental Association
 - b. Army Medical Library

- c. Library of Congress
- d. Midwest Interlibrary Center
- 4. Librarians should use microfilming and photostating services. Because microfilming is relatively inexpensive, it is a great convenience in supplying material to foreign countries.
- 5. The dental library should service its alumni and all members in the profession who seek its aid.
- D. Intensive work with research projects and graduate students is an important part of library work.
 - 1. The librarians should know what research projects are being handled in the school and direct all material that would be important in this connection, to the proper channels.
 - 2. Maintain a list of research subjects which is kept up to date and exchanged with other institutions. Much valuable unpublished material is made available in this way.
- E. Keep the library in the public eye.
 - 1. Library column in the school paper.
 - 2. Encourage visitors from other institutions as well as visiting friends and relatives of the students.

The resourcefulness of the dental school librarian must be constantly broadened and developed to serve the ever-growing needs of dentistry.

THE AMERICAN ACADEMY OF DENTAL HISTORY¹

CONTENTS

President's Address, J. Ben Robinson, D.D.S., Baltimore.	
The Dental Student and the Study of Dental History, Nell S. Talbot, A.M. . .	
John Hunter and the Physiological Basis of Dental Practice, L. L. Schwartz, D.D.S.	
A Reading Public for the History of Dentistry, George R. Denton, Ph.D.	

PRESIDENT'S ADDRESS

J. BEN ROBINSON, D.D.S.²

Baltimore

It is a pleasure and an honor to welcome the members and the friends of the American Academy of the History of Dentistry to the sessions of its first annual meeting. The excellent quality of the program that has been arranged for your benefit insures a successful meeting today; and the enthusiasm with which you have responded to the call for the formation of the Academy augurs well for its usefulness to the cause of dentistry in the years that lie ahead.

The Academy was launched after careful consideration of the meaning and purposes of the venture, and after careful thought to the contributions it can make to the advancement of the art and science of dentistry. Its promoters were keenly aware of the potential values of the resources of dental history and were convinced that through the efforts and influence of the Academy these resources could be investigated and the results examined, organized and moulded into materials highly useful to the present and the future of the dental profession. The purposes they had in mind were to bring into proper focus the facts of the origin and growth of the dental art and science, to interpret from these facts the true philosophy of dentistry, and to identify in its growth the peculiar forces which have operated to cause dentistry to take the course it has followed in arriving at its present state and in assuming the position it now occupies among the healing arts professions.

It is a fact beyond question that dental history has been one of the most neglected of the several categories of dental knowledge. The unfavorable position it occupies as a subject of instruction in the curriculum of our colleges and the lack of active interest shown toward it by members of the dental profession have been influenced

¹ Addresses delivered at the First Annual Meeting of the American Academy of the History of Dentistry, St. Louis, September 6, 1952.

² Dean, College of Dentistry, University of Maryland.

largely by a false estimate placed on its worth by those who have informally compared its practical values with those of other dental subjects. Because it seems to lack practical application to immediate problems of dental practice, dental history has been accorded a place low in the scale of relative importance among the subjects included in the dental curriculum, and has been relegated to a position of comparative obscurity in the esteem of the rank and file of the dental profession.

It is perhaps trite to repeat the generally accepted claim that among the peoples of the world the dental science and the dental art have reached their highest degree of perfection and attained their highest level of usefulness in the United States. In no other country are members of the dental profession better educated in the basic sciences than here, nor have they acquired the high degree of performance skills which the American dentist applies in the art of practice. Because of the great progress made by American dentistry it would appear that in this compelling atmosphere of unusual achievement, the knowledge of the facts of dental history and their application to problems of education and practice should have advanced more rapidly, and that dental historians in the United States should have become recognized authorities in this special branch of science. In view of our default in this important matter we must now attempt to make amends for past neglect.

A heavy responsibility rests on you who are members of this organization. You must attempt to bring about an improvement in the attitude of the members of the profession toward the true values of a knowledge of dental history, and you must require undergraduate students to achieve a level of scholarship in dental history consistent with the high cultural standards of a learned profession. You and your co-workers must exploit every opportunity that offers promise of promoting your cause, particularly those situations that may advance dental education and dental research. You must encourage those who have particular interest in the subject and special aptitudes for investigation to undertake serious study of the great store of historical material that is available, and through sustained efforts to accumulate, organize and record such data as may provide a reliable and useful body of historical knowledge.

Among the tasks that confront you is that of correcting the many prevailing erroneous beliefs held by the laity, and generally by members of the dental profession, concerning the beginning and growth

of dental science and art. The true character of dentistry has been greatly obscured, its fundamental meaning confused, and its usefulness seriously impaired by misunderstandings and misconceptions resulting from erroneous statements and claims which have been thoughtlessly and carelessly made by members of the profession and passed on from generation to generation as facts of history. These errors have been introduced into the literature as a result of partial and incomplete investigation by those not qualified by background and experience to speak with authority on the subject they have undertaken to discuss.

Since the organization of the dental profession in the United States through the founding of the three basic professional institutions, i.e., the *American Journal of Dental Science*, the Baltimore College of Dental Surgery, and the American Society of Dental Surgeons, certain beliefs have grown up that are at strict variance with the facts of history. Among these hurtful misconceptions are these: *a.* It is a widely held belief that dentistry as a science and art originated with the founding of the Baltimore College of Dental Surgery. *b.* Members of both the dental and medical professions, as well as interested laymen, believe that the Baltimore College of Dental Surgery was founded as an independent educational institution because an alleged request that instruction in the dental sciences be included in the curriculum of the medical school of the University of Maryland was rejected by its faculty on the grounds "That the subject of dentistry was of little consequence and thus justified their unfavorable action." *c.* It is not only believed but too often repeated by leaders in the dental profession that dentistry has but recently emerged from the status of a craft to become an enlightened and competent member of the healing arts family.

While the well-informed dental historian is fully aware of the supreme fallacy of these and many other similar traditional beliefs, too few of us have taken the time to challenge them as serious handicaps to the usefulness and reputation of the dental profession. We must, therefore, deliberately plan to replace error with truth in order to correct the thinking of those who may be concerned in any way with the fortunes of the dental profession, and above all to enlighten fully those leaders who may be responsible for making decisions that will affect the integrity of dentistry.

The natural relationship of the dental science and art to the medical science and art has been for many years a matter of concern to teachers of dental history, to dental practitioners, and to

dental educators. It is recognized that an understanding of the medico-dental relationship is an essential part of undergraduate student education, is fundamentally important to the effective coordination of the efforts of the dentist and the physician in caring for the total health of the patient, and is basically essential to dental educators in planning dental education programs in connection with medical curriculums.

For want of competent knowledge of the historical background of dentistry, and an understanding of its true philosophy, spokesmen for both the dental and medical professions have occasionally advanced the proposition that dentistry is the "errant child of medicine", and have assumed that the prodigal child can be returned to the parental roof by the simple expedient of an executive directive. They seem to think that by a stroke of the pen they can alter the current status of dentistry despite the fact that it has developed under the stresses of natural forces that have operated from ancient times to the present. Such uninformed attempts at a solution of the problem can serve only to injure or to destroy the form and substance of dental institutions.

Finally, I would call attention to the importance of encouraging the appropriate recognitions of persons, places, and events that are intimately interwoven in the fabric of the history of dentistry. To know distinguished people, to recognize important places, and to be acquainted with significant events of the past that have meant so much to the present that we enjoy and benefit from, are privileges that must give deep satisfaction and must be a source of great pride to all of us.

As evidence of our appreciation for these things, we have extolled in the pages of our literature the fine qualities, the high achievements, and the great virtues of our illustrious leaders. To the memories of some we have erected monuments; to the memories of others we have placed tablets. In any case these great leaders who gave so much to the cause of their profession have become endeared to us, who revere them as great contributors to the sum total of human progress.

There are sites scattered throughout the country where important acts were performed that turned the course of dental history, or served to provide lasting benefits to the human race. These places have in many instances been appropriately identified and have become shrines dear to the hearts of loyal dentists everywhere. There are those unusual events in our history that mark the beginnings of

great activities that have served the scientific and cultural needs of the profession. The appropriate celebration of the anniversaries of such events is highly desirable as a means of promoting interest in and loyalty to dentistry as a worthy profession.

In regard to the recognition of historic events I should like to recall to your minds the Dental Centenary Celebration held in Baltimore in 1940. This was an unusual opportunity for a highly successful celebration, since it recognized the founding of three important institutions: the *American Journal of Dental Science*, the Baltimore College of Dental Surgery, and the American Society of Dental Surgeons. The significant outcomes and lasting values of that celebration are too well known to dental historians to expand upon them here. I mention the event as background for a suggestion I make about another highly important impending event, namely, the one hundredth anniversary of the founding of the American Dental Association.

The American Dental Association was founded at an organization meeting held in Niagara Falls, August 3, 1859. It will have completed one hundred years of service to American dentistry in 1959. It has had a notably useful career as a great force in the advancement of dental education, dental licensure, dental literature and dental practice. It has served to stimulate the organization of constituent and component societies in all the states of the United States in a manner designed to benefit both the dentist and the public. In view of its great and important services to the dental profession and to the people of the United States its founding should be appropriately celebrated in 1959. Plans for the celebration should begin at once. Seven years is not too much time to plan a program that will be in keeping with the importance of the event. I would suggest that the Academy take action on this suggestion and if agreeable to the wish of the membership, that the secretary of the Academy be instructed to communicate your views to the Board of Trustees of the American Dental Association.

The success of the Academy of the History of Dentistry is in your hands. Its contributions to the cause of dentistry will be in proportion to the earnestness and zeal with which you accept your responsibilities and the fidelity with which you perform your duties. Knowing the spirit of most of you as I do I bespeak for this new organization a highly useful future.

THE DENTAL STUDENT AND THE STUDY OF
DENTAL HISTORYNELL SNOW TALBOT³, A.M., *Chicago*

To the dental student it may come as a considerable surprise to find a course in the history of dentistry included in his schedule; he may suppose that this is an innovation. The subject, however, has been in the curriculums of a few dental colleges for many years. At the University of Illinois College of Dentistry the subject has been offered continuously for the past twenty years, but the course was first announced in the College catalog in the late nineties—the same decade in which the first course in the history of any branch of science was presented in America.⁴

This early announcement of the course includes the following statement:⁵

The student cannot fully appreciate the greatness of the profession of dentistry without having received instruction in the progress, growth, and development of the art of dentistry to its present high standing among the professions.

We might today, with some adaptations, accept this statement as one of the bases on which the course is included in the curriculum. We probably should not say "The student cannot fully appreciate the greatness of the profession," but rather "The student cannot fully appreciate the profession of dentistry," using "appreciate" in the sense of understanding and evaluations. We should omit "greatness," because today the accepted style of speech and writing is less grandiloquent than fifty years ago. It would not be because we deny the greatness of the profession, its service to humanity, or its great potentialities—potentialities that were little suspected fifty years ago. For, "without having received instruction," we should perhaps substitute "without learning," since no one gains much knowledge through "receiving instruction." We should accent the active, not the passive role of the student. We should probably say "origins, growth, and development" instead of "progress, growth, and development."

³ Assoc. Professor, Medical and Dental History, University of Illinois: In preparing this paper, I am indebted to my teacher, Dr. Henry E. Sigerist, for what he has said, written, and practiced in teaching medical history.

⁴ I. Bernard Cohen, "The History of Science," *Science*; 114, 3; 1951 (Dec. 21).

⁵ *Circular of Information*, The Illinois School of Dentistry, 1899-1900.

Further modification of the 1899 statement would include the word science before the word art so that the reading would be "the science and art of dentistry." Empirical attempts to relieve pain motivated the earliest recorded treatment of oral diseases. Aesthetic considerations probably provided the dominant motive for constructing the first dental restorations; it is doubtful that hygienic and health considerations developed earlier than the eighteenth century. Not until the nineteenth century could medicine be called a science as well as an art; dentists began to develop this approach to their field during that period. In the twentieth century there has been constantly increasing emphasis on dentistry as a science, closely related to the development of medicine and ancillary sciences such as physics, chemistry and biology.

The basic reason would then read: The dental student cannot fully appreciate his profession without learning something of the origins, growth, and development of the science and art of dentistry.

The same thought has been expressed by a modern historian of science, Esmond Long, who writes in the preface to his *History of Pathology*:⁶ "nothing gives a better perspective of the subject than an appreciation of the steps by which it has reached its present state." This applies to many fields and in many situations.

We cannot understand the ideas and opinions of our time unless we know our history—not a jumble of dates, battles, boundary changes, the names of generals and presidents, but the history of technical, economic, and social developments, and of thought and philosophy. Only history can enable us to understand why the United States is capitalistic in most of its pronouncements, if not entirely so in fact; England, socializing its economy to a limited extent; and Russia, socialist in its profession with avowed purpose of becoming communist. It does not matter whether we approve; we must understand. We can do this only if we are aware of the factors in the situation and the trends they represent. The better we know history, the more intelligently can we act. Not that history repeats itself; rather that "those who cannot remember the past are condemned to repeat it."⁷

What is a case history, but the result of experience that has proved

⁶ Baltimore, 1928, p. xv.

⁷ George Santayana, quoted by Geoffrey Jefferson, "Harvey Cushing and His Books," *Journal of the History of Medicine*, 1, 250; 1946 (April).

the necessity of knowing what has happened in the past in order to understand the present? Why is there such an outcry concerning the shortage of psychiatrists? Intelligent men now recognize that the mental hospital, the jail and the penitentiary are not enough. To restore the asocial or the antisocial to social usefulness, the expert must learn the history of the individual—his origins (heredity), the social and economic background of his life, the interaction between the child and his family, and within and among the groups to which the individual has belonged. Only after the case history is complete can intelligent action to attain social adjustment begin.

Institutions, too, have their weaknesses. The dentist who knows the history of his profession can better understand the sources of its strength, and the etiology of its weaknesses. He can thus more intelligently serve both his profession and society in inventing better methods of adaptation to present needs.

Developments in education show a growing perception that Professor Long's statement is true. The history of music has long been included in the education of the musician; advanced work in sociology, philosophy, and mathematics usually requires at least one course in the history of the subject. Histories of science and of various individual sciences—anatomy, biology, chemistry, physics—are offered in some universities.

This trend exists in spite of the admission that the most important object of education is not to acquire facts, because it is recognized that to think, knowledge of what we accept as facts is essential. We cannot think in any field until we have learned the pertinent observations and accumulated evidence. After this is accomplished the material is available with which the critical faculties can work. To know the most important events in the technical and scientific history of dentistry as well as the social, economic, and technological background contributes to the ability to think intelligently about some of dentistry's problems. This is particularly true in considering social problems such as the relation of the profession to society, or how best to serve society. Only after learning can one compare, discard, and conserve. A knowledge of dental and medical history gives a picture of this process in operation. The study of history thus serves as a stimulus to development of the critical faculties as well as to understanding of contemporary trends and problems.

Another important reason for studying the history of dentistry is that an understanding of the growth and development of any science may contribute to the development of the scientific point of view. It is characteristic of the human being to demand a definite answer—perhaps it gives him a sense of security. We are most uncomfortable when we have to make a decision. Once the decision is made we are comfortable—we relax. We no longer have to think.

The history of any science reflects this characteristic of man; there have been times when many men believed that they had the final answers to most important questions. This was true in the field of medicine following developments in Greek medicine up to the time of Galen. For 1400 years Galen's anatomy of the human body was accepted; for 1500 years his physiology was little questioned. Medicine of the Middle Ages, whether in the Byzantine or Arabic Empire or in Western Europe, did not ask questions of nature. Then gradually following the Renaissance of the twelfth century,⁸ a few heretics risked their scholastic lives. The great Franciscans, Robert Grosseteste and his pupil Roger Bacon, even a few Dominicans, ventured to introduce some new ideas. The Franciscans pointed out that Plato had stressed mathematics in studying phenomena; a Dominican recalled that Aristotle had dissected animals, had himself observed nature. There were others, some of whose names are now unknown, who contributed skepticism and questions.

Following this trend the year 1543 saw the publication of two great books—Copernicus' *De revolutionibus caelium*, which revived and developed the theory that the sun and not the earth is the center of our universe, and Vesalius' *De humani corporis fabrica*, the first book after the third century B.C. on the anatomy of the human body to be based upon observation. These books questioned ideas accepted as facts for centuries. They were important not only because of their contribution to knowledge, but because they shattered man's complacency. They led other men to ask questions.

The slow accretion of questions, ideas, and research that led to the revolution in physics caused by Einstein's theory of relativity is another striking example of the overwhelming importance of the scientific point of view—namely, that for man there is no final answer. He can say only that, on the basis of observations made

⁸ Charles Homer Haskins, *The Renaissance of the Twelfth Century*, Cambridge, 1939.

under certain given circumstances he expects certain things to happen, always remembering that many of the "facts" of science are probably not facts, and that "scientific laws" exist only in the minds of human beings, and may be dispossessed by later findings.

Finally a knowledge of the history of his calling may contribute to the success of the dental practitioner. Admittedly nobility of character and special knowledge and skill are the most important of professional qualifications, but in insuring an opportunity to use these attributes in the service of society, no factor is so important as personality. In this intricate and elusive entity, next to warmth and understanding of one's fellowmen, the intelligent and informed mind is the most attractive factor.

Certainly the professional man may be expected to know the history of his own particular field of interest. This is not limited to an account of the development of various restorations, equipment and instruments, or of different dental organizations. The history of dentistry has not occurred within a vacuum; it has been closely related to the history of the ancillary sciences and of medicine. Much of the history of medicine is a part of the history of dentistry. In Egypt, Babylonia and Greece, the physician treated oral diseases just as he treated other diseases. The Roman surgeon extracted teeth; it is in a text of a fifteenth century surgeon that the first account of gold foils appears. In the Middle Ages barbers treated most physical ills of the common people, including toothache. The tendency to make treatment of diseases of the oral cavity the responsibility of a special group did not assume importance before the close of the seventeenth and the beginning of the eighteenth century. Not until almost the middle of the nineteenth century did dental colleges, societies and periodicals emerge.

The fact that dentistry is concerned with the study, treatment, and prevention of disease in a part of the body, gives rise to the concept that the history of medicine is a part of the history of dentistry. In both medicine and dentistry developments in such ancillary sciences as chemistry and physics have had an important influence. Progress in both medicine and dentistry has been dependent upon the same discoveries in sciences such as anatomy, physiology and pathology. Neither dentistry nor medicine could become scientific in nature until Galen's anatomy was replaced by the new attitude towards anatomy engendered by Vesalius' research

in the sixteenth century; until Galen's physiology of the movement of the blood was superseded by Harvey's proof of the circulation; and humoral pathology, by Morgagni's correlation of diseases with local lesions through study of autopsy findings. It was John Hunter, not a physician but a great surgeon and a great researcher in anatomy and pathology, who first demonstrated to the surgeon the necessity of a knowledge of science. And it was John Hunter who by his work in oral anatomy and diseases of the teeth suggested to scientists that the oral cavity and the teeth were fruitful fields of inquiry. Only after Pasteur, Koch, and numerous other researchers had shown the bacterial origins of many diseases could preventive medicine reduce the death rate from contagious diseases. The work of these men, their collaborators and students, such as Willoughby D. Miller, also made possible the theory of the role of micro-organisms in caries, and the possibility of prevention of this disease of the teeth.

To understand the development of any subject, whether science or art, some knowledge of major technological, economic, social, philosophic, and religious trends is necessary. All parts of a culture are dependent upon such factors as tradition, contacts with other peoples, changes in the amount and routes of commerce, technological developments, types of economies such as agricultural or industrial. Ethnologists do not attempt to study the religion or the arts and skills of a preliterate tribe isolated from the remainder of its culture.⁹ Religious and philosophic concepts have much bearing on scientific developments. For example, although the human body was opened by the Egyptians during the process of embalming, there is no indication that dissection for the sake of gaining knowledge of anatomy was practiced. During the Hippocratic period in Greece, the importance of a knowledge of anatomy was appreciated, but no dissection of the human body is recorded. In Alexandria during the third century B.C., however, organs of the human body were dissected, scrutinized, and described by physicians. During the Hippocratic period there had still been fear of the revenge the dead might take upon the living who desecrated the body. Socrates and Plato strongly emphasized their belief that the soul left the body after death, that the body of the dead was not sentient. This concept was accepted by the third century B.C., and dissection was

* Franz Boaz, Introduction to *Patterns of Culture* by Ruth Benedict, (New York, 1934) xii.

considered a proper procedure. This advance in medicine was dependent upon religious and philosophic change.¹⁰

Each factor of a culture fits into a cultural pattern. This cultural pattern establishes definite limits to the possible concepts of a period; these limits establish the boundaries of the possible, not only in the physical, but in the social sciences. Those men who advance ideas outside these limits are usually disregarded, or perhaps they become those esteemed as martyrs by a later age. It is necessary to know the limitations of different periods, and neither to feel contempt for the past nor to read into the past the concepts of the present. For these reasons, to the extent that time permits, the course in dental history should incorporate something of the dominating religious and philosophic ideas of various groups and different periods, as well as the economic and social background, the geography and history of contacts with other peoples.¹¹

The dental practitioner who has some basic information on these subjects can answer many questions raised by the intelligent layman. The dentist may often be able to contribute information concerning the origins and the relations of dentistry that will bring to the public a new understanding of and an increased respect for the profession.

The lives of the great men of the profession, such as Harris, Haydn, Parmly, Brown, Miller, Williams, Black, Owre, will stimulate the student to greater efforts. When he knows what obstacles these men have overcome, he may acquire confidence that he too can make a contribution, can even be a leader in his profession. A knowledge of the part dental practitioners have taken in community, state and national affairs may influence young practitioners to assume their responsibilities as citizens in solving the problems of modern society.

It is the office of the teacher of dental history so to present the subject as to bring these considerations to the dental student. This requires all possible resources. It is the exceptional dental student who has developed interest in history in his preprofessional years. He enters dentistry because his basic interests lie in science and techniques. All the visual aids such as slides, rare books, maps,

¹⁰ Ludwig Edelstein, "The Development of Greek Anatomy," *Bulletin of the History of Medicine*, III (April, 1935), p. 241 ff.

¹¹ Clark Wissler, *Man and Culture*, New York, 1923, pp. 73-97; Ruth Benedict, *Patterns of Culture*, New York, 1934, p. 244; Erwin H. Ackerknecht, "Primitive Medicine and Culture Pattern," *Bulletin of the History of Medicine*, XII, 546; 1942 (Nov.).

museums containing objects of interest in dental history, reproductions of older types of restorations, must be utilized. Particularly important is encouragement of the student to read the medical and dental classics. This will quicken his understanding of and feeling for history. If he reads Pierre Fauchard, John Hunter, Woofendale, Fitch, and Harris, he will learn more than from all the lectures he may hear. Particularly beginning with 1839-40 and the establishment of the first journal, the first society, and the first college devoted exclusively to dentistry, is it possible for the dental student to live the past of his profession. The dental periodicals of the time, with their verbatim accounts of society meetings, of the activities of the dental colleges, are full of drama as well as information.

To a course presented in this way a few students will be immediately responsive. Some will later come to appreciate and study the subject. The teacher of dental history must perhaps be even more patient than most teachers. He must know his subject thoroughly and, more than the average teacher, he must love his subject and his students. Competition within the dental curriculum is so terrific that the life of the teacher of dental history is not easy. But if he can help the dental student

1. appreciate his profession
2. understand the social problems confronting his profession
3. develop the scientific attitude
4. practice dentistry more successfully

he can be happy in a field that is rewarding, not only in its ramifications, but in itself. He can be happy in serving a profession which he can perhaps appreciate more than most of its practitioners because he knows well the difficulties it has surmounted and can thus more confidently anticipate further realization of its potentialities.

JOHN HUNTER AND THE PHYSIOLOGICAL BASIS OF DENTAL PRACTICE

L. LASZLO SCHWARTZ, D.D.S., *New York*¹²

Dentistry, as we know it today, is the result of two streams of development: one technical, the other scientific. Each arose during

¹² Lecturer in Dentistry and Director, Head and Tempero-Mandibular Joint Clinic, School of Dental and Oral Surgery, Columbia University.

antiquity: the first among the craftsmen of Phoenicia and Etruria, the second among the philosophers of Greece. Flowing sluggishly throughout the Middle Ages, gathering momentum during the Renaissance, they broadened and deepened during the Eighteenth Century to form the reservoirs of dental knowledge which we now associate with the names of Pierre Fauchard and John Hunter.

Fauchard's "Surgeon-Dentist", which appeared in 1728, is not exclusively technical, nor is Hunter's "Natural History of the Human Teeth", published in 1771, purely scientific. There is much that is scientific in one and a great deal that is practical in the other. It is nevertheless true that the main current of the development which led to each was essentially either technical or scientific and Fauchard's emphasis is consequently upon the practice of dentistry while Hunter's is upon its science. Attempts have been made throughout the centuries to connect the two, but each followed its separate course until the time of John Hunter.

Fauchard expressed his understanding of the relationship between practice and science in the following words: "... practice alone does not suffice to carry these operations to perfection, at least when it is not governed by an exact study of the anatomy of the mouth: this study is absolutely necessary to understand the structure, the situation, the connection and the function of the different organs of which it is a part."¹ This knowledge was not fully available to Fauchard² in spite of the fact that at this time surgery was entirely in French hands and Paris the only place where the subject could be properly studied. For until Hunter transformed it, surgery was purely a mechanical art and progress during the period consisted of new amputations, excisions and other improvements in operative technic. A knowledge of ental and oral anatomy had already been provided by the work of Fallopius, Eustachius and Leeuwenhoek. What was needed was an understanding of the "connection and function" of which Fauchard spoke. This was Hunter's great contribution.

Sir Arthur Keith, in discussing John Hunter, said that it is not the years which have elapsed since his time but the great discoveries which have been made, which make him seem so distant. The knowledge of respiration, cellular pathology, and bacteriology has caused some of Hunter's work to lose its currency, but much of it is still valid and Keith concludes that: "The great evolutionary movement

left Hunter's work unchanged, for he was an evolutionist; but, fortunately for us, he studied the evolution of function rather than form. For medical men it is function rather than structure which matters. Hence it is that when we have deducted those parts of Hunter's labours which have been displaced by the progress of knowledge, there still remains a vast fund of permanent value, not only for us now, but for generations to come."²

The story of the life of John Hunter has often been told. Born in 1728, the youngest of ten children, he was spoiled by his mother and given to tantrums. As a youth he avoided education like the plague—a great disgrace for a Scots boy living within walking distance of Glasgow College, and whose brothers were studying law and medicine. Curious about nature, he spent his days wandering over the countryside. "When I was a boy", he afterward said of himself, "I wanted to know all about the clouds and the grasses, and why the leaves changed colour in the autumn; I watched the ants, bees, birds, tadpoles and caddisworms; I pestered people with questions about what nobody knew or cared anything about".³

A thorn in the side of his family, he was sent to a brother-in-law in Glasgow who was in the lumber business. It was of no use. Instead of attending to bills and letters, he spent his time working with the carpenters, probably developing the manual dexterity which he later put to such good use in the preparation of the 13,000 anatomical and other specimens of his collection. Finally, in desperation, he was sent at the age of twenty to London to his older brother, the refined and accomplished William, who was already a prominent surgeon and anatomist. Here, to everyone's amazement and relief, the impulsive youth found himself. He settled down, chose his life's work and became its willing slave.

John Hunter now imposed a regimen upon himself which in spite of its severity could not completely hold his turbulent nature in check. He picked a quarrel with the brother who had formed him over a petty question of priority of discovery. Three years later he was distraught by William's death. Suffering from angina pectoris, he had said, "My life is in the hands of any rascal who chooses to annoy and tease me".⁴ He predicted his own end, for in 1793, while pleading before the board of the St. George's Hospital for the admission of two young men who lacked necessary certificates,

a colleague contradicted him. Overcome with anger, angina seized him and he staggered out of the room to die.

In the history of medicine, John Hunter is recognized as one of the great all-round biologists, and with Paré and Lister, one of the three greatest surgeons of all time. Ambroise Paré advanced the art of surgery but it was John Hunter who taught its science. It was he who provided surgery with the firm foundation in physiology and pathology which enabled it to take its place as a branch of scientific medicine. His work was perpetuated by his students, his collections, and his writings.

His students were many and famous, among them Edward Jenner, the discoverer of preventive inoculation. His specimens, which now make up the Hunterian Museum, offer a dramatic example of how directly modern science is related to John Hunter. One hundred thirty-two years after Hunter had procured the now famous skeleton of O'Brien, the Irish giant, at great risk and expense, Cunningham, the anatomist, in his search for evidence of endocrine dysfunction, explored the pituitary fossa of the skeleton by thrusting his finger through the foramen magnum.⁵ It is John Hunter's four written masterpieces, however, which comprise that part of his work which is most easily accessible to those who would seek it out.

The first of the four, "The Natural History of the Human Teeth", was published in 1771. Seven years later, in 1778, a second volume appeared. The full titles of the two clarify their relationship. The first reads "The Natural History of the Human Teeth; explaining their Structure, Use, Formation, Growth, and Diseases," the second "A Practical Treatise on the Diseases of the Teeth; intended as a Supplement to the Natural History of the Parts." Together they comprised a cohesive fund of knowledge concerning dental science that we can no longer find between two covers.

The term "natural history" as it was used in Hunter's day meant a systematic account of natural phenomena. In time the word "history", derived from the Greek noun meaning "learning" was replaced by the equivalent Latin word "scientia" or "science". The word history was reserved for accounts of phenomena, especially human affairs, in chronological order.⁶ Science, including dental science, has been invaded by the "-ologies". They have divided our scientific knowledge into smaller and more concentrated units. The older term, natural history, vague and archaic though it may seem,

did possess a virtue—the connotation of the indivisibility of scientific knowledge. This is splendidly illustrated by the “Natural History of the Human Teeth”.

This is not only an anatomical text, even though with its clear descriptions and splendid illustrations, it can still be used as such. Nor is it simply embryological, histological, pathological, or physiological, because it is all of these things and something more. It is biological science in action—original observations and investigations unearthing the truths of science, critical thinking fashioning them into a sound basis for dental practice. There is no schism here between science and practice, for the science is practical and the practice scientific.

We pay tribute to John Hunter everytime we speak of a cuspid or a bicuspid, for it was he who gave us the classification we use in our dental anatomy today. Much more than a systematist, Hunter could apply his knowledge as facilely as he could classify it. At a time when the crude and often injurious key and pelican were generally used for the extraction of teeth, John Hunter wrote: “It would be best of all to attempt the extraction of a Tooth by drawing it in the direction of its axis: but that not being practicable by the instruments at the present in use, which pull laterally, it is the next best to draw a Tooth to that side where the Alveolar Process is weakest; which is the inside, in the two last grinders on each side of the Lower-Jaw, and the outside in all the others”.⁷

Hunter emphasized science but he did not underemphasize technique. He speaks of extractions as “an operation of considerable delicacy,”⁸ and points out that the teeth “. . . are naturally so fast as to require instruments; and the most cautious and dextrous hand; . . .”.⁹ He respected technique as the indispensable servant, not the master, of science. He thus avoided rigid procedures, and his writing expresses his reliance upon professional judgement. “It is impossible,” he wrote, “to give absolute directions what Tooth or Teeth ought to be pulled out. That must be left to the judgement of the operator; but the following general hints may be of service;”.¹⁰

This attitude prevails throughout the book, regardless of the subject discussed—extractions, periodontal, or orthodontic treatment. Hunter describes an orthodontic procedure in this way;

“The means of making this pressure I shall only slightly describe,

as they will greatly vary according to circumstances, so considerably indeed, that scarcely two cases are to be treated alike, and in general the dentists are tolerably well acquainted with the methods".¹¹ Hunter had faith in the ability of skillful dentists to work out the technic of therapy once they understood its biological basis. He was concerned first of all with the science of dentistry. His functional approach resulted in the first step toward a physiological basis for dental practice.

A subject so vast and a book so rich cannot be treated adequately in a single paper. I should like, however, to consider the work of John Hunter in relationship to occlusion. This is an important, if not the most important, aspect of any consideration of a physiological basis of dental practice, if one is to judge only by the attention it is receiving in our literature.

The term "occlusion" has created a problem in dentistry. This is largely due to the fact that the term can no longer contain the concept. Today, our thinking encompasses mandibular posture and movement and not simply a closed position of the jaws. "Occlusion", unfortunately, is a noun which denotes a completed action. It cannot express function and is figuratively bursting at the seams. We have tried to patch it with adjectives, and speak, for example, of dynamic occlusion. We are even tempted to trade it in for a brand new name. An excellent conference on "Concepts Pertaining to Occlusion" held recently by the American Dental Association under the leadership of Dr. George B. Denton offers much hope for a solution.

It is interesting to note therefore that John Hunter never used the term "occlusion". A superb plate illustrating it is described simply as "A view . . . of the Teeth of both Jaws in the natural situation when the mouth is shut".¹² Thus, form was presented graphically with a brief description, while function was described in the most minute detail. In his chapter on the muscles of the lower jaw, Hunter wrote, "It will be necessary in the description of each Muscle, to give its use in the different situations of the Jaw; by which means after they are all described, their compound actions will be better understood".¹⁴ And so with other chapters of this type, such as "Of the Motion in the Joint of the Lower-Jaw," "Of the Action of the Teeth arising from the Motion of the Lower-Jaw", and "General Comparisons between the Motion of the Jaw in Young and old people"¹³. These can still be read with profit today.

What a wealth of valuable information is contained in Hunter's monumental work—the rest position of the mandible, its movements and the reciprocal action of the muscles that cause them, the action of the joint, the continuous eruption of teeth, the effects of the loss of the six year molar, to mention but some.

It is only within our own century that these subjects are receiving the attention they deserve, for a profession struggling with elementary technical problems in the treatment of the single tooth, could hardly have been expected to face the complexities of tooth and jaw relationships. Consequently, it was the treatment of edentulousness that first directed interest to these problems.

In full dentures, cosmetics was at first the only consideration. Fauchard, for example, did not replace those posterior teeth which were not visible. Later, only the buccal cusps were allowed to touch.¹⁹ In England, however, where Hunter's influence was more evident, the natural anatomy and occlusion were more closely followed.²² When chewing efficiency as well as denture stability was sought, occlusion became an object of study. In this W. G. A. Bonwill was the pioneer. In 1883, he stated that "I shall use the term "articulation" instead of "occlusion" for the very good reason that it is more in keeping with the functions or motions of the jaw".¹⁵ His approach to his work, however, was entirely different from that of John Hunter.

Hunter was described as "... one of the few rare men to whom the love of carefully observing the course of Nature is sufficient for the motives and safe methods of scientific study".¹⁶ That which he observed he was quick to apply but it was not primarily the practical problem which motivated him. On the other hand, Bonwill and those who followed him were seeking a mechanical solution for the occlusal problems of full dentures. This Gysi expressed as follows: "The problem of articulation is, in my opinion, not completely solved, even though we may know all the movements of the mandible theoretically, until these movements can be initiated mechanically".¹⁷ There was thus brought to life an approach to the study of occlusion which has been with us for well over a half a century. It is practical in its aim and mechanical in its method.

What, we may very well ask at this time, has it produced? Since Bonwill first described his "Anatomical Articulator" others have

followed by the score. No single one has won universal acceptance and one is thus reminded of the old adage—that when there are many remedies for the same disease, there is, as a rule, no single effective one. Reliance has been and still is on individual art rather than complex instruments. Boswell, in a recent paper entitled “Practical Occlusion in Relation to Complete Dentures”, quotes F. W. Craddock as follows: “It is not for a moment disputed that workers who use individual measurements of condyle path inclination and adaptable articulators produce occlusions of great accuracy. What is here denied is that such readings contribute anything essential to the excellence of the result”.¹⁸ A similar viewpoint was voiced more than twenty-five years ago. “One of the phenomena of dental history”, wrote Washburn in a history of the study of occlusion, “is that no one for forty years discovered that teeth set up to balance with the Bonwill Articulator did not balance in the patient’s mouth”.¹⁹ Evidently the so-called practical approach has not proved very practical. Why then does it persist to this very day?

“The tendency to confuse what the poet calls ‘the sublime and irrefutable passion of belief’ with the purposes of scientific investigation”, wrote Garrison,²⁰ “is, indeed one of the saddest things in the history of medicine.” To my mind, the knowledge of the life and work of John Hunter offers the best protection against this human frailty. We can still heed Hunter’s advice to Jenner, his friend and pupil. Jenner, in a letter to Hunter, told him of his thoughts concerning preventive inoculation. Hunter answered, “Don’t think, try; be patient, be accurate;”¹⁶ and thus a great discovery was made. I believe that we will agree that as far as the study of occlusion is concerned, we have been guilty of too little trying, too much thinking, and much too much believing.

This has not only proved disappointing in its practical results, it has also held back the progress of research. In 1931, Hildebrand a Swedish investigator, introduced his study of masticatory movements with the statement that he was going to ignore its immediate practical application. He decided to do this because he felt that the so-called practical approach which had dominated research in the past pushed the problem itself to the background and he believed that the problem is primary and its practical application secondary.²¹

He thus expressed a point of view which characterizes the work of John Hunter, scientific in aim as well as in method.

The fact is that this point of view, even though it has been overshadowed by Bonwill's practical, mechanical concept, has never been extinguished by it. This is because John Hunter has exerted too strong an influence over many aspects of the history of dentistry. William Rae, for example, a dentist and pupil of Hunter, had at his suggestion given a course of lectures in Hunter's house. These are considered a landmark in the history of dental education since they initiated an established, organized system of lectures, given in turn by Fox, Moore, Fuller, and Blake, to those interested in the practice of dentistry.²²

The "Natural History of the Human Teeth", moreover, had appeared in many editions, foreign as well as English and American. Because of its influence, not all dentists had succumbed to the seductive appeal of Bonwill's mathematical system. William H. Trueman, immediately recognized the scientific fallacy inherent in trying to create a machine that will chew exactly as the patient does. In a chapter which almost prophetically follows that of Bonwill in Litch's "System of Dentistry", Trueman commented: "Could we remove the very jaws we are adapting the denture to, and use them as an articulator, it would be impossible to know with any degree of accuracy the relative positions they will assume when activated by the muscles and nerves that belong to them."²³

Hunter was fully aware of the importance of mechanical considerations, which he expressed mathematically wherever possible. He describes the condyle thus, "Its external end is turned a little forward, and its internal a little backward; so that the axis of the two Condyles are neither in the same straight line, nor parallel to each other; but the axis of each Condyle, if continued backwards, would meet, and form an angle of about one hundred and forty-six degrees; and lines drawn from the Symphysis of the Chin, to the middle of the Condyle would intersect their longest axis, at nearly right angles".²⁴ Hunter was too keen an observer and understood nature too well to stop observing at this point and to start thinking in terms of geometrical and mechanical laws. He continued with the following: "There are, however, some exceptions; for in a Lower-Jaw, of which I have a drawing, the angle formed by the supposed

continuation of the two axes, instead of being an angle of one hundred and forty-six degrees, is of one hundred and ten only".²⁴ Hunter's research on occlusion was from the point of view of a biologist, understanding variation in nature; Bonwill, as a mathematician, tried to reduce occlusion to a formula.

Oliver Wendell Holmes said,²⁵ "There is a dead medical literature and a live one. The dead is not all ancient and the live not all modern." The "Natural History of the Human Teeth" is still very much alive. In 1950, for example, there was published an excellent study on variations of the temporomandibular joint. Ricketts, the author, concluded that "Probably the most interesting concept gained from this study is the range of variation found in practically every aspect investigated".²⁶ Thus, we find modern cephalometric laminagraphy confirming observations of John Hunter.

Allan G. Brodie recently cited another example. He described the work of Brash, who in 1920 repeated Hunter's work regarding the growth of the mandible using the same animal experiments and conditions. He came to identical conclusions.²⁷ The most eloquent tribute to John Hunter comes not only from historians but also from the findings of modern research.

The papers on occlusion appearing in our literature which are scientific in aim as well as in method are increasing in number. By means of careful clinical observations, ingenious experiments, and anthropological studies, we are moving towards an understanding of that complex physiological process which we call occlusion. If we read the sign posts of history correctly, the knowledge of occlusion, first investigated scientifically by John Hunter, may prove to be the keystone of a physiological basis of dental practice.

John Hunter, slowly and carefully, as was his way, placed the first stones in a foundation in physiology for dentistry. Upon it, aided by knowledge and scientific equipment which he lacked, we are building a physiological basis for dental practice. This is our monument to John Hunter.

BIBLIOGRAPHY

1. FAUCHARD, P.: *The Surgeon Dentist* (translated from 2nd edition 1746 by L. Lindsay) London, 1946. Preface P. 7.
2. KEITH, A. *Menders of the Maimed*, London, 1919. P. 2.
3. PAGET, S. *John Hunter*, London, 1897. P. 27.

4. GARRISON, F. H. *History of Medicine*, Philadelphia and London, 4th ed., 1929. P. 346-347.
5. TURNER, G. G. *The Hunterian Museum*, London, 1946. P. 5.
6. GOTTSCHALK, L. *Understanding History*, New York, 1950. P. 41.
7. HUNTER, J. *The Natural History of the Human Teeth*, London, 1771. Vol. I, P. 122.
8. IBID. Vol. 2, P. 86.
9. IBID. Vol. 2, P. 88.
10. IBID. Vol. 2, P. 78.
11. IBID. Vol. 1, P. 77.
12. IBID. Plate 6, Fig. 2.
13. IBID. The Contents.
14. IBID. Vol. 1, P. 15.
15. LITCH, W. B. *The American System of Dentistry*. Philadelphia, 1887, Vol. 2, P. 486.
16. PAGET, S. Op. cit., P. 14.
17. WASHBURN, H. B. *History and Evolution of the Study of Occlusion*, Dental Cosmos 67: 233, 1925.
18. BOSWELL, J. V. *Practical Occlusion in Relation to Complete Dentures*. J. Pros. Dent. 1: 307, 1951.
19. WASHBURN, H. B. op. cit. P. 230.
20. GARRISON, F. H. op. cit. P. 313.
21. HILDEBRAND, G. Y. *Studies in the Masticatory Movements of the Lower Jaw*. Berlin and Leipzig, 1931. P. 3.
22. WEINBERGER, B. W. *An Introduction to the History of Dentistry*, St. Louis, 1948. Vol. 1, P. 341-344.
23. LITCH, W. B. op. cit., P. 577.
24. HUNTER, J. op. cit., Vol. 1, P. 5.
25. HOLMES, O. W. *Medical Essays*, Boston, 1891. P. 400.
26. RICKETTS, R. M. *Variations of the Temporomandibular Joint as Revealed by Cephalometric Laminagraphy*. Amer. J. Ortho. 36: 894, 1950.
27. BRODIE, A. G. *Contribution of the mandibular condyle to the growth of the face*. (in B. G. Sarnat: *The Temporomandibular Joint*, Springfield, 1951. P. 49).

A READING PUBLIC FOR THE HISTORY OF DENTISTRY

GEORGE B. DENTON, PH.D., Chicago¹²

Only three general ways appear to be open for stimulating a greater interest in reading the history of dentistry. These ways are: 1) improving the quality of historical contributions with regard to both their content and the method of their presentation, 2) placing historical articles for publication where they will reach the readers most interested in them, and 3) offering courses in the history of dentistry in the dental schools that will instill a greater interest in

¹² Research Consultant, American Dental Association.

the subject by students. I shall undertake to discuss only the first of these ways.

The American Academy of the History of Dentistry consists of the persons most interested in the history of dentistry, and they write much of it. Therefore, I shall have to ask them to forgive me when I say that the chief reason that the history of dentistry is not read more by members of the profession is the character and quality of the historical work published. I do not mean that there is no good work done, for some excellent studies have been published, but there is much that is trivial or too highly specialized for general consumption, much that is "old stuff" or "rehash," much that is mere compilation, paste and scissors work, much that is badly presented, without a consistent viewpoint, unorganized, inaccurate, and unclear.

To understand how the numbers and interest of readers may be increased by improving the quality of dental history offered to readers, it is necessary to glance over the principles of historiography.

From the point of view of the purpose of the author, historical accounts are of several kinds. The first and most elementary of the types of history is the presentation of the original sources of history, the raw material, the records and remains of past events, from which those events may be derived. This activity of discovering and revealing documents is elementary but fundamental, for as the great French historical methodologists, Langlois and Seignbios, have declared, "No documents, no history."

It is a great service to students of history when one of their number makes available an important document in the history of dentistry. And in some instances, workers in the field whose talents lie particularly in that direction would doubtless perform a greater service to historiography if they would be satisfied merely to present documents and not attempt to utilize them. There are many important documents relative to the history of dentistry known to exist today which have never been published and thus made available to scholars in this field. There are the minutes of the faculty of the first dental school and of the addresses of Horace Hayden. There is the manuscript of Pierre Fauchard's famous book, which has been made available only recently through the acquisition of a

microfilm of it by the American Dental Association library. There is the manuscript of an unpublished book on dentistry by the Italian Fonzi inventor of porcelain denture teeth, at the beginning of the nineteenth century, a manuscript which the historian Guerini has averred still exists among the papers of the Fonzi family. Documents such as these are of the utmost importance to historians of dentistry, and somehow, somewhere, they should achieve publication in facsimile or transcript.

Most documents, however, are interesting reading only to the historian, partly because of their indirect relevancy to the events which they record and partly because of the load of circumstantial details which they usually bear. Only in rare instances are documents interesting to the general reader. Consequently, it is hardly to be expected that any but journals devoted to history, local antiquities, or medical history will publish such material. Valuable as documents are to the dental historian, there is little likelihood of securing publication for them or a reading public outside a few dental historians, so long as no periodical exists devoted to the history of dentistry.

A great deal of the writing done by some of the most serious and productive historians of dentistry is devoted to trying to determine from the available documents what are the facts, what actually happened. This is *critical history*, or as it is technically termed, *heuristic*. A whole article may be given over to the establishment of a single fact or to a group of related facts. Dr. Asbell's article entitled "Specimens of the Dental Art in Ancient Phoenicia," originally published in the *Bulletin of the History of Medicine*, 1948, is a good example of this type of critical history. The first half of his article is devoted to determining definitively whether the so-called Gailardot specimen of prosthesis was for the upper or for the lower jaw. After reviewing the many contradictory opinions of persons who were unqualified technically to judge or who had never examined the prosthesis at first hand, he demonstrated that Dr. Fildermann of Paris, by intimate study of the prosthesis itself and by careful measurements of the fractured necks of the teeth, proved beyond doubt that the prosthesis was constructed for the lower jaw.

Obviously, all critical history belongs to the argumentative form of discourse. It aims to prove the truth or credibility of a statement

of fact in regard to the past. This is so whether the critical consideration is an extended argument such as Dr. Asbell's or is merely a bibliographical reference as to the source of information from which the statement is derived. Being essentially a reasoning process, critical consideration adopts the viewpoint of universal time, abandoning the viewpoint of specific time, especially past time, which is the realm of historical reality.

This sort of historical study furnishes only the facts of history. It is absolutely essential, but it is preliminary to the historical account. It delights the historian, who is engrossed in the technic and zealous to reveal new truth with regard to the past. But it is almost always uninteresting and boring to the general reader, who wants to know what happened and not how the historian discovered it.

The opportunities for publication of such critical studies are very scanty, and the readers are bound to be few, restricted for the most part to a small group such as the Academy, who have a special and more or less occupational interest in such problems. If there were a journal devoted to the history of dentistry, it could be expected that a fair proportion of such articles would find place there and be read by historical scholars. But as there is no likelihood that such a journal at this time could be supported, no such opportunity offers itself, and publications non-dental in character will often have to be resorted to. Journals devoted to the history of medicine (of which Dr. Asbell availed himself in the example given) and local history journals (such as *Ohio Archaeological and Historical Quarterly* to which Dr. Mills has contributed) and other specialized historical periodicals (such as *Isis*, devoted to the history of science) are the only repositories which at present can be expected to offer asylum for such contributions. In order for these critical articles to get into dental journals, the subject must be of outstanding interest, and the treatment must be incisive, and the space occupied small.

History as reality is usually thought of, and rightly, as a procession of events, a sequence of happenings in time. Written history, therefore, if it is a reflection of reality should be an account of these events as they have occurred chronologically. Primarily, then, written history is a narrative; and however necessary the establish-

ment of facts by the critical process may be, yet the actual facts, and not the arguments and proofs of fact, constitute the substance of history.

Isolated facts, however, do not make history. It is only when facts are related in a dynamic, forward moving stream in time that they fairly represent reality and constitute complete consummate written history.

These truths have led to the inference on the part of many writers of history that the goal of historiography is the re-creation of the past so that the reader may relive, as it were, remote incidents and previous events, and feel towards them as the persons felt who experienced them. As a result of this aim, one type of historical writing is the narrative-presentative or narrative-descriptive form. This is what Raper has undertaken in most parts of his *Man against Pain*, by introducing dialogue and in other ways bringing the reader into intimate contact with the circumstance in the discoveries and developments of anesthesia. Emphasis is placed on action; and explanations and arguments are reduced to a minimum so as not to halt the forward movement of the narrative.

To transport the reader into the past, various devices have been employed. One device is to employ vivid and picturesque language. Another is to quote passages from the documents where the expression and the sentiments seem to reflect the character of the time and persons involved. Let the actors speak for themselves is the dictum of these historians.

For recent events this practice may do well enough, but it usually poses problems of interpretation almost insuperable for the remote past, and especially where translation is entailed. For instance, in the well-known letter of an Assyrian physician to his king, of the seventh century B.C., where the condition of the patient is reported, some translators, giving the words a modern turn, have represented the physician as asserting that the patient had "inflammation" or that he had "fever." These are concepts of present day pathology of which the Assyrian medical man, mostly concerned with symptoms, had no understanding. Yet, if the historian adopts the alternative, and asserts that the patient suffered "burning" in his extremities, which was what was actually said in the letter, the expression is equally undescriptive for it becomes merely quaint, and surely the

statement was matter-of-fact and not quaint to the king and his medical adviser.

To re-create the past is a heroic endeavor; and if it is attempted without false dramatization and on the basis of known facts (which are often too meager), the effort is praiseworthy even if impossible of accomplishment.

One other purpose to which the historian may devote his historical writing is to make the past intelligible to the reader of today, i.e. to make it understood. In this type of historical writing the author abandons the notion of re-creating the past as impossible of attainment. He is satisfied if his reader is able to give the right interpretation of the developments that took place many years ago, and places them in the right perspective. Such history is less dramatic and less picturesque than that which attempts to re-create, but it is likely to be more informative and more penetrating. Although the narrative character of history must be preserved, this sort of history usually becomes a slower moving narrative with halts in the forward movement along the way to allow explanations of the phenomena presented. It becomes, thus, an expository-narrative type. Emphasis is placed on causal relation rather than on chronological order. A later set of circumstances and conditions is shown to arise out of earlier circumstances and conditions; and the historian tries, as far as possible, to relate the two, explaining how one produced the other. History of this sort is substantial and, in the school curriculum, compares favorably with the science and professional technic courses as valuable material in dental education.

The pure types of historical writing are the three mentioned; namely, critical history (or the determination of facts), presentative history (or the re-creation of the past), and expository history (or the elucidation of the past). To these pure types should be added the mixed form in which the historical narrative is interrupted at intervals to discuss the credibility of the statements of fact to be used in the narrative.

Of all the forms of historical composition, this combination of critical and narrative history is the most unsatisfactory, the least justified, and perhaps the most frequently produced. This practice of intruding critical matter into the narrative not only slows the forward movement of the narrative unnecessarily, but violates the

historical point of view, which aims to keep the reader in the past contemporaneous with the events narrated. Nothing is more irritating to a reader, in the midst of an interesting and perhaps exciting account, than to have to stop and follow the author through a maze of argument to determine which or what is the next fact in the story.

One could point to a recent volume of dental history in which the author is constantly guilty of interrupting himself in this way to discuss at length the proof for the next incident of his narrative; and sometimes he is guilty of concluding only that there are many contradictory opinions as to whether incident x did or did not occur, that nobody can know, and that so far as the author himself is concerned, he believes neither this way nor that. This is both confusing and discouraging to the reader. The reader is repeatedly wrenched out of his temporal viewpoint and thrown into the timelessness of logic, thus having his illusion of the past as reality shattered.

How can this sort of thing be avoided? Obviously, the historian must establish his facts before he can use them in his narrative, and sometimes the facts are obscure and controversial. The historian cannot use such uncertainties as if they were known to be truths. How can he avoid arguing the matter out in the text? In the first place, in his statement of fact he can always include an indication of its degree of credibility. It is either certain, probable, or possible. Statements of fact with these degrees of credibility can be used when qualified accordingly. In the second place, he can separate the critical process by which the facts are established from the text. This can be done by footnote if the justification is short, or by appendix or separate critical chapter if it is long. By relegating critical discussions and bibliographical references to footnotes located at the bottom of the page with indication of their attachment in the text, the author enables his reader to follow the narrative alone if he chooses; or if the reader has the historian's curiosity, he can appraise the justification of the statements more in detail by reference to the footnotes. This device at the historian's disposal can do much to make his narrative more readable without lessening its validity.

The intelligibility and interest of an historical account depend in great measure on the general principles of organization according to which it is constructed. In a broad sense, the choice of a plan of

organization lies among three types: 1) the chronological, 2) the topical, 3) the developmental.

In the *chronological* organization all events are presented pretty much in the order of their occurrence. An approximately chronological order may work well in the earlier periods of dental history when the activities of the dental occupation were few and relatively simple. But in more modern times, to organize all historical facts in the simple order of occurrence is to confuse the development or sequence of change in any one aspect of the subject. What happened in cavity preparation will be obscured by contemporaneous or intervening events in the field of complete dentures or the etiology of caries, and so on.

Few works are organized on a strictly chronological plan. The attempt is made in Prinz's *Dental Chronology*, which (valuable as it is as a reference work) exemplifies the shortcomings of such an arrangement of material. Obviously, it cannot be regarded as a unitary work, but only as a miscellaneous group of factual statements. Perusing it from cover to cover, the reader might obtain a vague sense of development in the profession, but a realization of any connected progress in the various aspects of dentistry would be lost because of the scattering occurrence of their manifestations. Problems of dealing with phenomena that cannot be ascribed to any particular date also arise. For instance, the lives of leaders of the profession have been placed in Dr. Prinz's book at the year of their birth. Thus the career of G. V. Black, whose most important work was done in the nineties of the last century, is located in the year 1836, before the introduction of nitrous oxide anesthesia, before the founding of the first dental school, and before any of the developments with which his efforts were connected.

A special form of the chronological arrangement, very largely used in the history of arts, sciences, and professions, is the biographical or bibliographical. In this organization the presentation is by authors or by their books, the accounts being arranged one after the other according to the dates of their births, deaths, or the period of their activity. Naturally, there will be occasion in any historical account to stop and review the career of some distinguished contributor to the profession. But adopted as a prevailing principle of arrangement, such a plan results in a series of more or less unrelated

biographies or abstracts of books, and not in a continuous and progressive history. This is a favorite method because it is easy—much easier than digesting the works of the various men and then reorganizing the analyses so as to relate the contributions of many persons on one subject. As valuable a work as Guerini's *History of Dentistry* is organized on this biographical principle.

The strictly chronological order does not lend itself to intelligibility or readability, and yet many of our historical articles are largely so organized.

It is obvious that to a certain extent the organization of the historical account must be *topical*. In order to give an intelligible and significant development, it is necessary to follow one aspect at a time. In more recent years, when dental activities have become extremely complicated, it is almost imperative that the main divisions of the subject should be the different fields or branches of dentistry. But even the subdivisions to a considerable degree of subordination must very often likewise be topical.

It is possible, however, to destroy the sense of historical continuity and forward movement of the narrative by overuse of topical analysis. Interrelation and interaction of the various separated developments must be presented at advantageous points in the account.

Dorrance's book, *The Operative Story of Cleft Palate*, is an example of the loss of the narrative character of the history by unskillful use of topical analysis. The work is organized by types of operations performed. These are arranged pretty much in sequence according to the time when they were first proposed. But there is no device for tying them together into a connected narrative. Somewhat the same may be said of a new and excellent book by Sir Frank Colyer on *Old Instruments Used for Extracting Teeth*. It is organized by division according to types of instruments, and the reader will feel in most places that it is the description of the instruments that concerns the author rather than any connected development of them.

The method of organization of the historical narrative which seems to promise most in the way of interest, significance, and intelligibility for the reader is what may be called the *developmental*. In history written according to this principle, the various threads of the narrative are clearly distinguished and yet they are sufficiently intermingled and interwoven in the account as to produce a forward

moving pattern of change and progress in which the individual figures can be traced throughout. Such organization requires writing skill of a high order and demands great effort on the part of the author. It is the hard way to write history, but it is productive of the best accomplishment. Writing history, it must be appreciated, is a creative act, not mere compilation.

Something ought to be said about the general quality, tone, and style of historical writing. It will be universally admitted by historians that 1) accuracy in the substance and precision in the statement are prime requisites; 2) Lucidity is probably the quality of style next in importance; and 3), readableness should be listed.

One reason that history of dentistry does not attain a higher standard is that dental educators do not always take it too seriously. Some years ago I was somewhat irked to have the dean of a school remark, "Oh, well, if the student gets a general impression, it doesn't matter too much if he doesn't have the facts straight." I could only reply, "You are a biologist, and you would not want biology taught that way. To my mind history of dentistry, if it is worth teaching at all, is worth teaching like any other serious and scientific subject."

Some persons consider that the main purpose of dental history is entertainment, and a great deal of history of dentistry has been written on that assumption. There is no objection to indulging in some amusing historical anecdote now and then. However, I contend that history of dentistry, as a study of the solidarity of the profession is as serious and as important a subject for the professional dentist as any in the school curriculum. It should, without resorting to propaganda, inculcate the important truth that the solidarity of dentistry not only is world wide but extends backward and forward through time, including past, present, and future.

It has not been the intention of this paper to discourage anybody from writing the history of dentistry. As students and devotees of the subject, the members of the Academy of the History of Dentistry will read with interest everything that a fellow worker publishes. But so far as extending the reading public is concerned, engaging the interest of the profession and securing publication in the periodicals, the thought of this paper is that historians of dentistry may expect to win readers among the profession in proportion as their work is of such a character as to deserve readers.

AMERICAN COLLEGE OF DENTISTS

MINUTES OF THE MEETING OF THE BOARD OF REGENTS, CONRAD HILTON HOTEL, CHICAGO, ILL. FEB. 8, 1953

(ABBREVIATED)

O. W. BRANDHORST, D.D.S., *St. Louis*, Secretary

FIRST SESSION

Sunday, February 8, 1953, Conrad Hilton Hotel, Chicago, Ill. Convened at 9:00 a.m. Twelve members of Board present. President Pierson presiding. Minutes of previous meeting approved. The following reports of officers and regents were received: President, President-Elect, Vice-President, Treasurer, Secretary, Editor and the Regents.

The Treasurer reported as follows:

"As of January 31, 1953, the funds of the American College of Dentists on deposit with the Fauquier National Bank, Warrenton, Virginia, are represented by balances as follows:

General Fund

Bank statement of January 31, 1953.....	\$13,965.39
Less checks outstanding.....	555.18
Actual balance.....	\$13,410.21
U. S. Government Bonds, Series G. and K. (maturity value).....	30,000.00

43,410.21

H. Edmund Friesell Endowment Fund of the American College of Dentists

U. S. Government Bonds, Series G. (Maturity Value)...	3,300.00
Savings Account (accrued interest on above bonds)....	341.67
Total.....	47,051.88

Respectfully submitted,
WILLIAM N. HODGKIN, *Treasurer*

The Secretary's report indicated the passing of the following members since the September convocation:

Dan U. Cameron, Chicago, Ill.	December 10, 1952
George W. Dick, Sumter, S. C.	October 28, 1952
Thos. S. Eader, Frederick, Md.	December 14, 1952
John G. Frisch, Madison, Wis.	September 11, 1952
Reed H. Gerard, Carmel, Calif.	November 12, 1952
Sidney B. Hoskin, Portland, Ore.	September 17, 1952
George C. Jernigan, Rector, Ark.	September 9, 1952

Edward Kennedy, New York, N. Y.	October 3, 1952
George W. Lundberg, St. Paul, Minn.	October 21, 1952
Michael J. Moran, Deming, New Mexico	January 26, 1953
Edward H. Smith, Libertyville, Ill.	February 5, 1953
Rose Smith, Texarkana, Ark.	October 10, 1952
Grace Rogers Spalding, Birmingham, Mich.	January 7, 1953
William O. Talbot, Ft. Worth, Tex.	October 14, 1952
Wilbert J. Whiteman, Birmingham, Mich.	July 31, 1952
Chas. E. Woodbury, Alhambra, Calif.	September 12, 1952
John V. Mershon, Philadelphia, Pa.	February 18, 1953

SECOND SESSION

This session convened at 2:00 p.m., February 8, 1953 with eleven members present.

The following committee reports were received: Dental Student Recruitment, Preventive Service (this committee outlined a possible survey of opinion on why people did or did not seek dental service), Committee on Committees (this committee reported an exhaustive study on committee activities, recommending the discontinuance of some and the creation of others as interest and activity suggested).

The Committee on Central Office, reported need for expanded facilities to carry forward present activities and for future development.

New Business

Dr. Geo. C. Paffenbarger was selected to represent the American College of Dentists in the American Association for the Advancement of Science for a period of two years, 1953 and 1954.

Addendum

Committees not re-appointed 1952-1953

Certification of Specialists
History
Hospital Dental Service
Journal

Work completed
Work carried out by Academy of History
Committee inactive
Not re-appointed

AMERICAN COLLEGE OF DENTISTS

MINUTES OF THE BOARD OF REGENTS, STATLER HOTEL, ST. LOUIS, MO
SEPT., 1953

OTTO W. BRANDHORST, D.D.S., *St. Louis*, Secretary

REPORTS OF COMMITTEES¹

Certification of Specialists
Journalism²
Necrology³
Nominations⁴
Preventive Service
Prosthetic Service

CERTIFICATION OF SPECIALISTS

RALPH L. IRELAND, D.D.S., *Lincoln*, Chairman⁵

The committee on Certification of Specialists of the American College of Dentists has been working with the Advisory Board of Dental Specialties the past two years helping the Board develop a Model State Dental Specialty Law.

A model law was formulated by last years committee and following the committee's report to the officers and regents of the College, the proposed law was presented to the Advisory Board. A few revisions were made by the Board and the proposed law was submitted to the Council on Dental Education of the American Dental Association for suggestions.

A communication sent to the secretaries of the dental specialty boards on June 10, 1952, from Dr. Shailer Peterson, Secretary of the Council on Dental Education, contained the following statement regarding the proposed law:

Those who attended the last meeting of the Advisory Board of Dental Specialties will recall that Dr. Ralph L. Ireland presented a suggested Model State Dental Specialty Law. This was revised following the meeting in Washington, D. C. and

¹ Made to the St. Louis Convocation September 1953.

² See J. Am. Col. Den., 20, 20: 1953 (March), and see also J. Am. Col. Den. (this issue, p. 202, Erratum).

³ See J. Am. Col. Den., 20, 28; 1953 (March).

⁴ See J. Am. Col. Den., C/p. 3—March 1953.

⁵ Other members of this committee are: T. M. Barlow, C. O. Boncher, N. E. Flesher, S. C. Miller.

submitted to the Council for its suggestions. The Council recommends that the report or document be retitled so as to convey the thought that this release is intended "to present recommendations and suggestions to those interested in preparing a State Dental Specialty Law." This would, of course, mean that the text would need to be altered somewhat so that instead of an actual example of a law, the document might present some of the background indicating the reasons for preparing the material in a certain way. The basic reason behind this is the thought that the House of Delegates of the American Dental Association on two occasions has expressed its disapproval of resolutions directing the Council on Legislation to draft a model Dental Practice Act or to exercise control over the substance of a bill to be introduced in any state legislature. This was done because constitutional and legal precedents established through and by court decisions are not uniform in the several states and therefore, legislation must be drawn with consideration for these varying factors and therefore, cannot be identical throughout the nation. Also, any bill that is introduced into a state legislature is subject to change through adoptional amendments and, therefore, much of the advantage of a "Model Law" would be lost.

It was indicated at the Council meeting that a set of recommendations would be useful and that these could either be made available to interested parties through the Advisory Board of Dental Specialties or through the Council on Legislation of the American Dental Association.

At the meeting of the Council on Dental Education's Committee on Dental Specialties held May 15, 1952, it was suggested that the title of the proposed model law be changed to "Guide for the Formulation of a Model State Dental Specialty Law," and that several copies be sent to the committee on Dental Specialties and the Council on Dental Legislation instead of the Council on Dental Education.

The proposed law will be considered further at the meeting of the Advisory Board of Dental Specialties to be held Sunday, September 7, 1952 at 7:30 p.m.

A copy of the proposed state dental specialty law with the revisions which have been suggested is attached to this report.⁶

JOURNALISM

CHAS. W. CRAIG, D.D.S., *San Francisco*, Chairman⁷

The Committee on Journalism of the American College of Dentists in making a report for the year 1951-1952 submits that report in what may be termed three headings:

⁶ Held for later publication. (Ed.)

⁷ Other members of this committee are: C. C. Sheppard and J. E. Gurley.

1. Referring to the report of the Committee on Journalism, published in the Journal of the American College of Dentists, Volume 17, page 143, June, 1950, we recommend the classification of dental literature, insofar as Group C is concerned, be extended as follows:

Old Classification:

- Group A. Professionally owned and professionally controlled
- Group B. Privately owned but professionally controlled
- Group C. Privately owned and privately controlled
 - Type 1. Non-subscription magazines
 - Type 2. House organs
 - a) Company use only
 - b) Professional distribution

Proposed New Classification:

- Group A. Professionally owned and professionally controlled
- Group B. Privately owned but professionally controlled
- Group C. Privately owned and privately controlled
 - Type 1. Subscription magazines
 - Type 2. Non-subscription magazines
 - Type 3. House organs
 - a) Company use only
 - b) Professional distribution

As we considered the two journals on which we are reporting, another very important one, the Dental Digest, came to our minds. This is a subscription magazine, privately owned and privately controlled. Under the present classification there is no grouping under which it may be placed. Both of the journals considered in this report fall within the same group, therefore, we recommend the extension as suggested.

2. *Digest of Dental Science* (known as D.D.S.) is a subscription magazine which, in view of careful consideration, is privately owned and is privately controlled. It is headed by one of unquestionable integrity and ability and whose professional status is unquestionable, which is also true of the entire Board. Nevertheless, there is no dental association back of it; therefore, it is privately controlled. We recommend that it be placed in Group C, Type 1, of the revised classification.

3. *Dental Concepts*: A study was made of this journal and its owners. It is claimed to be the official publication of the Alumni

Association of the New Organization School for Graduate Dentists and "is supported in part by the Alumni Association, in part by the school, in part by revenue from advertising." It is said to be "devoted to unifying the ideals and realities of dental practice."

A survey was made among individuals, representing either themselves or an institution, in order that we might obtain their opinions regarding the merits of this journal and its sponsoring body. Out of twenty-five inquiries we had a return of twenty-three, the great majority of which did not speak with favor.

At the meeting of the American Dental Association in 1951, the following resolution was passed by the House of Delegates:

"23-1951-H. Resolved, that the House of Delegates of the American Dental Association re-affirm its stand that dental education, like all education, is a continuous growth process, and therefore, that postgraduate dental education deserves the same concern and discipline that is accorded undergraduate education; that dental education is professional education and must include, in addition to the teaching of technical procedures, indoctrination in social responsibility, patient responsibility and professional ethics and that such teaching is best accomplished by universities, professional societies and recognized hospitals."⁸

It is our contention that this institution is an independent institution, having no university or other institutional connection, therefore, its alumni association would be similarly placed. Their publication is a subscription magazine. We do not know that it is mailed regularly to any one free. They possibly have an exchange list but otherwise it is apparently confined to their alumni association members and subscribers.

Your committee after full deliberation of the information available recommends that Dental Concepts be placed within Group C, Type 1, of the revised classification, namely: a subscription magazine, privately owned and privately controlled.

PREVENTIVE SERVICE

CARL L. SEBELIUS, D.D.S., *Nashville*, Chairman⁹

The term "Preventive Dentistry" has enjoyed a rather intangible and loose meaning for many years with many dental practitioners, as well as teachers of dentistry, making little distinction between

⁸ Transactions of the American Dental Association, 1951, p. 180.

⁹ Other members of the Committee are: F. A. Arnold, Jr., J. M. Dunning, K. E. Eastlick, G. R. Lundquist, and W. J. Pelton.

preventive and control procedures. Today preventive procedures are receiving an increased amount of emphasis. Fluorides, either topically applied to teeth or used in the form of controlled amounts in water, are being used with increasing emphasis as a tool against dental caries.

The Committee on Preventive Service submits for your consideration the following definition of Preventive Dentistry which, in its opinion, recognizes the difference between a preventive measure and a control technic:

"Preventive Dentistry consists of the various educational procedures, used by dentists, dental hygienists, physicians, nurses, teachers and others, which will develop scientific oral health knowledges and habits and will prevent the development of improper oral health knowledges and habits; it consists of those technics which will prevent the initiation of oral diseases or conditions such as dental caries, diseases of the supporting structures of teeth, and non-hereditary malocclusion; and it includes the prevention of such sequelae of the neglect of these conditions as oral and systemic infections, interference with normal growth and development of the arches, loss of masticatory function and impairment of the personal appearance or the social adjustment of the individual. The procedures utilized may be effective, scientifically correct, health educational measures or specific preventive technics, such as the topical application of sodium fluoride to teeth, the addition of fluoride to public water supplies, proper toothbrushing, proper diet, the interference with oral habits and the prevention of accidents to teeth. A measure may be considered a control technic if it is corrective in nature at the time it is utilized and if it prevents the development of sequelae. Such control technics are the early detection and correction of carious lesions, timely and proper orthodontic interference, the early detection and treatment of diseases of the supporting structures of teeth and the early detection and treatment of oral cancer and the developmental anomalies of the oral cavity."

A committee charged with the responsibility of appraising critically the current available scientific information in all areas which relate to preventive dentistry and to define and assess quantitatively the effectiveness of preventive practices took on an assignment of greater magnitude than could be accomplished in a year's time. Even though the assignment has not been completed, much thought has been given by each committee member to the recommendations.

There seems to be reason to think that the profession of dentistry is entering into a period which may be called the preventive phase or era. The response registered by the major health professions and

organizations, as demonstrated by their endorsement of water fluoridation, suggests such a prediction.

Even though great interest has been demonstrated in certain preventive dental procedures, there are many questions which need to be studied. Some of these questions are, "Why do so few dentists practice preventive dentistry and how can the members of the American College of Dentists encourage and assist in the promotion of a more comprehensive practice of Preventive Dentistry? It would also be most interesting to know why only a few dentists chart decayed, missing and filled teeth as a dental caries index, use caries susceptibility tests, allow sufficient time for conferences on diet control and toothbrushing and make every effort to assist each patient to develop scientific oral health knowledges and habits? Would not a lack of experience and a simple method for obtaining diet history analysis and simple methods and record forms permitting easy summarization of D.M.F. data keep many dentists from obtaining this type of information? Do they not follow such practices because they were not taught such a procedure in dental school, or do they feel that they cannot afford to spend the time, or do they not know how?"

Because of the need to do something about those practitioners who do not accept preventive dentistry as a part of their practice, the committee feels that a discussion and a study of the blocks which may keep a person from the attainment of optimum health should be presented. At the University of Michigan School of Dentistry, the senior dental students receive an assignment on the blocks to the attainment of optimum oral health. The student is required to decide the size or importance of each of the blocks which keep people from receiving scientific dental care. He also must write a brief, critical, objective appraisal, accurately documented, which gives the magnitude of the block assigned to him.

The following outline presents many of the blocks which interfere with the attainment of dental care:

1. *Psychologic Blocks*

- (1) Fear
 - (a) of cost
 - (b) of the unknown
 - (c) of pain

- (d) of dentist
 - (I) induced by indiscreet statements or disciplinary threats on the part of parents or associates.
 - (II) induced by unfortunate experience during patient's first appointment.
- (2) Distrust of motives of professional people.
- (3) Impatience with failure to secure appointments promptly.
- (4) Habit of not going to the dentist.
- (5) Resentfulness of patients against control or regimentation by dental personnel.
- (6) Indifference about oral health.
- (7) Procrastination.

2. Ignorance

- (1) Incomplete information regarding the importance of teeth for function, comfort, health and appearance.
- (2) Failure to appreciate the value of preventive steps.
- (3) Lack of realization of responsibility for provision of dental care.
- (4) Commercial propaganda detrimental to oral health.
- (5) Misinformation obtained from the teaching or the health professions.
- (6) Belief in supernatural or divine healing.

3. Professional Blocks

- (1) Refusal to treat undesirable patients (children, people of some racial groups, people from low income levels).
- (2) Inability to manage the behavior of child patients.
- (3) Professional misstatements to get rid of patients.
- (4) Lack of professional skill or education.
- (5) Failure to pursue postgraduate education.
- (6) Poor office management.
- (7) Unattractive office surroundings.
- (8) Lack of personal or office cleanliness.
- (9) Overcharging patients.
- (10) Addiction to alcohol or drugs.
- (11) Unacceptable temperament (intolerant, uncommunicative, arrogant, rough, sadistic).
- (12) Inadequate distribution of dentists to provide services.
- (13) Refusal to integrate preventive technics in office practice.

4. Economic Blocks

- (1) Cost of oral health care.
- (2) Competition of goods and other services for family income.
- (3) Family level of income.
- (4) Size and youthfulness of family.
- (5) Extensive illness in family.
- (6) Lack of adequate space and operating facilities at reasonable cost to the dentist.

- (7) Cost of dentist's educational preparation.
- (8) Lack of sufficient facilities to educate an adequate number of dentists.

5. *Social Blocks*

- (1) Inability of a community to attract a sufficient number of dentists as permanent residents.
- (2) Religious or cultist objections to oral health treatment or preventive technics.
- (3) Antagonist beliefs, traditions or cultural patterns.
- (4) Custom of permitting teeth to decay and seeking dentures early in life.
- (5) Lay classification of health professions as labor unions.
- (6) Desire of patients for the enactment of a compulsory health insurance program.
- (7) Discrimination against racial groups (white, negro, Indian, oriental, foreign language).

6. *Geographic Blocks*

- (1) Geographic isolation of patients.
- (2) Distance necessary to travel to dental office.
- (3) Availability of transportation.

7. *Administrative Blocks*

- (1) Red tape.
- (2) Filling out forms.
- (3) Lack of promptness in processing and paying vouchers.
- (4) Regimentation.

It seems extremely important in all phases of dentistry to know more about the magnitude of the many blocks which prevent certain dentists from practicing preventive dental procedures and the blocks which keep people from obtaining the scientific knowledges and the practices of proper oral health habits.

It is suggested by the Committee on Preventive Service that study be given to the engagement of a social research group to do a fact-finding survey. Carefully thought out test questions could be used which are subject to the technic of a public opinion poll so that more may be known about the blocks which impede progress in the field of Preventive Dentistry.

PROSTHETIC SERVICE

CLARENCE A. NELSON, D.D.S., *Amory*, Chairman¹

Following the several reports of the Prosthetic committees of the American College of Dentists, which had their beginning in 1934,

¹ Other members of this committee are: E. M. Eaton, W. H. Monk, C. G. Porter, S. C. Robinson and W. S. Thompson.

the American Dental Association appointed a Prosthetic Dental Service Committee in 1940 which later became the Council of Dental Trades and Laboratory-Relations. This latter committee has been of valued service to the profession of dentistry and is now regarded as one of the most important Councils in our American Dental Association set up. The present function of the Prosthetic Dental Service Committee of the College should be to supplement the work of the Council on Dental Trades and Laboratory-Relations, as was done in 1949, when the American College of Dentists published the treatises on the survey made by the Council on the question, "Will registration of Dental Laboratories and/or Licensure of Laboratory Technicians be good for the profession of dentistry."

The July, 1952 Information Bulletin of the American Dental Association was devoted to "The Dental Profession and the Laboratory Craft, a Discussion on Mutual Responsibilities and Problems," and was sent to all members of the American Dental Association and to the dental laboratory craft. Editorially one dental laboratory publication stated that it dealt largely in generalities leaving specific and detailed problems to be solved by the profession and the craft on a state level.

The information contained in the bulletin was well written and covered the entire prosthetic problem very well. Dentists should read and re-read this information and if dentists, dental societies, and dental boards of examination would follow the suggestions and recommendations contained there-in, we would be a long way towards the solution of our problem. Another like bulletin should be published this coming year.

ACCREDITATION

The principle of accreditation has been adopted by the American Dental Association as the program for cooperation of the profession and the craft in solving our mutual problems. Some states have formally adopted the principle and have a working plan. Other states have adopted the principle but as yet have not an approved plan. Still other states are in accord with the principle but have not officially adopted the principle or the plan. In some states, districts and component societies outside the heavily populated areas have accreditation in operation. And then there were states that believe this plan is not the solution but that legislation through licensure or registration was the only solution. The reasons for the present

status of our approved principle of accreditation are varied: there are states that do not have a prosthetic committee that has presented the plan to their state society for approval; in some states the dental laboratory association is not in accord with the wishes of the prosthetic committee or the suggestions of the states societies; some states are waiting to see how the plan works in states that have adopted the plan and then probably local state policies has delayed action in some areas.

Accreditation is being employed more and more by the laboratory industry. They are now asking for accredited laboratory schools for the training of dental laboratory technicians. After World War II many proprietary laboratory schools sprang up all over the country, interested only in the tuition they could get through the government for the war veterans. Many of the graduates from these schools did not have the requirements necessary for dental laboratory technicians.

The laboratory association in one state objected to the proposal that they be accredited by the profession. They claimed that by their department they were self-accredited, yet they admitted that there was considerable boot-legging of dentistry by dental laboratories in their state. They also complained about members of the profession patronizing unethical laboratories. They thought that the dental society should see to it that all members of the profession patronize the dental laboratories of their association or who professed to be ethical laboratories. It was interesting to observe that some of their laboratories advertised with their customers that they were an "accredited" laboratory. Can we conclude that individual dental laboratories wish to be an accredited laboratory but the officials of their laboratory association objects to the ritual of accreditation by the officials of the dental society?

ILLEGAL PRACTICE OF DENTISTRY

The illegal practice of dentistry still rides rampant in the larger and more thickly populated areas. Twenty-eight officers of the Chicago Dental Society brought suit in October, 1950, asking that thirty-eight laboratories be enjoined from selling directly to the public.

There is a long story behind the latest calamity. In 1934 the laboratory technicians published the following statement:

"What dentistry must remember is that to the public there is

nothing so inherently sacred about a set of teeth, that it should require the ritual of a dental office to make them function." With the large number of dentists in the area, there is bound to be controversies and confusion. One group blamed the society for not having proper liaison or mutual cooperative program with the dental laboratories as found in accreditation. Some blame certain dental laboratory leaders for selling out to labor leaders during unionization of laboratory technicians. Others blame the dental society's legal council for selling the dental society short. There are so many angles to consider and deal with that it makes a most complexing situation for the society officials to deal with.

On Thursday, April 17, 1952 the following news item appeared in the Chicago Daily Tribune:

*****DENTISTS LOSE SUIT TO CURB SALES BY LABS*****

Judge John F. Haas of Superior court held invalid yesterday a 1945 amendment to the Illinois dental practices act which prohibited dental laboratories from selling directly to the public and required them to sell through dentists.

Twenty-eight officers of the Chicago Dental society brought suit in October, 1950, asking that thirty-eight laboratories be enjoined from selling directly to the public. Judge Haas held the act unreasonable because it gave dentists power to charge for services of a laboratory and to select the laboratory which would make the plates.

Attorneys for the society indicated the ruling would be appealed.

The following article, "The Current Status of the Lawsuit Against Advertising Laboratories", is of such importance that it is included with this report.²

THE CURRENT STATUS OF THE LAWSUIT AGAINST ADVERTISING LABORATORIES

The recent newspaper reports on the current status of the Society's lawsuit against 26 advertising laboratories were erroneous. Since they appeared the Society has made two attempts to have the correct version of the affair published in the Chicago newspapers but with little success. This article is written for the information of our members and others who are concerned with the ultimate outcome of the suit.

Judge Haas' decision in this preliminary stage of the suit was handed down on Thursday, May first. It was a definite order, the text of which is appended. The legal document upon which the news stories were based was merely the Judge's opinion on the preliminary hearings in the case. His order neither

² Fortnightly Review, Chicago Dental Society; —, —, 1952 (May 15).

"threw the case out of court" or "dismissed the suit" as the newspapers stated nor did it state that patients could deal with laboratories direct without first going to a licensed dentist.

Judge Haas' decision said, first, that the Society's suit was properly brought. He struck out the arguments of the laboratories that the Society didn't have the right to sue them and that it wasn't proper to name more than one laboratory in the suit at a time. The laboratories argued that the suit should be heard by a jury—a long, time-consuming process that Judge Haas' decision threw out, too.

The decision went on to say that, in his opinion, the Judge felt that a part of the 1945 Amendment to the Illinois Dental Practice Act, if it was interpreted as the Society interpreted it, would confer an undue privilege upon the dentist as he felt it was the privilege of the patient to take an impression or a prescription from the dentist to the laboratory of his choice. The Judge made it clear both in a conference in his office on April 22 and on the occasion of the handing down of his order on May 1 that he never intended reporters or anyone else to get the idea that members of the public could go to a dental laboratory direct. They must, he stated, go only to a licensed dentist for dentures. The legal language setting forth the Judge's thinking on this important point will be found in numbered paragraph 5 in the appended material. It says that Section 5A of the Illinois Dental Practice Act, to the extent that it prohibits laboratories from selling dentures to a patient, where the patient has employed a licensed dentist to take the impressions and make the fittings, is unconstitutional. This is the most vital point at issue in the suit as it now stands and the one that most concerns the Society and its attorneys. It is to be noted that the Judge's ruling does not invalidate the provisions of the Act defining advertisements, announcements, directory listings and advertising signs used by laboratories. This latter material is set forth in numbered paragraph 6 of the appended material.

Pursuant to the Judge's order of May 1, hearings in the case will proceed, evidence will be taken, witnesses against the laboratories will be heard and the Society will continue to prosecute the suit with all of the vigor and determination it possesses.

Your Society is engaged here in an involved and expensive legal battle. Because of the fundamental issues concerned the case has nationwide implications. Your officers, directors and the members of your legislative and law enforcement committee have been spending evenings, Sunday afternoons and other periods of their spare time to aid and assist our attorneys. Our attorneys are the best procurable. This case is not going to be tried in the Chicago newspapers; it will be tried in the courts of Cook County and if necessary in the higher courts of Illinois, and won!

On the best of authority your committee has been advised that "concerning the decision of Judge Haas relative to the constitutionality of Section 5A of the Illinois Dental Practice Act, this will be appealed to the Supreme Court. A revision or new legislation

concerning the Dental Practice Act will depend on the decision of the Supreme Court." It is important to note that pending the decision of the Supreme Court, the Dental Practice Act is still in force and they feel that it will be difficult for the illegal dental laboratory technicians to make a racket out of the said decision.

UNIONIZATION

As stated in our last report, we hold it to be the right of any man to join a union if he so desires. Our profession however, is concerned if and when a union interferes with our rendering a service in the interest of public health and welfare. Union leaders seem to have become interested only in the larger metropolitan areas where there are enough dental technicians to make it worth while. The threat to unionize every laboratory technician in a state has not materialized. Laboratory owners who built their business through their own individuals efforts are not keen in being told by another party how their business should be run. Laboratory technicians who wish to go on their own are going into smaller towns where they can and wish to serve only five or six dentists and not be interfered with union leaders nor have to pay union dues. These men were satisfied with their working conditions before unionization, voted against unionization but had to join the union because of the majority voting rule. One new concern to the profession along with unionization is that union leaders promise the laboratory technicians that they will assist them to obtain licensure through the backing of all labor unions.

There are a few in our profession who aid and abet the illegal practice of dentistry by dental laboratories and dental laboratory technicians. We regret to report that there are men in our profession who take impressions of a mouth for a fee and then give the impressions to the patient who takes it to a laboratory or dental technician for processing and payment is made to the laboratory or dental technician. Not only is this practice unethical but illegal as well. Other unethical procedures that should be stopped are: calling upon dental laboratory technicians to assist them in the registration of centric relations and occlusion; the taking of shades and molds; sending patients directly to dental laboratories for denture repair; and requesting patients to call for their dentures at the dental laboratory.

At the time of the first prosthetic reports of the College there were many men in the profession who believed that the only solution of the prosthetic problem was by legislation, either registration of dental laboratories or licensure of laboratory technicians. When they learned of the serious implications to the profession and the long range intent of some of the promoters of this course, they changed their concepts of the best solution.

The difficulties and hazards of trying to solve these problems by legislation has already been shown in the above report. We can never stop all illegal practices or boot-legging by legislation or legal procedures. Evidence is difficult to get, favorable jury or court decisions are problematic, delays and legal costs are discouraging and Boards of Dental Examiners have not all the money necessary to prosecute all cases. Education of the individual dentist as to his duties, obligations, ethical and legal responsibilities to the public and his profession is of utmost importance, along with a mutual cooperation relationship between the profession and the craft.

BOOK ANNOUNCEMENTS

STRONG-CARTER DENTAL CLINIC: This is the 32nd annual report of the Palama Settlement in Honolulu for the year ending August 31, 1952.

This institution has done a very effective job during the thirty-two years of its existence; during that time the personnel has of course changed many times in both professional and non-professional staffs. A very comprehensive analysis appears on page 43 in the following statement—"This year 47.9% of the 73,636 public and private elementary school children reported received complete dental services from private dentists and 17.9% were attending but not completed. This represents a 3.1% increase in the number of cases attending but not completed by private dentists this year over last year. In addition, there were 3.5% completed and 2.0% attending but not completed by the Strong-Carter Dental Clinic and the City and County Mobile Dental Union. The remaining .2% attended or were completed by a self-supporting dental clinic. There were 28.5% not attending a dentist. This is an improvement over last year's 31.3%.

There were three 100% public schools and one 100% private school. There were also one hundred seven 100% classrooms in the public schools and eighteen 100% classrooms in the private schools.

A total of 4,547 sodium fluoride treatments were administered to ten schools on Kauai, one school on Hawaii and one school in rural Oahu.

Our greatest need is "additional positions" for dental hygienists to reduce the present heavy work-load, to take care of the increased enrollments in the elementary schools and to extend the services to the secondary schools."

A review of these figures may serve as a matter of encouragement to communities in states who have not carried out a similar program over so long a period of time. Published by The Palama Settlement, 870 N. Vineyard St., Honolulu 17, Hawaii. Copies may be had for an application.

CURRENT THERAPY 1953: This is the title of a 1953 volume of this book, edited by Howard F. Conn, M.D., with 12 consulting editors and innumerable contributions. The book is well known within the

medical profession and should by this time be well known within the dental profession. It is a handy volume for the dentist to have available. The book consists of 835 pages, including index. Published by W. B. Saunders Company, Philadelphia. Price \$11.00.

THE HISTORY OF RHODE ISLAND STATE DENTAL SOCIETY: This is a paper covered book of 54 pages covering the history of the State Society from the date of its founding 1878 to 1953. It is interesting to note the advances that have been made and the interest of the men who have contributed to its advancement. Further information may be secured by addressing the secretary—Dr. Edgar L. Bessette, 1745 Broad Street, Cranston, R. I.

ORAL MANIFESTATIONS OF OCCUPATIONAL ORIGIN: This is the title of a paper covered book of 38 pages issued by the Federal Security Agency of the Public Health Service, known as Public Health Bibliography Series No. 7. It is exactly what the title indicates, a discussion of occupational hazards from the standpoints of acid, dust, gas, metals, organic compounds and certain physical factors. It may be secured upon request from the Federal Security Agency, Public Health Service, Division of Occupational Health, Washington 25, D. C.

CLINICAL PERIODONTOLOGY: This is a book of 1019 pages, including an extensive index and 742 figures or illustrations all in black and white. The book is well printed, on a good quality paper, and illustration are most acceptable, not only in that which they attempted to show, but with regard to the ability with which they show it. There is a long reading list at the end of each chapter and as indicated in the title it is for clinical use and should be of value to clinic teachers in that field. The author Irving Glickman, B.S., D.M.D., Professor of Oral Pathology and Periodontology, Tufts College Dental School, is a well known periodontist within the profession. It is published by W. B. Saunders Company, Philadelphia. Price \$15.00.

CROWN, PARTIAL VENEER OR THREE-QUARTERS: This is the title of a small technical book of 61 pages with an index, well illustrated and printed in good form. The author is Walter E. Jones, D.D.S., a practicing dentist in Minneapolis. Published by Burgess Publishing Company, 426 South 6th Street, Minneapolis 15, Minnesota. Price \$3.00.

PRINCIPLES AND TECHNIQUE OF EXODONTIA: This is the title of

a book by Frank W. Rounds, A.B., D.D.S., and his son Charles Elder Rounds, A.B., D.M.D. This book was initiated by Frank W. Rounds, a well-known and popular exodontist, but, as stated by Dr. Kurt H. Thoma in his Foreword, "following his father's untimely death, Dr. Charles Elder Rounds has supervised the publication of this volume . . .".

The book consists of 407 pages with an index and 365 illustrations. Again, as stated by Dr. Thoma it "should long serve as a tribute to . . . Frank Rounds, besides being a useful bequest to the dental profession." Published by C. V. Mosby Company, St. Louis, Price \$10.00.

PROCEEDINGS, INSTITUTE OF PUBLIC HEALTH: This is a mimeographed copy of the First Institute of Public Health presented by The Dental Service, Veterans Administration Hospital, Tuskegee, Alabama, March 16-19th, 1952. This is copyrighted by Clifton O. Dummett, D.D.S., Director of the Hospital. It consists of 197 pages, covering some 19 different subjects relating to public health.

Dr. Dummett will be remembered as the Dean of Meharry College of Dentistry, which position he resigned to become Chief of Dental Surgery in the Veterans Hospital, Tuskegee, Alabama.

This Institute was sponsored by the Veterans Hospital with the co-operation of 17 other Health and Welfare Agencies. There were as many speakers as there were subjects and more discussors. Considering apparently the entire range of public health up to and including water fluoridation. A copy may be had by addressing Dr. Dummett at the hospital.

DENTAL ASSISTANTS, A TEXT BOOK FOR: This is the third edition of this book by the author, Irvin Robert Levy, D.D.S., Director, Dental Assistants Division, Eastern School for Physicians Aides. It contains 272 pages with an index and a dictionary of terms. It is well printed and well illustrated and should serve a useful purpose in teaching young ladies to become dental assistants. Publisher: Lea & Febiger, Philadelphia. Price: \$4.00.

THE STORY OF DENTAL CARIES: by Russell W. Bunting, D.D.S., 94 pages, and **DIETARY PROGRAM FOR THE CONTROL OF DENTAL CARIES:** by Philip Jay, D.D.S., and associates, 39 pages: These two books should be read together, since Bunting's "Story" supplies the theoretical background for Jay's more practical work. Bunting's

book is an interesting account of the development of the concept of decay that emphasizes acid decalcification, *Lactobacillus acidophilus*, and sugar as the important causes of caries, and the author believes with a "faith to move mountains" in this concept. However, the first sentence of the last paragraph of this book states, "the problem of dental caries is still unsolved," and to the reviewer this statement deserves more emphasis than that given it by Professor Bunting. If the causes of caries are unknown, how can they be stated so convincingly? Turning now to Jay's work, we find a dietary regimen based on the concept of decay so entertainingly presented by Bunting. Data presented by the latter suggest that the practice advocated by the former may be 85 per cent effective in controlling caries in perhaps 10 to 15 per cent of all patients. The procedure is to determine lactobacillus counts in samples of saliva mailed from patients or their dentists to an appropriate laboratory. If the lactobacillus count is greater than some arbitrary value, there is prescribed a diet which is continued until a subsequent determination indicates reduction of this count below that arbitrary value. The competent bacteriologist will recognize that there are a number of shortcomings in the methods advocated. For example, how can an accurate count of any bacterial type be made from a specimen maintained, in the process of mailing, at room temperature for 24 to 48 hours or longer before the counting procedures are carried out? However, the plan presented by Jay and associates is a well thought out restriction of dietary carbohydrate, and the diets advocated might be applied in cases where this restriction appears to be indicated. One real shortcoming of this work is that there is no statement of clinical situations which might indicate the necessity of restriction of dietary carbohydrate. The whole procedure rests on application of the lactobacillus index and there are certainly many cases for whom this test is unnecessary. Published by: Overbeck & Co., Ann Arbor, Michigan. Price: Upon application.

PRACTICAL PEDODONTIA OR JUVENILE OPERATIVE DENTISTRY AND PUBLIC HEALTH DENTISTRY: This is the sixth edition of this book by the author, Dr. F. E. Hogboom, Professor of Children's Dentistry, College of Dentistry, University of Southern California. This is a considerable expansion over preceding editions, carrying as it does a special chapter by four different authors. It contains 642 pages

with an index and appendix and is well illustrated. Considerable space is given to orthodontic treatments inasmuch as the author practices orthodontics along with his work in operative dentistry.

Chapters by contributing authors have to do with child guidance, infections, extractions and minor surgery and preventive dentistry. Published by C. V. Mosby Co. St. Louis. Price \$12.50.

EXODONTIA, TEXTBOOK OF: This is the title of the third edition of this book by the late Leo Winter, D.D.S., registered by his son, Leo Winter, Jr., D.D.S., and William F. Harrigan, A.B., D.D.S., M.D. Dr. Winter is visiting oral surgeon at Bellevue Hospital and Dr. Harrigan is Professor of Oral Surgery, New York University, as well as several hospitals. It is a book of 349 pages including an index, 385 illustrations, and one color plate. There are twelve chapters ranging from examination and diagnosis and the psychological approach to the study of the application and administration of Antibiotics. Published by C. V. Mosby Company, St. Louis, price \$8.00.

COMPLETE DENTURE PROSTHESIS: This is the title of the Third Edition of this book by Schlosser and a new associate author, Dr. Gehl. Doctor Schlosser is well known in this field, having served in Northwestern University School of Dentistry for so many years. Doctor Daniel H. Gehl is Professor of Denture Prosthesis, Marquette University School of Dentistry.

The book contains 507 pages including an index and 292 illustrations. It is well printed, on good paper, covering the subject from "Objectives to Case Reports and Treatment of Anomalies". Published by W. B. Saunders Company, Philadelphia. Price \$8.50.

ERRATUM

On Page 20, line 11 of the Journal for March, please note the following correction. The line now reads;

Group B. Privately owned and privately controlled.

This should read:

Group B. Privately owned but professionally controlled.

American College of Dentists

OFFICERS OF THE COLLEGE

1952-1953

President, FRITZ A. PIERSON, Lincoln, Neb.
President-Elect, HARRY A. THOMSON, Toronto, Can.
Vice-President, ALFRED E. SEYLER, Detroit, Mich.

Treasurer, WILLIAM N. HODGKIN, Warrenton, Va.
Historian, WILLIAM J. GIES, New York, N. Y.
Secretary, OTTO W. BRANDHORST, St. Louis, Mo.

REGENTS

E. FRANK INSKIPP, San Francisco, Calif.
WILBERT JACKSON, Clinton, N. C.
LLOYD W. JOHNSTON, Denver, Colo.
GERALD D. TIMMONS, Philadelphia, Pa.

JAMES H. FERGUSON, Jr., Baltimore, Md.
BENJAMIN F. THIELEN, Paris, Texas
KENNETH C. PRUDEN, Paterson, N. J.
ROBERT S. VINSANT, Memphis, Tenn.

JOHN E. GURLEY (Editor) Ex-Officio, San Francisco, Calif.

STANDING COMMITTEES: 1952-1953

Cooperation

C. WILLARD CAMALIER, *Chairman*
1726 Eye St., N.W., Washington, D. C.
HENRY A. SWANSON, *Co-Chairman*
1726 Eye St., N.W., Washington, D. C.
WALTER D. LOVE, CLEMENS V. RAULT

VERNON L. HUNT, CARLOS H. SCHOTT,
EDGAR W. SWANSON, JOHN E. TYLER

Necrology

HENRY A. MERCHANT, *Chairman*
1228 Medical Arts Bldg., Omaha, Neb.
EARLE S. ARNOLD, DAVID W. BROCK, WIL-
LARD OGLE, JOHN STEEN

Dental Student Recruitment

HAROLD G. RAY, *Chairman*
Univ. of Calif., College of Dentistry, San Francisco, Calif.
WENDELL L. WYLIE, *Vice-Chairman*
Univ. of Calif., College of Dentistry, San Francisco, Calif.
DON JOSE F. AUBERTINE, ERNEST L. JOHN-
SON, JOHN W. LEGGETT

Oral Surgery

LESLIE M. FITZGERALD, *Chairman*
718 Roshek Bldg., Dubuque, Ia.
DON H. BELLINGER, JAMES R. CAMERON,
HORACE L. CARTEE, SANFORD M. MOOSE

Education

LAWRENCE E. VAN KIRK, *Chairman*
Univ. of Pittsburgh, School of Dentistry,
Pittsburgh, Pa.
JOHN D. ADAMS, MAYNARD K. HINE,
HAROLD J. NOYES, GERALD D. TIMMONS

Preventive Service

CARL L. SEBELIUS, *Chairman*
Tennessee Dept. of Health, Nashville, Tenn.
FRANCIS A. ARNOLD, Jr., RALPH J. BOW-
MAN, ROBERT A. DOWNS, KENNETH A.
EASLICK, WALTER J. PELTON

Journalism

CHARLES W. CRAIG, *Chairman*
Univ. of California, College of Dentistry, San Francisco, Calif.
JOHN E. GURLEY, CLYDE C. SHEPPARD

Prosthetic Dental Service

CLARENCE A. NELSON, *Chairman*
Amery, Wisconsin
LLOYD H. DODD, EARL M. EATON, WALDO
H. MORK, SAUL C. ROBINSON

Medical Dental Relations

ALBERT L. MIDGLEY, *Chairman*
1108 Union Trust Bldg., Providence, R. I.
JOHN A. KOLMER, STERLING V. MEAD,
L. M. S. MINER, CLARENCE J. SPEAS,
ROBERT S. VINSANT

Relations

HOLLY C. JARVIS, *Chairman*
716 Mercantile Library Bldg., Cincinnati,
Ohio
DANIEL F. LYNCH, LON W. MORREY, MY-
RON A. ROBERTS, CHARLES A. SWEET

Memorial Book

JOHN S. OARTEL, *Chairman*
Army Medical Services Graduate School, Den-
tal Div., Washington, D. C.
VICTOR L. STEFFEL, RICHARD C. LEONARD

Research

PHILIP JAY, *Chairman*
715 Forest Ave., Ann Arbor, Mich.
LLOYD E. BLAUCH, WILLIAM H. CRAWFORD,
H. TRENDLEY DEAN, THOMAS J. HILL, PAUL
C. KITCHIN

Nominating

HENRY CLINE FIXOTT, Sr., *Chairman*
814 Medical Dental Bldg., Portland, Ore.

Socio-Economics

RAYMOND E. MYERS, *Chairman*
129 E. Broadway, Louisville, Ky.
ALLEN O. GRUEBBEL, DONALD H. MILLER,
WILLIAM B. RYDER, JACOB M. WISAN