Contents

American College of Dentists:
Address: The William John Gies Dental Research Fellowship and Awards for Achievement in Research. Albert L. Midgley, D.M.D. ........................................ 77

Dentistry’s Centennial:
Dentistry Celebrates. A. W. Bryan, D.D.S. ........................................ 84

St. Louis Convocation, October 23, 1938:
Reports of Committees to Board of Regents:
Oral Surgery: Malcolm W. Carr, D.D.S., Chairman ........................................ 87
Public Relations: Otto W. Brandhorst, D.D.S., Chairman ........................................ 92
Endowments: John V. Conzett, D.D.S., Chairman ........................................ 103
William John Gies Testimonial: H. E. Friesell, D.D.S., Chairman ...................... 104
Prosthetic Service: Walter H. Wright, D.D.S., Chairman ........................................ 104
Journalism: J. Cannon Black, D.D.S., Chairman ........................................ 151

American Association for the Advancement of Science:
Proceedings of the Subsection on Dentistry: Fourth Annual Meeting, Richmond, Va.,
December 28, 1938. Thomas J. Hill, D.D.S., F.A.C.D., Secretary of the
Subsection and Dental Representative in the Council of the A.A.A.S. ...................... 184

Editorials:
The Future Status of Dentistry. G.W.W. ........................................ 188
National Dental Internships. T. McB. ........................................ 192

Notes and Comments ........................................ 195

Published quarterly at 99 South Van Ness Avenue, San Francisco, California
By THE AMERICAN COLLEGE OF DENTISTS
Editorial Office: 350 Post Street, San Francisco, California
Copyright, 1939, by the American College of Dentists
Made in United States of America


Objects: The American College of Dentists "was established to promote the ideals of the dental profession; to advance the standards and 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.

Classes of members (each member receives the title of Fellow—"F.A.C.D."): (1) "The active members consist of dentists and others who have made notable contributions to dentistry, or who have done graduate, scientific, literary, or educational work approved by the College." (2) "Any person who, through eminent service, has promoted the advancement of dentistry, or furthered its public appreciation, may be elected to honorary membership."—Constitution, Article II.

Forfeiture of membership. "Membership in the College shall be automatically forfeited by members who (a) give courses of instruction in dentistry under any auspices other than those of a dental society, dental school, or other recognized professional or educational agency; or (b) give courses of instruction in dentistry in a privately owned undergraduate or postgraduate dental school; or in a school that is associated with an independent hospital or dispensary but is not an organic part of it; or (c) exact exorbitant fees for courses of instruction in dentistry under any auspices."...—Constitution, Article II.

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

Board of Editors (1938-1939)

Officers of the College and Regents ex-officio

President: Arthur H. Merritt, New York
Vice-president: W. N. Hodging, Peoria, Ill.
Treasurer: Harold S. Smith, Chicago

Elective Regents of the College

E. G. Meisel (43), Pittsburgh
Albert L. Midgley (42), Providence
George W. Wilson (39), Milwaukee

Editor: John E. Gurley, San Francisco
Associate Editor: Secretary of the College
Assistant Editor: Assistant Secretary of the College

Contributing Editors

Thomas F. McBride (43), Pittsburgh
William C. Fleming (42), Oakland (Calif.)
Paul R. Stillman (41), Longwood (Fla.)
Walter H. Wright (40), Pittsburgh
Charles W. Freeman (39), Chicago
Walter Hyde (43), Minneapolis
Clarence W. Koch (42), Little Rock
William R. Davis (41), Lansing
Maurice Williams (40), New York
J. Ben Robinson (39), Baltimore
THE WILLIAM JOHN GIES DENTAL RESEARCH FELLOWSHIPS AND AWARDS FOR ACHIEVEMENT IN RESEARCH

Chairman, Committee on Dental Research, American College of Dentists

It is with genuine enthusiasm that I welcome the privilege of appearing before you a second time as a representative of the American College of Dentists and as spokesman for cooperation between the International Association for Dental Research and the College in the promotion of dental research. At the outset may I express the gratification of our Committee on the appointment of a Cooperative Committee from the International Association for Dental Research, and, in behalf of my colleagues and myself, thank the members of this committee for their invaluable suggestions, advice and assistance in the development of our work.

The plans and projects which we laid before you at your last annual meeting have been the subject of extensive and intensive inquiry, analysis and deliberation during the past year, through correspondence and in conference at meetings in St. Louis, Chicago, and, last Friday, in this city.

You will recall that these plans and projects have been decided upon by the American College of Dentists as a logical means of emphasizing their conviction that the prosecution of dental research is of three-fold importance to our profession, since our present and future usefulness must unquestionably depend upon (1) advancing the frontiers of knowledge, (2) stimulating a professional, wide-awake interest in and attitude towards the solution of health problems, and (3) effecting a new relationship with

\(^1\)Address delivered at the annual meeting of the International Association for Dental Research, Cleveland, March 19, 1939.

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS
VOL. 6, NO. 2
the medical profession and with an enlightened public. It may be said that enlightenment, in a corresponding three-fold interpretation, is the keynote of our whole campaign: (a) we plan to furnish direct means of enlightenment by offering financial assistance for research; (b) we plan to spread enlightenment among dental practitioners by directing the fruits of this research to be published, *without restrictions*, in professional journals and periodicals approved by the College; and (c) we plan to enlighten both the public and our medical colleagues in health-service, by broadening the opportunities and rewarding the efforts of research workers in dentistry in the most effective and intelligent ways that we can devise.

Because of the size and importance of the problems under consideration, and the fact that our activities, in many respects, are more or less of a pioneer character, you will readily understand it is impossible to formulate hastily, definite plans essential for the attainment of any one of the three objectives towards which we are working. To make haste slowly, and by so doing avoid the waste of false starts and unseen pitfalls, has been our policy, and we feel sure that such a policy will have your approval. We must have a comprehensive knowledge of all angles of the three problems. For obvious reasons may I quote again the words of an eminent preacher, Reverend John A. McClurey, which were presented in my address to you last year, and which set forth the philosophy of the Committee on Dental Research of the American College of Dentists:

"Let us not mistake theories for proven principles, plausibilities for incontrovertible facts, enthusiastic interest for solid advance in study, and unbounded assurance for real certainty."

Assuming that the zeal and devotion of the members of your Cooperative Committee are indicative of the whole-hearted interest of the members of the International Association for Dental Research in the development of our plans, I shall take the liberty of discussing briefly the three matters to which our attention has
been given, namely, grants-in-aid and research fellowships, the award for outstanding contributions to dentistry, and the promotion of the medico-dental relationship. I shall confine myself chiefly to a review of what has been accomplished since the meeting of your organization last year.

After a preliminary study and discussion by the whole committee, the three items under consideration were delegated to three sub-committees, each chosen and organized with a view to the kind and quality of work required. The Sub-committee on the William John Gies Grants-in-aid and Research Fellowships has given detailed attention to the use of funds to be appropriated, the time and duration of appointments, the form and content of applications, the qualifications of the applicants and obligations of recipients, and under what auspices research shall be conducted.

The Sub-committee on the William John Gies Award for Achievement in Research is studying the aims, purposes and values of a public recognition of one who, in any field of science, has made an outstanding contribution to the progress of dentistry, or one who, over a number of years, has devoted himself unselfishly to the organizational, scientific, and socio-economic interests of the profession. Much thought has been devoted to the when, where and how, the probable frequency of bestowal of awards deserving such recognition, and what form the award shall take. Last Friday, March 17, the Committee decided that the award be made at the annual meeting of the International Association for Dental Research, provided this action has the approval of the International Association for Dental Research. The Committee concluded that the award may or may not be granted annually, and that its conference should signify a signal honor comparable to that of honorary degrees by universities.

The Committee on Dental Research of the American College of Dentists has felt that one of its first duties was to come to some clear understanding with the dental and medical schools in order to open the way for that coordinated effort, which will consoli-
date for the benefit of both professions whatever significant knowledge is gained by either.

I realize fully that the activities of the International Association for Dental Research are confined solely and entirely to the promotion of research—that this regulation is inflexible and inviolable, and so approach even a brief mention of our work on the medico-dental relationship with some apprehension. However, high-grade research and a cordial and effective medico-dental relationship are, in the opinion of our Committee, inseparably linked. They advance hand in hand. One is weak if the other is deficient; may I say neither can hit the mark without the other—as the bow is to the arrow, so is dental research to the medico-dental relationship, and vice versa. We firmly believe our effort in setting forth the claims of dental research upon public confidence and support will be vitiated without vigorous, hearty cooperation from our medical colleagues in the service of public health. The Committee is aware that separate studies must be in no way neglected or subordinated, but holds it to be self-evident that a coordinated program of research in problems of value to both professions will provide stimulating rivalry, avoid duplication of effort, and lead inevitably to a mutual respect and comradeship of inestimable worth.

The Sub-committee on the Medico-dental Relationship has sought the support of editors of all non-proprietary dental journals in securing publicity, and has contacted all the deans of the medical and dental schools in the United States and Canada, informing them that the American College of Dentists has inaugurated plans to promote research of high quality in dentistry, and that these plans include grants-in-aid and research fellowships for which applications can be made in the very near future. The Committee has solicited the cooperation of the deans and faculties, not only in giving this information to prospective applicants, but also in presenting recommendations regarding the worthiness of projects for which aid may be desired.

Replies from a large number of the medical and dental deans
indicate plainly their friendly interest and concern in the development of our dental research program, and an earnest desire to cooperate in bringing about a better understanding of what the medico-dental relationship really is. This is a subject which must be clarified by patient discussion and comparison of ideas and objectives. In the meantime, the Committee is assembling the opinions, suggestions and requests set forth in the replies from the medical and dental deans, heads of departments in the various medical and dental schools, and other interested medical and dental educators, and is putting the data into composite form, with the hope that our inferences and deductions may take shape in a forceful appeal which will lead all interested to cooperate with the College in its effort to promote research.

The Committee on Dental Research of the American College of Dentists is now in a position to offer financial assistance to research workers, since the Board of Regents of the College have voted their willingness to appropriate adequate funds for that purpose. A sub-committee of six, appointed by the Chairman from the Committee on Dental Research of the American College of Dentists, has been designated as the Research Fellowship Board, to receive and pass on applications for research fellowships or grants-in-aid in accordance with regulations adopted in their final form by the Committee as a whole at its latest meeting. It may interest you to know that the annual stipend for a research fellowship was set at $1,000 for a single person and $1,200 for a married person, and that single grants-in-aid will be made up to but not to exceed $500.

Just as we have sought comments and suggestions from medical and dental deans, and others interested in dental education and research, so do we extend this request to you, those upon whom we must constantly depend for inspiration, encouragement, guidance and information. We believe we are helping on the new day in dentistry, and shall do all in our power to carry it through in a spirit of hopeful altruism.
A CENTURY OF PROGRESS IN AMERICAN DENTISTRY

President, American College of Dentists and President-elect, American Dental Association

As one reflects upon the history of American dentistry as represented in its one hundred years of existence as an organized profession, he cannot fail to be impressed with its accomplishments. Beginning as a mere craft, without organization or the facilities for education, it has, in the first century of its existence, created a system of professional education second to none in the world. Likewise, it has made the name of American dentistry the synonym for excellence wherever it is practiced.

So great have been these achievements in the century now coming to a close one finds it almost impossible to realize that no longer ago than 1820—only 119 years—there were not more than two hundred dentists in the United States and Canada, many of whom were itinerants practicing their art along the Atlantic seaboard from Montreal on the St. Lawrence river to New Orleans on the Gulf of Mexico. They had no dental education in the sense in which we use that term, having acquired what knowledge they possessed of the art of dentistry in the office of some practitioner of the day. Yet there were among that small group, men of vision, who thought of dentistry in terms of health service and coveted for it a wider field of usefulness. In keeping with these ideals there was organized in the City of New York on December 3, 1834, the Society of Surgeon Dentists of the City and State of New York, the first dental society in the world. This was followed by the organization of the American Society of Dental Surgeons in New York on August 18, 1840, the logical

\[1\text{See footnote no. 1, J. Am. Col. Den., 6, 53; 1939, March.}\]
progenitor of the present American Dental Association. Ante-dating this by a few months was the founding of the Baltimore College of Dental Surgery, February 1, 1840. This educational separation of dentistry from medicine was made in the belief that an independent school would serve better in training candidates for dental practice than would a chair of dentistry in a medical school. There were then, as there are now, two distinct schools of thought regarding the proper education of the dentist. Those holding to the independent education of the dental practitioner (wisely or unwisely) prevailed.

But more important than the organization of that first dental society in 1834—more important, even, than the founding of a school for the study of dentistry—was the discovery on December 11, 1844, of the anesthetic properties of nitrous oxide by Horace Wells of Hartford, Conn., and its application to the alleviation of pain in surgical operations. And as if this were not honor enough, less than two years later, on October 16, 1846, another dentist, William G. T. Morton of Boston, demonstrated before the Massachusetts General Hospital the anesthetic possibilities of sulphuric ether, thus giving to the world within the brief space of two years the priceless boon of surgical anesthesia. The world can never repay the debt which it owes to these two American dentists, “before whom, in all time, surgery was agony; after whom pain in surgery was averted and annulled”.

These are achievements worthy of any profession. They bear eloquent testimony to the vision and unselfishness of those early pioneers.

And now, as we stand on the threshold of a second century, it is altogether fitting—nay, it is our bounden duty—that, as members of the dental profession, we should pause in our professional activities to celebrate an event of such importance as the first centenary of American dentistry. It is an event in which every member of the profession should take an active interest. In September, 1939, in San Francisco, and in March, 1940, in
Baltimore, three-day celebrations will be held, observing the birth of American dentistry as a scientific profession. As many as can should plan to attend either or both of these meetings. All should give to the projects an enthusiastic and whole-hearted support. Never again in the life of any living person will there be presented to dentistry an opportunity of such importance. This is our profession. To it we owe much. We are proud of its progress. We have faith in its future. But that future will depend upon what you and I do in the present. Let us join in making this first centenary of American dentistry an event worthy of a great profession.

DENTISTRY CELEBRATES

A. W. BRYAN, D.D.S., F.A.C.D., Iowa City, Iowa
Dean, College of Dentistry, University of Iowa, and President-elect, American College of Dentists

Anniversaries are always important as well as interesting; important because they cause us to look back and survey the failures and the successes of past years, and interesting because it sometimes takes an anniversary to make us do that. Just as at the beginning of each New Year we compare the record of the past with what we think we might be able to do and hope to do in the next period of time. The coming centennial of dentistry gives the profession an opportunity for reflection and planning. If, after our reflection, we feel well pleased with the record that we have made, it is highly fitting that proper celebration be observed.

What are the accomplishments of dentistry in the past one hundred years? Except for the foresight and progressiveness of those who saw the wisdom of establishing dentistry with an educational basis, it might easily have remained a craft, devoted to

1See footnote no. 1, J. Am. Col. Den., 6, 53; 1939, March.
the purely mechanical procedures for retention of loose teeth or for the restoration of lost teeth. But we have come a long way since 1840, when the Baltimore College of Dental Surgery was set up as the first educational institution for the training of dentists. The change in concept of the field and the responsibilities of the dentist were aptly stated by Dr. W. J. Gies as far back as 1923 when he said:

“In its evolution (dentistry) dental defects have been repaired and lost teeth replaced with increasing regard for the esthetic and functional aspects of dental reconstructions. Many centuries passed before correction of irregularities in the position of teeth, and until means of limiting the extension of decay for the conservation of defective teeth, became common objectives in dental practice. Even then health service continued to be a subordinate purpose and was achieved negatively, in the main, by extraction of diseased teeth. There has also been a marked development of means for the preservation of dental function and of methods for the elimination of dental infection; and oral hygiene, as a prerequisite to the control or prevention of dental disorders, has received increasing attention. The advent of roentgenography in dental practice . . . as an important aid in the detection and diagnosis of hidden ailments of the teeth and supporting tissues, the general recognition . . . that infectious maladies of the teeth and surrounding tissues may occasion serious diseases, and recent findings in chemical biology, . . . have made the development and application of means for the prevention of dental disorders and their systemic sequelae the paramount duty of the dental profession.”

A perusal of the announcements of courses of study as made by dental schools over the past quarter of a century impresses one with the gradual broadening in the preparation of the individual for the study of dentistry and the enlarged scope of his professional training. Despite the fact that several recent articles have bewailed the fact that we are placing too much emphasis on the technical side of training and that we are too widely separated from medicine, is it not true that history shows that gap per-

2 William J. Gies, Dental Education in the U. S. and Canada (Bulletin No. 19, Carnegie Foundation for the Advancement of Teaching).
sistently narrowing? And is it not true that if dentistry is to render adequate restorative service its members must be trained in both branches, the technical and the biological?

Yes, our reflection on the past century should give us cause for celebration, not because we have reached perfection, not because we are satisfied with our accomplishments, but because we have progressed.

Our centennial is just ahead. How fitting that two great expositions, one on each shore of this great country, should come at a time when attention can be called to millions of laymen of the progress in health service. And how fitting, also, that appropriate observance of a great step in the development of dentistry, the establishment of the first dental school, is to be made in Baltimore, the birthplace of that school, in 1940. Every member of the profession should participate in this anniversary to the fullest possible extent.

On to San Francisco in September, 1939, and to Baltimore in 1940!
AMERICAN COLLEGE OF DENTISTS


REPORTS OF COMMITTEES TO THE BOARD OF REGENTS

(Concluded from March issue—pp. 22-42)

VIII. Public Relations. Otto W. Brandhorst, D.D.S., Chairman ............. 92
IX. Endowment. John V. Conzett, D.D.S., Chairman .......................... 103
X. William John Gies Testimonial. H. E. Friesell, D.D.S., Chairman ....... 104
XI. Prosthetic Service. Walter H. Wright, D.D.S., Ph.D., Chairman ......... 104
XII. Journalism. J. Cannon Black, D.D.S., Chairman .......................... 151

VII. COMMITTEE ON ORAL SURGERY

Malcolm W. Carr, D.D.S., Chairman

New York City

During the past year your Committee has undertaken a study of the following subjects: (1) Minimum standards and a systematic plan of management of oral surgical service in hospitals and institutions; (2) graduate and post-graduate facilities for training in oral surgery; (3) certification of specialists in oral surgery; (4) the development of a Journal of Oral Surgery; (5) the variation in the state statutes and education laws, particularly as they affect or limit the practice of oral surgery as a specialty of dentistry.

Oral Surgical Service in Hospitals and Institutions

The subject of minimum standards and a systematic plan of management of oral surgical service in hospitals and institutions has

14 The other members of this Committee (1937-8): J. O. Goodsell, C. W. Freeman, J. R. Cameron, Harry Bear. In the absence of the Chairman, the Report was read by C. W. Freeman.
been discussed in the report to the College\textsuperscript{15}, particularly the relationship of this subject to public health. Your Committee has been working in cooperation with the Committee on Hospital Dental Service of the College and the Sub-Committee on Dental Standards and Services in Hospitals and Institutions of the New York Tuberculosis and Health Association. Attempt is being made to coordinate the work of several committees working on the subject of basic standards of hospital dental and oral surgical services. Notable progress has been made in the direction of standardization and it is recommended that minimum standards as well as an accepted plan of management be included in the requirements of approved class “A” hospitals.

\textit{Graduate and Post-Graduate Courses in Oral Surgery}

A survey was conducted to determine the existing training facilities for specialization in oral surgery. A resume of the essential information is herewith included as a part of this report. Statistical data relative to individual schools is omitted from this report but are in the possession of the Committee.

Facilities for special training in oral surgery may be grouped into three classifications: (1) Formal courses in recognized dental schools; (2) private courses given by individuals, and (3) opportunities for additional experience without formal education, as internships in hospitals and externships or other special service in dispensaries.

This resume of available facilities is primarily concerned with courses which may be considered adequate preparation for special practice, and the term “oral surgery” is used here to designate tooth extraction and minor surgical procedures about the mouth and jaws customarily conducted in office practice. This report is confined to the available opportunities for special training within the recognized dental schools. Available hospital internships have

been surveyed recently by the Committee on Hospital Dental Service of the College. No information has been obtained which warrants consideration of private courses of training for specialty practice.

A questionnaire was sent to the dean of each of the thirty-nine dental schools, and responses were received from all except four. Such information as is available in the published bulletins of these four schools was used to complete the data.

Twenty-one of the dental schools offer no advanced or special training in oral surgery except refresher courses of one week or less or special arrangements for alumni to observe the clinics.

Eight schools offer a course in oral surgery leading to an advanced degree, one of them requiring 3 years, one, 2 years, and six, 1 year as a minimum. Five of the eight schools also offer short courses of from one to three months.

In addition to the eight schools offering degree courses there are ten schools offering short courses of one month or more. Four of these ten schools offer courses of approximately one year without a degree, although it is not clear whether all require full-time attendance.

Examined on the basis of courses in oral surgery at least one year in length there are twelve schools with such arrangements and there are eleven schools offering courses from one to six months.

The following question was included: “How many students in the past five years have taken such a course, which they might consider fitted them for specialty practice in oral surgery or exodontia?” The interpretations of this question might vary, hence, the replies were not always conclusive. However, the total, according to the replies from schools giving a course of one year or more, was eighty-six for the past five years.

In several cases, mention was made of hospital internships affiliated with the school, but the degree of affiliation and the
amount of formal teaching to internes appears too variable for tabulation and analysis.

Anesthesiology is a subject that requires both fundamental knowledge of the principles or science of anesthesia, and sufficiently prolonged clinical experience in the practice or art of anesthesia.

Training in the practice of general anesthesia requires sufficiently prolonged individual clinical experience including, fundamentally, the opportunity of observing a sufficient number of cases in order to become familiar with the variation in anesthetic types and the reactions that may be expected from these known types. Then, the clinical course should consist of adequate practical experience in the actual administration of various anesthetics. There is a need for extension of the facilities of graduate teaching in anesthesia by universities and hospitals with teaching affiliations, in order that it may be possible for those who are interested in the subject to gain, under proper auspices, the instruction and clinical experience necessary before engaging in the administration of general anesthetics in private practice.

Certification of Specialists in Oral Surgery

The study of this problem has led to many ramifications and related problems. Fundamentally, your Committee favors a national board of oral surgery, the express purpose of which would be to formulate standards of preparation for those wishing to be certified as proficient in oral surgery, and to examine and certify those who meet the requirements and qualifications. In studying the experience of medicine regarding its specialty boards, however, it is found that the uncoordinated establishment of specialty boards has been unsatisfactory and an advisory board for medical specialties has been created to coordinate the work. This advisory board is made up of representatives from all other specialty boards and all other national organizations devoted to medical education and certification. It seems logical that dentistry should
utilize the experience of medicine and base the organization of specialty boards on a set-up similar to that finally adopted by medicine.

During this week, under the auspices of the American Academy of Periodontology, a meeting is to be held to consider organizing an advisory board for dental specialties and to formulate standards and procedures to guide the specialties in organizing their specialty boards. Two representatives have been invited to attend this meeting from each of the well-organized specialties in dentistry and each of the national dental organizations concerned with dental education and certification.

Pending the developments which may result from this meeting your Committee prefers to hold in abeyance specific recommendations relative to certification of specialists in oral surgery.

**Development of a Journal of Oral Surgery**

It will be recalled that last year your Committee reported activity in behalf of a Journal of Oral Surgery. At that time it was urged that the American Dental Association assume responsibility for such a publication. It was shown, based upon a survey made by your Committee, that such a journal is needed and that it could be made, at least, self-supporting. The Oral Surgery Journal Committee of the American Dental Association (two members of which are members of your Committee) presented its report to the Board of Trustees and recommended that the American Dental Association publish a Journal of Oral Surgery. The report was well received by the Board but, because of the difficulties arising from the problems associated with the *Dental Cosmos*, with which the College is familiar, it was decided to table the oral surgical journal request for the time being.

Your Committee is still of the opinion that a Journal of Oral Surgery, published by the American Dental Association, is vitally needed. It is to be hoped that the journalism problems existing in
the American Dental Association will soon be clarified so that your Committee again and with vigor may pursue its request for a Journal of Oral Surgery.

*Education Laws in Relation to the Practice of Oral Surgery*

There is considerable variation in the wording of the state statutes affecting dental practice, particularly regarding the implied or expressed limitation of surgery that a dentist may legally practice. This has created misunderstanding in matters of hospital administration and confusion of medical boards. Many of the education laws affecting the practice of dentistry were written a number of years ago and have not been amended to conform with the present advanced standards of dental education. A study of the education laws in the forty-eight states, with particular reference to oral surgery, is being undertaken by your Committee. When the survey is completed it is hoped that it will be possible to formulate specific recommendations.

**VIII. REPORT OF THE COMMITTEE ON PUBLIC RELATIONS**

Otto W. Brandhorst, D.D.S., *Chairman*

*St. Louis, Mo.*

The title implies that the activities of this Committee might be rather widely flung inasmuch as public relations could easily be interpreted as including practically all our activities. While this is true, the Committee actually has been trying to limit itself to those relations not covered by other committees.

The objectives of the American College of Dentists might easily be summarized into:

---


17 The other members of this Committee (1937-8): C. Willard Camalier, F. H. Cushman, Thos. J. Hill, P. V. McParland.
(a) Elevation of the standards and efficiency of dentistry through the promotion of ideals, encouragement of further study and recognition of such services, and

(b) Improvement of public understanding and appreciation of oral health service.

This latter objective definitely becomes the basis for the activities of the Public Relations Committee.

Relations with Other Scientific Organizations

(A) One of the very best ways of promoting a better understanding and appreciation of oral health services is to become a part of, or at least cooperate with, other organizations in allied fields of service.

One such organization is the American Association for the Advancement of Science. Through the influence of the American College of Dentists, this organization has seen fit to establish a sub-section of dentistry and has granted affiliate membership to the American Division of the International Association for Dental Research, which means that dentistry now has a representation in the Council of the American Association for the Advancement of Science.

The American Dental Association, American Association of Dental Schools and the American College of Dentists hold associate membership in the A.A.A.S., and all cooperate with the American Division of the I.A.D.R., in presenting a dental program at the annual mid-winter meeting of the A.A.A.S. This is a fine recognition of dentistry by this scientific body and dentistry should make the most of its opportunity.

It is important that there not be a break in these annual meetings of the Sub-Section on Dentistry of the A.A.A.S., and in order to retain this interest it is recommended that a special committee of five (5) be appointed, to be known as Committee on Cooperation with the A.A.A.S., whose duty it should be to act in an ad-
visory capacity, or executive capacity when necessary, in promoting the annual meeting of the Sub-Section Dentistry.

(B) During the past year, through the Committee on Dental Research, the American College of Dentists has made some valuable contacts with the I.A.D.R., A.A.D.S., and O.K.U. Because of the interest which the College has taken in the development of research, it is but logical that a closer association should be developed between it and the groups directly interested. The further development of this might well be left to the Committee on Dental Research.

(C) The interest and development in the public health movement has brought about the organization of the American Public Health Association. Since dentistry should be an integral part of every health movement, it is logical that it should become interested in this organization. In October, 1937, the dentists especially interested in public health, formed the Oral Health Group of the American Public Health Association with John Oppie McCall, chairman, and Harry Strusser, secretary. The formation of a dental section of A.P.H.A. was discussed but replaced for the present by the Oral Health Group.

The public health movement merits the earnest consideration of every dentist and every encouragement should be given it. Our suggestion is that Assistant Secretary Gies be instructed to give his attention to this matter and suggest ways and means for cooperation on the part of the American College of Dentists.

(D) There are other organizations such as American Association of Social Hygiene, American Red Cross, etc., in all of which dentistry should assume its rightful position. This may be brought about through the efforts of the American College of Dentists on behalf of the profession.

Survey on Caries

We are glad to report that the suggested survey summary on dental caries is now well in hand. The American Dental Associa-
tion through its Research Commission has taken hold of this matter and the work is on its way. Dr. Wm. J. Gies is acting as secretary of a sub-committee of the A.D.A. Commission, to make the survey and summary.

Research

Last year this Committee recommended that a Special Committee on Dental Research be appointed. This was done and the report of this Committee will speak for itself. Its report will not only touch upon Fellowships and grants-in-aid, but also awards for distinguished service.

Student Attitude Toward Public Responsibility

With the ever-increasing interest in public health service and a recognition of the fact that oral health service must be a part of any public health service plan, it seems logical:

1. That dental schools should recognize a responsibility for public health courses in dentistry, and
2. That they make a special effort to develop the proper student attitude toward his responsibility to the public.

We recommend that a special study be made of public health courses in dentistry and methods to bring it to the attention of the profession.

U. S. Public Health Service and Children’s Bureau

Both of these governmental departments are continuing their efforts along the lines as previously reported.

A definite place has been found for dentistry in the field of public health service and with the cooperation of the Children’s Bureau, the development has been quite rapid in many states. The program for the most part consists of education with treatment services in many instances.

Refresher courses for dentists are being offered in many states.
These are arranged for and given with the cooperation of state organizations.

We should continue to watch the development of these two governmental departments and help guide their activities into proper channels for the interest of all concerned.

Public Dental Education

The education of the public in dental matters is one of our greatest opportunities. Yet it must be done in a manner that will prevent criticism. To educate the public is not only an opportunity for the profession to create a greater appreciation of its services, but it is our duty. Justice Hughes in handing down the decision of the Supreme Court on advertising said:

"The community is concerned with the maintenance of professional standards which will insure not only competency in individual practitioners but protection against those who would prey upon a public peculiarly susceptible to imposition through alluring promises of physical relief, and the community is concerned in providing safeguards not only against deception, but against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous."

We can see from this that the laws that grant us the privilege of practicing our profession also exact from us an obligation to educate the public dentally. Thus the public may be in a better position to choose between honest and deceptive offerings.

There are many ways in which we can attempt this education, some of which are as follows: through the establishment of oral health departments in the schools, special effort by the dentist himself in his office, cooperation of the medical profession, the press, the radio, special lectures, special agencies, and special publications.

If we are to make progress with a preventive program, it seems logical that we will have to make the approach through the child. The best place to do this is through the school. Health messages should be so planned that they become a part of the general in-
struction. Health instruction and education should go hand in hand.

Naturally the first step in any dental educational program is that the dentist himself must be convinced of its merits and should, therefore, be ever ready to impart his knowledge to his patients.

The physician and the nurse make contact with the child long before the dentist and both should be informed as to oral health requirements, so that they can carry the message into the home in the early life of the child. Joint meetings, joint papers, joint research will bring about a better medico-dental relationship and result in better health for all.

The use of the press in the education of the public offers fine opportunities but at the same time is also fraught with some dangers.

It is our belief, generally speaking, that the press wishes to publish only statements that are truthful and of public interest. The press, we are sure, would welcome the cooperation of the dentist in dental health education. Unfortunately, there are still those who seek personal publicity and this militates against cooperation.

Press publicity might readily be divided into news articles and news items. The former constitute the longer articles specially written, and the latter, the current happenings.

An ideal arrangement would be to have a committee of the dental organization of a given community submit copy to the press with the understanding that the material be rewritten for public consumption and then returned to the committee for approval.

Science news writers have expressed themselves as being anxious to cooperate with the professions in their news service, but ask that copies of papers at such meetings be submitted in advance for their study rather than be expected to read over one another's shoulders and rush the work. Due consideration should be given to this.
Publicity agencies are today quite plentiful. Their usefulness depends to a great extent upon the cooperation given them by the professions who use them.

The American Dental Association has this year secured the services of such an agency. It is hoped that proper steps will be taken at the beginning to direct their efforts into the proper channels. All material passing through their hands should have the approval of a committee or an individual, a dentist, to whom the responsibility has been delegated.

Publicity through the radio is, of course, the modern method of approach. Like all new things, it usually takes some overstepping to bring about rules to curb the offenses. Radio messages can be divided into two classes:

1. Messages especially prepared for education of the public by dental committees.

2. Messages having for their purpose the sale of services or merchandise.

This latter group is, of course, objectionable. It is contrary to public interest and should, therefore, be fought with the same zeal with which we fight other frauds.

Vendors of dental remedies are the worst offenders and their nightly squawks are a disgrace to the profession.

It is our belief that much good would come from an effort on the part of the organized profession to refute over the same network, some of the misleading statements concerning their claims for their products. We believe the subject is of sufficient importance that a special committee or a sub-committee on radio activities should be appointed to take up this matter with proper authorities and take steps to properly protect the public.

During the year the chairman has had some correspondence with Prof. Lyman Bryson of the Teachers' College, Columbia University, New York, N. Y., through the suggestion of Dr. A. B. Luckhardt. Professor Bryson, in presenting plans for adult education over Columbia Broadcasting system, had omitted ref-
ference to public dental education, but in his correspondence expressed willingness and desire to include it in his plans. A special committee could be of great value here.

Opportunities for special lectures before parent-teacher organizations, service clubs, etc., offer themselves frequently and are very valuable.

In our estimation, the greatest service that is rendered by the medical-dental service bureaus and similar organizations is that rendered through their lecture opportunities before the employees of large organizations and manufacturing concerns.

How often have you heard, "I saw it in Hygeia"? Why not a similar dental publication to carry the dental message?

Special exhibits are also valuable in bringing to the public information of value to them.

**The National Health Conference**

A national health conference was held in Washington, D. C., July 18 to 20. It was attended by many representatives from various fields of health services as well as many outside of these fields, but interested in the social security problems. C. Willard Camalier, president of the American Dental Association, and a member of this Commission, spoke briefly at the conference. His remarks, according to the Chicago Dental Society Bulletin, were as follows:

"The American Dental Association realizes its obligation to society and it is very glad to cooperate in this conference. It offers all the information and facilities of the Association before the deliberations of this conference.

"The members of the dental profession realize that they are confronted with a very serious public health problem. Dental defects are the most prevalent of all diseases with the possible exception of the common cold. I feel forced to speak on this subject at this time because an examination of the report and recommendation of the Technical Committee on Medical Care makes but slight mention of this serious but common condition."
Ninety Per Cent Suffer From Caries

“A survey of 1,500,000 school children made in 1933-1934 by members of the dental profession in cooperation with the United States Public Health Service, in which 4800 dentists in twenty-six states contributed over $2,000,000 in time and service, disclosed that approximately 90 per cent of American children of school age suffer from dental decay. Studies on a smaller and more detailed scale made subsequent to this large survey confirmed these findings.

“Until further dental research demonstrates some method whereby we can prevent dental disease, the objective of the dental profession is to control it in its incipiency. It is universally recognized by those who have studied the problem that the general health is often adversely affected by dental disease.

“The American Dental Association has given serious consideration to this phase of the public health problem and believes that the logical approach is through adequate prenatal and post-natal nutrition and medical care, plus the detection and correction of dental defects early in childhood. This must be brought about largely through education. It has been demonstrated that if adequate dental service is provided the preschool child, the occurrence of complicated dental diseases will be materially reduced. If this type of program is followed, the ultimate cost to the community for proper dental service will be greatly minimized.

Dental Health for Youth

“Realizing that the prevention of serious dental defects as suggested will reduce some of the catastrophic and other serious systemic conditions in later life, as well as add to the comfort and appearance of the citizens of the country, the American Dental Association during the past two years has laid tremendous emphasis upon dental health for the child. In 1937, the Association adopted as its theme the slogan, ‘Preventive Dentistry in the Interest of Health’. In 1938 it adopted the theme, ‘Dental Health for the American Youth’. Under these inspirational themes, the following important measures have been accomplished:

“(a) State and component dental societies have intensified their preventive dental programs.

“(b) The Association has furnished the leadership in having divisions or bureaus of dental health established in State Boards of Health, tripling the number in three years. To date, thirty-four states have such divisions.

“(c) State and component dental societies have been stimulated to co-
operate with the National Congress of Parents and Teachers in their 'summer round-up campaigns'.

"(d) Realizing that the technique of handling and performing dental operations for children is intricate and of a highly specialized nature, the Association has accelerated the conduct of refresher courses in children's dentistry. These courses have already been conducted for dentists in Georgia, Utah, Oregon and Indiana, where they have been enthusiastically attended and received. Similar courses are now being planned in many of the other states for the coming year. We will have a special feature in St. Louis on this particular phase of our preventive program, at the meeting in October.

"(e) Under American Dental Association leadership, courses in dental health education are increasing in teachers' and nurses' training schools.

"(f) The Association has requested our state and component societies to inaugurate dental health programs in all child-interested groups, such as the Parent-Teachers' Association, Boy Scouts, Girl Scouts, Camp Fire Girls, 4-H Clubs, American Red Cross, and others. This is now being done.

"(g) The Association, through its Bureau of Public Relations, has developed and distributed large quantities of dental health educational material to the public through schools, boards of education, boards of health, and other channels. And incidentally, some of you know that we established a national dental poster contest to bring preventive measures to the people of the United States. About a million posters have been submitted and we have made in the neighborhood of two million contacts. We have had the pleasure and the honor of three distinguished judges on the poster contest, the name of the Surgeon General of the United States Public Health Service, Miss Katherine Lenroot, and Mr. James L. Preser, the Vice-President of the American Red Cross.

"(h) The Association, through its Research Commission, is now making an intensive study of all dental literature pertaining to the problem of dental caries, in an effort to facilitate the discovery of the etiology of the disease. It is hoped that the United States Public Health Service will, in the very near future, initiate studies on the problem of dental caries. Further to stimulate this activity, it is the desire of the American Dental Association to establish a Fellowship on dental caries in the National Institute of Health.

"(i) The dental profession realizes that some provision must be made to provide emergency service such as the relief of pain and the elimination of infection at community expense for those adults of the present generation who cannot provide this service for themselves.
“As previously stated, however, the dental profession believes that the long-term preventive program for children is the only feasible and practical program for the control of dental disease.

“In substance, the above program is the same as the one published under my signature in the October, 1937, issue of the Journal of the American Dental Association, except that most of the October suggestions have become realities.”

Reports from the conference indicate that the government is ready to take steps in the direction of health insurance. It behooves us to be alert to this development and guard zealously the interest of the public and the profession.

Almost immediately upon the closing of the health conference, the government, through Assistant Attorney-General Thurman Arnold, announces that it proposes to determine whether or not the American Medical Association is a monopoly. While the term “A.M.A.” does not in itself include dentistry, our profession will watch every maneuver made in this case, for any favorable action here would probably be a forerunner of a similar action against organized dentistry.

David Lawrence commented that “the doctors have a society which is as much entitled to protection under the Wagner Relation Act as any other association of service workers”.

Another person said, “Why doesn’t the American Medical Association apply to the A.F.L. for a charter to operate Union No. XXX, to render medical services?”

Perhaps that is the answer. At the moment, however, we will live and learn.

Recommendations

Your Committee, therefore, recommends the following:

(1) That a committee of five (5) be appointed to further our interests in connection with the American Association for the Advancement of Science.

(2) That members of the American College of Dentists be urged to take greater interest in the public health service and if possible become members of the Association.
(3) That the Committee on Education be requested to study the matter of courses on public health in dentistry, and to bring to dental students more vividly the matter of their responsibility to the public.

(4) That a radio committee be appointed to give attention to the matter of radio publicity and develop ways for control of present objectionable methods by commercial interests.

(Recommendations approved by the Regents and the Committee instructed to develop details.)—Ed.

IX. REPORT OF THE ENDOWMENT COMMITTEE

John V. Conzett, D.D.S., Chairman

Dubuque, Ia.

It is usually a confession of weakness to make an apology, and your chairman confesses that as chairman of the Endowment Committee he may appear to be a failure. There may be some excuse or, at least, he eases his own conscience in the belief that the times are such, it is difficult to approach either members of the profession or philanthropic individuals in quest of donations to our specific cause.

That the College could use a liberal endowment in its various activities goes without saying and your chairman hopes that the conditions in the nation and the profession may soon clear up and that a financial canvass by the Committee may be productive of beneficial results.

The first thing that must be stressed, however, is a definite plan by the Regents which may be promulgated throughout the College, enlightening the members concerning the need of such funds and the use to which they would be allocated. The adoption of a plan of operation and a statement of the financial needs to carry

18The other members of this Committee (1937-8): Herbert C. Miller, A. Hoffman, D. U. Cameron, A. H. Merritt.
out the plan, made public to the members of the College, would
give your Committee an intelligent approach both to members
and to prospective contributors. Our report this year is one of
progress in thought only.

X. WILLIAM JOHN GIES TESTIMONIAL COMMITTEE

H. E. Friesell, D.D.S., Chairman
Pittsburgh, Pa.

For the Gies Testimonial Committee I am pleased to report
that the Committee is attempting to make a compilation or bibli-
ography of Dr. Gies' writings, and hopes to be able to present an
abstract of his numerous contributions to dental literature. This
is quite an exhaustive piece of work, and as we will have to call
on Dr. Gies for considerable information not available to the
members of the Committee, it is not possible to indicate a date
when we can promise completion of the effort. The Committee,
however, will do all that it can to expedite the work.

XI. REPORT OF DENTAL PROSTHETIC SERVICE COMMITTEE

Walter H. Wright, D.D.S., Ph.D., Chairman

The report of the Committee for 1937 included a discussion
by the editor of the Laboratory Technician in which he tried to
show that dental educators are in favor of the dental laboratories.
In support of his argument the editor quoted the 1935 Curricu-
lum Survey Report of the American Association of Dental Schools
and then proceeded to interpret certain statements in a manner
shown by your Committee to be erroneous. This criticism of the
Curriculum Survey Report raised the question as to how the deans

19 The other members of this Committee (1937-8): O. W. Brandhorst, A. R.
McDowell (deceased), B. B. Palmer, H. S. Smith.
20 The other members of this Committee (1937-8): A. H. Patterson, C. H.
Schuyler, W. H. Grant, A. P. O'Hare.
of our dental schools regard the commercial dental laboratory situation. Accordingly your Committee prepared a questionnaire, which was sent to all the deans of schools belonging to the American Association of Dental Schools. The replies are tabulated with each question and a general discussion by your Committee follows the questionnaire:

**Questionnaire Submitted to the Deans of American Dental Schools**

**NOTE:** Please read all of the questions before you begin to answer any of them. The Committee would appreciate more comprehensive answers than the spaces on the questionnaire will allow. Please have your answers typed on separate sheet, if possible. All answers will be regarded as confidential.

1. Do you teach each of your students enough clinical and laboratory prosthesis to enable him to do not only the chair-side work for the patient, but also all of the laboratory procedures related to his prosthetic service in the clinic?
   
   A—Yes, 29. No, none.

2. How much technical and clinical work do you estimate is sufficient to prepare the average dental student to practice all aspects of prosthetic dentistry that may be included in general practice? Please state the exact number and nature of your preclinical projects in prosthesis; also the complete dentures, partial dentures, crowns and bridges each of your students is required to make in the clinical infirmary of your school.
   
   A—Owing to wide variation in methods, indefinite replies, no definite requirements, etc., no brief statement can be made to cover the returns.

3. In teaching your students, does your school recognize, in any respect, the part the commercial dental laboratory plays in fabricating prosthetic restorations for the dental profession?
   
   (a) Do you teach your students to be self-reliant so that they will not be dependent on the help of the commercial dental laboratory after entering practice?
   
   A—Yes, 29. No, none.

   (b) Do you believe that any of your graduates may, for any reason,
enlist the aid of a dental technician in making impressions in the mouths of patients, designing partial dentures, etc.?

(c) Is your undergraduate instruction based on the assumption that dentists generally patronize the commercial dental laboratory, and that, therefore, students should be taught in such a manner that they will be able to have the co-operation of the laboratory after graduation?
A—No, 26. Yes, 3.

(d) In view of the widespread professional patronage of the commercial dental laboratory, do you continue to teach your students those laboratory phases of prosthesis which, after graduation, they may have done for them by the commercial dental laboratory?
A—Yes, 29. No, none.

(e) Does your school employ (directly or indirectly) laboratory technicians (commercial or private) to assist in fabricating any part of the prosthetic restorations that are being made by your students for patients in the infirmary of your school? If so, please describe the set-up and tell exactly what work is done by the technician.
A—No, 24. Yes, 4. Yes, 1, technician as instructor.

(f) Do your teachers advocate and approve, or disapprove, patronage of the commercial dental laboratory by the dental practitioner, or do they remain silent on this question when teaching your students?

4. What is your reaction to the fact that some commercial dental laboratories have developed and exclusively control the casting of partial dentures of stainless steel, etc., which methods and materials cannot conveniently be made a part of undergraduate dental teaching?
A—Disapprove, 23 (9 of these think profession should develop same). Favor, 2. Approve as fair, 1.

5. Do you believe that insufficient or inadequate prosthetic training of dental students is responsible for the present widespread patronage of commercial dental laboratories by dentists?
A—No, 18. Yes, 10.

6. To what causes would you attribute the rapid growth and widespread patronage of commercial dental laboratories since 1920?
A—Economics, 12. Technical inability, 5. Advertising by labora-
7. In seeking a satisfactory profession-laboratory relation do you favor:
(a) Registering dental technicians by the State?
(b) Professional supervision of already existing commercial dental laboratories?
   A—No, 12. Yes, 9.
(c) Laboratories organized, operated, and supervised by the dental profession?
   A—No, 23. Yes, 4.
(d) Disregarding the present situation with the hope that it will correct itself?
   A—No, 25.
(e) Some other plan of your own, as follows:

Discussion of Answers to the Questionnaire

Of the forty-five questionnaires sent out twenty-nine answers were returned. As shown by the answers to the first question, all deans are satisfied that their graduates are sufficiently well trained to practice both the clinical and the laboratory phases of dental prosthesis. As to the amount of work required to prepare the average dental student, there is a wide divergence of opinion as shown in the answers to question two. The total number of units of work, including the number of crowns, bridges, partial and complete dentures made in the preclinical and clinical years of the several dental courses ranges from 20 to 60, while some schools have no definite unit requirement. Tabulation of the individual units is of little or no value owing to the wide variation in the methods employed in the several schools. We are safe in assum-
ing that each school teaches what it believes to be an adequate course in the subject of prosthetic dentistry.

Replies to the third question indicate that all of the schools teach their students to be self-reliant, but section (b) of the same question shows that about two-thirds of the responding deans believe that some of their graduates enlist the aid of dental technicians in phases of an oral health service which the dentist alone should do. This abuse of professional license by the dentist is particularly alarming when we learn from answers to question 3(c) that twenty-six of the schools base their instruction on the assumption that their graduates do not patronize the commercial dental laboratories after entering practice. Notwithstanding the actual widespread professional patronage of the laboratories, a fact well known to dental faculties, all of the schools, as shown in answers to question 3(d), continue to teach those laboratory phases of prosthesis which some dentists choose to have done by the commercial dental laboratory. So far the answers reveal unanimity among the schools regarding the basic educational philosophy that prosthetic dentistry in all of its phases is an integral part of the practice of dentistry and is therefore under the supervision of and should be practiced by licensed members of the dental profession only. Dental educators are upheld by law in this concept of professional unity. Nowhere in the United States are dental technicians recognized by law to practice either the extra- or intra-oral phases of prosthetic dentistry. Attempts to secure license, mentioned in previous reports, have been made by dental technicians, but all such efforts have been thwarted by the profession which has been vigilant in protecting its own and the public's interest. This philosophy, clearly stated in the questionnaire, promises to be the ideal about which the profession must rally, when busy and careless dentists deliberately disregard its ideals, without awareness of the disintegrative influences resulting from their actions. If this were the end of the questionnaire we might infer that all is well with our schools and that the den-
tist alone is responsible for the present profession-laboratory problem.

However, a startling fact is introduced into the report by the answers to question 3(e), from which we learn that five of the twenty-nine responding schools employ dental technicians in connection with the clinical work in prosthetic dentistry. After such unanimity in defending the unity of dentistry, it is apparent that these schools have not foreseen the potential results of their action on the members of the profession and likewise on the aspiring dental technicians. There can be no doubt that the profession will be respected and its rights recognized only as they are cherished by the profession. The present situation is reminiscent of the downfall of ancient Troy. The wooden horse caused no trouble until it had been taken within the city gates after which the gates were secretly thrown wide open to the invaders. This inadvertent recognition of dental technicians by dental educators will strengthen the cause of the laboratories and weaken the unity of the profession. Such recognition lends official sanction to the thorn of commercialism in the side of the profession and while it appears an expedient and harmless act (?) at present, it may well become the means of opening the gates of the profession to invasion by commercial dental technicians. If well known and respected dental educators employ dental technicians to do part of the students' work while they are in school, there is no logic or argument convincing enough to dissuade the graduates from sending all of their work to the commercial dental laboratory after graduation.

About one-half of the dental teachers disapprove, while one-third approve the patronage of the commercial dental laboratory when teaching their students, as shown in the answers to question 3(f). Stated in terms of dental enrollment in the United States, we find that approximately three-tenths of the total number of dental students are taught by teachers who in some manner approve the use of the commercial dental laboratory. This fact may,
in part, explain why recently graduated dentists who are capable of performing all of the laboratory procedures related to prosthetic oral health service, and who are taught to be self-reliant and independent of the help of assistants, send their work to the commercial dental laboratory.

The answers to question 4 indicate that twenty-three of the schools are opposed to the exclusive control by commercial laboratories of materials and methods used in casting stainless steel dental appliances. Most teachers are no doubt aware of the potential dangers in having any dental fabricating process controlled by groups outside of the dental profession.

While each dean is confident that his own course is adequate to the needs of graduating students, the answers to question 5 would lead to the conclusion that some of the deans are not convinced as to the adequacy of courses in schools other than their own. Ten deans believe that insufficient or inadequate prosthetic training of dental students is responsible for the present widespread patronage of dental laboratories. In view of the fact that the Report of the Curriculum Survey Committee has been available for three years and voluntarily accepted as a guide in revamping the course in Prosthetic Dentistry in most of the schools, it appears illogical that ten deans should make the above accusation. It is possible that these deans are all referring to a single school or to several schools where, in their estimation, the training is insufficient or inadequate. There can be no doubt that a great majority of the schools have, within the past three years modified their courses and that today, they are above reproach.

In reply to the sixth question, twelve of the deans attribute the rapid growth and widespread patronage of the commercial dental laboratory to economic conditions. It is cheaper for the dentist to have the laboratory do the work than to do it himself. When viewed from the financial standpoint alone, it is true that it is cheaper to send work to the commercial dental laboratory, but when the quality of the oral health service is considered it
appears impossible to serve the best interests of the patient by indiscriminately sending work to dental laboratories as was commonly done prior to the depression. Many dentists are convinced that they cannot afford to send their work to the laboratory and therefore employ an assistant in their own offices, or prefer to do it themselves. With the passing of prosperous days, there has been a marked renewal of interest in prosthetic dentistry among the dentists. More equipment and more materials are being sold to the dental profession, more study clubs are at work on prosthetic problems, the laboratories are complaining of their serious financial plight and the cut-throat competition that has sprung up among them, and unionism is being talked of as the only solution of the serious problems which the overcrowded and poorly patronized industry faces.

It will be seen therefore that the growth of the laboratories is definitely related to the economic condition of the profession and that of the nation. When times are prosperous, they flourish; when lean, some of them perish. It is possible, although not pleasant, to imagine a depression so severe that dentists universally would do all of their own work, and close every commercial dental laboratory. Thus we see that regardless of other considerations, the financial question is the one to which the laboratories owe their existence. That this precarious existence is both unsatisfactory and irksome to some of the laboratory leaders is openly stated in the periodicals. During recent times when retrenchment has been the keynote in business, in industry and in the professions, some of the laboratories continue to bewail their sorry plight oblivious of the fact that all suffer during a depression. Instead of enduring a condition that cannot be momentarily cured, certain interests have introduced a bill in the New York State Legislature providing for the licensing of dental laboratory technicians, which will be discussed later in this report.

In the last question, four alternative ways of seeking a satisfactory profession-laboratory relation were submitted to the vote
of the deans. All of these alternatives, except the second relating to professional supervision of already existing commercial dental laboratories, were definitely opposed. Nine voted in favor of professional supervision, but the exact nature and the method of supervision were not stated. Seven of the deans voted in favor of registering dental technicians by the state, while twenty-five indicated that the present situation must not be disregarded in the hope that it will correct itself. Among the many plans suggested by the deans, only one, namely, that the dentist have his own technician in his office, received as many as five votes. Hence, it is apparent that almost all deans are in favor of doing something about this situation. Further, these replies are valuable in that they suggest two alternative methods of trying to arrive at a termination of this controversy: either with the cooperation of the dental profession, or by a struggle for licensure, in opposition to the dental profession, which has already been licensed to practice all of those phases of prosthesis which the technicians seek to control.

As to a profession-technician agreement, it is maintained by some that the profession and the technicians could come to some amicable agreement whereby inimical practices among the dental laboratories could be proscribed by the laboratories with the help of the profession. Discriminate patronage of reliable laboratories by the dental profession would tend to curtail such undesirable practices.

The latter method, of seeking statutory regulation, is, in the opinion of your committee, a difficult procedure, because it would involve a change in the dental law. At present, the dentist alone is licensed to practice all phases of dentistry, including all the technical and laboratory procedures relating to prosthetic dentistry. Nurses and technicians are trained, examined and approved by the medical profession and registered by the state. Plumbers, electricians, and other trades are trained, examined and registered in their own respective fields which by right of priority and train-
ing belong to them. The dental technicians, members of a self-styled industry, however, are generally untrained, except in a very limited field of laboratory procedure which is comparable to the specific operations done by a workman in the assembly line in the automotive industry. The dental profession has no formal part in the training of technicians. This is done mainly through practice and experience in the laboratories. Despite the fact that dentistry has no part in their training nor in examining them (in fact, formal training and examination of dental technicians do not exist) the dental technicians now clamor for license in a field of dentistry which by tradition belongs to and by law has been legally granted to the dental profession. Such legislation is being sought by some (the Dental Guild of New York) even though such license of technicians presumes the ultimate disenfranchisement and dislodgement of the dental profession from those laboratory procedures now performed by the profession. The futility of such attempts at licensure is apparent to all who recognize constitutional authority. However, there are some among the dental technicians whose chief inspiration comes from foreign countries, where, as has been related in previous reports, the laws have been made subservient to those who clamour the loudest.

Should Technicians Be Licensed?

The committee regards as one of its important duties a review and compilation of literature dealing with the dentist-technician relationship. Accordingly, the pertinent writings of the interim have been reviewed and those of importance are included in this report.

Agitation for licensing technicians continues, notwithstanding the profession's determined opposition. The Dental Outlook, a professional journal, located in New York where much of the agitation for licensing his occurred, has continuously defended the rights of the dental profession in this regard, and speaks editorially under the caption:
"THE GALGANO GHOST WALKS AGAIN\textsuperscript{22}"

"Fellow dental practitioners—Attention! On Your Guard! What was thought as dead, buried and forgotten, is showing signs of resurrection. There are rumors and indications, many from authoritative sources, that the dental technicians of this State are again secretly raising funds for the purpose of forcing through legislation that would require State regulation and license to carry on their work. This is being done in the old way—under cover. The attack is intended to be sudden and overwhelming.

"Once more some politicians will be found willing to assist in the scheming; to have the trade of dental prosthesis disguised in a cloak of legality which will permit it to masquerade as a profession. Needless to say that such action would prove to be detrimental to the public and the ultimate demoralization of the profession of dentistry.

"The old Galgano Bill with some trimmings, a few modifications and additions will be proposed—that same piece of vicious legislation which the dental technicians, through their hirelings, attempted to bring into existence eight years ago. At that time a thoroughly aroused dental profession, electrified and inspired by the imminent danger of the bill, united to demand its repeal. The profession won the battle. The bill, if enacted, would have been genuinely catastrophic to all concerned with the good and welfare of dentistry.

"The technicians, as before, will undoubtedly argue in sum and substance that this form of legislation is all that is needed to solve their many problems and elevate to dizzy heights the standards of their work, the inference being that the existing association of laboratory owners and a Workers’ Union are not sufficient to meet their requirements. It appears that they are ignoring the dangers resulting from the bitter controversy stirred up by their last unsuccessful attempt, which this time may end in disaster to their trade. For we predict that it once more will meet with overwhelming hostility and opposition by organized dentistry, which we have reason to hope will reach a climax in the complete frustration of the proposed measure.

"In the past, when we faced the possible enactment of this audacious if not vicious bill, many of the pages of our journal, the voice of the Allied Dental Council, were literally covered with arguments and reasons concerning the imperative need of concerted action by the dental profes-

\textsuperscript{22}Dental Outlook, 24, 449; 1937, Oct."
tion of the State of New York to bring about its defeat. Many important matters confronting dentistry at that time were, to our regret, temporarily forced to one side.

"Now that the threat is again in the offing, we herewith give warning and serve notice that we are once more fully prepared to devote all available energy and effort towards the decisive eradication, this time we hope permanently, of what may be considered an outstanding menace to the development, growth and progress of dental practice as a great indispensable health service to the people of our State.

"If dental technicians are confronted with difficulties or entertain grievances, the Allied Dental Council extends to them a cordial invitation to state their case and they can be assured that there will be no lack of sympathy and understanding. Politicians are certainly not the people to whom they should appeal for the solution of their problems.

"We do not seek strife. We want peace, but not at a sacrifice of our professional integrity. In our long struggle to maintain and further the ethics, dignity and high standards of our calling, we have been patient and forbearing. Many, if not most of the conflicts have occurred when dentistry's right to develop and grow as a profession was challenged or denied, or when non-qualified outside or affiliated groups threatened to encroach on statutory dental practice.

"Now that the alarm has been sounded, we sincerely hope that the technicians and owners of dental laboratories will rationalize, take heed and refrain from even starting that which must in any event result in strife and end in ultimate failure."

The Dental Outlook was right, for on February 7, 1938, a bill, No. 1136, which would legalize the licensing of master dental technicians, was introduced in the Legislature of the State of New York.23

"DEPARTMENT TECHNICIAN LICENSING BILL AGAIN INTRODUCED

"On February 7, 1938, Assemblyman P. J. Moran introduced a Bill, Introductory No. 1136, legalizing the licensing of master dental technicians.

"The Bill is now in the hands of the Ways and Means Committee, Assemblyman Abbot Low Moffat, Chairman.

"The Bill has already been printed and studied by the three major

23Dental Outlook, 25, 140; 1938, March.
dental societies, and Assemblyman Moffat has already been notified by the three societies that they are unalterably opposed to this Bill; they have also informed Chairman Moffat that if his Committee has any intention of reporting out this Bill, organized dentistry in New York State commands an open legislative hearing on it.

"MICHAEL PEYSER, D.D.S.,
Chairman, Legislative Committee."

Following the publication of the above notice by the Dental Outlook, an article and an editorial appeared in the Laboratory Technician. It is stated that the Associated Dental Laboratories have not sponsored this bill, nor do they know who are the sponsors. The opinion is expressed that license is desirable and may be expected to remedy the current ills of the laboratory situation and prevent illegal practice of dentistry by technicians.

In supporting the licensing of technicians, an editorial "On Licensing Technicians" appeared in the Dental Observer and is presented herewith in full:

"ON LICENSING TECHNICIANS

"During the next six months one of the most pressing problems besetting the members of the dental profession will come up for solution. The question "Shall dental laboratories and dental technicians be licensed by the state?"

"After due consideration and much thought on the matter, the editors of the Dental Observer have decided to come out unalterably favorable to the idea of licensing the dental technician. It is not merely desirable—it is essential. Especially in view of some of the facts that have lately come to light.

"Several months back, the City of New York decided to farm out contracts for dental work among the various dental laboratories in the city. As a matter of course, before the bids were considered, representatives of the city paid calls upon the various laboratories with an eye to examining conditions.

24 Laboratory Technician, 11, 3; 1938, March.
25 The Committee is informed that the Dental Guild sponsors the bill.
26 Dental Observer, 3, 2; 1938, Sept. 23.
"The reports they brought back are hard to believe, yet each one is truth.

"In some laboratories visited, the filth and confusion was indescribable, with no thought to the observance of sanitary conditions or laws. Some laboratories are nothing more than the technician's bathroom or bedroom, others are sunless garrets that haven't had the beneficial effects of a broom in months. The working conditions in many were intolerable, the wages unbelievable. Inferior materials were discovered in use, indescribably poor workmanship, on every hand.

"It is these very "bathroom" laboratories that are responsible for the conditions existing in the dental laboratory field today. With no overhead, no pride of workmanship, no materials worthy of the name, they underbid the conscientious workmen.

"Were dental technicians and dental laboratories licensed, conditions such as these could not exist. There would be periodic examinations, sanitary laws would have to be observed, materials would be checked and a certain degree of skill required.

"Then, of course, the question of illegal practice by technicians must be considered. A careful study of this subject brings one very important fact to light—in the list of violations during the past year most of those who erred were the proprietors of small one-man laboratories. In the entire list not one large laboratory is mentioned!

"In many cases the reason given is the fact that dentists themselves, by their growing custom of price shopping, have made it impossible to make an honest living. In other cases it is a condition that develops because the dentist has sent his patients to the technician's home for impressions or often for the matching of teeth. How logical it is to the patient to attempt to eliminate the middle man, who, in their mind, is the dentist, not the technician.

"It is not enough to say to the technician, 'That is the dentist's domain, you must not infringe.' That is reasoning with him, and you cannot reason with a hungry man.

"The sane way to clear up the problem of illegal practice would be to reestablish the laboratories on a plane whereby they can make a decent living for themselves.

"A licensed technician, who is guaranteed a living wage, and a licensed laboratory from over whose head has been banished the specter of unfair competition are less likely to resort to illegal methods and trickery. Secondly, a technician who knows that violation of the law would result in
loss of his license and disbarment from his chosen trade would think twice before endangering his standing.

"We are strongly in favor of licensing technicians on the grounds that it will be a boon not only to the technicians, but will react beneficially to the entire profession in all its branches. However, we do admit that the majority of technicians now engaged in the trade have never made themselves worthy of advancement to almost-professional status.

"Our grounds for that statement?

"According to a recent survey, during the past twelve months approximately 1500 dentists took post-graduate courses locally. With a registration of about 6000 dentists we find that 25 per cent of them have availed themselves of the opportunity to increase their knowledge of their profession and keep abreast of latest developments in their field. How many dental technicians were sufficiently interested in the welfare of their clientele to take post-graduate courses during that same period? A very small percentage.

"Consequently, while we urge the legislative bodies of our state to give serious thought to the feasibility of licensing technicians, we also urge technicians to give more thought to preparing themselves for such elevation."

In this connection, dentistry apparently has a new Moses to lead it out of its troubles. A physician, John Bassett Edwards, M.D., of Pomona, California, has been airing his views in *Oral Hygiene*, and the *Dental Laboratory Review*. These articles are so pertinent to the subject that your committee has included both in their entirety, together with some of the editorial comments from laboratory periodicals. The first article appeared in *Oral Hygiene* and was reprinted in the *Laboratory Technician*, under the caption:

"**THE CASE FOR THE DENTAL TECHNICIAN**

By John Bassett Edwards, M.D.

"It is a sorry kind of argument that does not have two sides. Quite in keeping with the average person, we are much inclined to consider our side of the matter as being right and give little time and less consideration to the point of view of our antagonist.

*Laboratory Technician, 11, 3; 1938, Feb.*
"Dental technique and the operators in that art have been given much thought and investigation by me and it is my desire to present herewith certain aspects of a discussion which already has attained the proportions of a controversy—and the end is not yet.

"It is admitted, doubtless, that dental technicians are a necessity in these busy times. Usually the operating dentist cannot afford to spare the time from his chair to work in his laboratory. I have often seen dental offices—strikingly handsome ones, too—in which the laboratory was simply a neat little cubicle where the owner might warm a bit of impression compound or keep his trays and a modicum of plaster. But obviously it was not a place in which to do ceramic work or perform the many routine daily tasks of a dental laboratory, in the commercial meaning of the term.

"The situation at this time has developed into something of a problem; and there are many who allege that the dental profession itself is to blame. As to the matter of the culpa, this article does not purport to judge.

"There is no doubt at all that for a long time—years—dental technicians have been striving to attain some sort of professional recognition, with the advantages attendant on such recognition. But the dental profession appears to have fought this recognition, even to the extent that in one state they have employed an expensive lobby in legislative halls to prevent any action there which might presumably be against the interests of the dental profession.

"It is well known that a serious, well-planned attempt is being made to organize the dental laboratory technicians\textsuperscript{28} on a scale which will be nationwide, and in consequence the roar that is being raised is almost deafening.

\textit{The Technician's Work}

"May we not for a moment consider what a dental technician really is, what he stands for, what he has, and what it costs to execute deftly the skillful work which he steadily produces and sends around to the offices of his patrons, the dentists?

"Like many another kind of labor done in a laboratory, the dental technician's work is highly technical and specialized. Until I had spent hours in such a laboratory studying the work and trying to visualize\textsuperscript{28} Editorial, "Are We Ready for Unionism?" \textit{Oral Hygiene}, 27, 1347; 1937, Oct.
what the manifest dexterity had cost, I did not know much about dental technique. To this I have added my own observations in the offices of operating dentists, which include a period of three years of intimate association with a highly competent operator.

“Based upon Army and Navy figures (United States) it costs something like $2,500 and six months’ concentrated work to prepare a man for dental laboratory operations; but after that time and at that stage is such a worker deemed to be a real technician? Not at all. He is merely an apprentice, with a fair start at the game, now possessing some of the fundamental knowledge needed to supplement the operating dentist.

“Commercial laboratories, notoriously devoid of flubdub and sentiment, figure that it requires five years’ time to develop a good dental workman, who must be naturally gifted with mechanical sense, since none other should attempt to become a dental technician.

“Now, considering the time and cost, as indicated here, in a concrete sum, the figure assumes impressive proportions—at least $3,500 for education—that the dental profession may justly term this worker a technician of parts.

“The dental technician, of course, cannot work without tools and laboratory equipment, and this we may properly estimate at amounting to an investment of $1,000—not considering the ceramist, who is in a class by himself. Please note that this thousand dollars of investment does not include a tooth contract. It does include some small amount of working material.

“What will this investment of time and $4,500 produce for the technician?

“Using the figures that most laboratories, large and small, concede to be average as to percentage of profit (which includes cost of labor) and the amount of work which one technician may do in a month, it appears that this sum must be at least $350, in order that the technician may earn a salary of $105 per month!

“Now let us see what type and amount of work a technician must do in order to gross $350 a month. Consider a month of work for the technician as 176 hours. He is able during this time to turn out 25

sets of full dentures—upper and lower—in vulcanite, at a cost of $4.80 for teeth, $2.50 for set-up, $7.00 to vulcanize and finish, a total cost of $14.30. Bite blocks and models are furnished free by the majority of dental laboratories. These 25 full sets would cost the dentist $357.50. He would charge his patients as an average from $35.00 to $45.00 for a single full upper denture, and for both upper and lower from $50.00 to $75.00. We will use a medium figure of $60.00 for the full set, which would make the 25 sets amount to $1,500. The dentist’s net return on this amount of work is $1,142.50, on which he expended 87.5 hours, or at the rate of $13.00 an hour. The technician has received for 176 hours of labor $357.50, and it is apportioned to him like this:

10 per cent net profit to the laboratory owner.
30 per cent strictly for labor
60 per cent for materials and overhead

“It is not intended that the reader shall evaluate the services of an operating dentist and a dental technician by the same yardstick. But the relative ability to make money brings about some rather invidious comparisons. It is appreciated that the dentist has studied longer, that he has spent more money, that his equipment probably would average around three thousand dollars in cost. However, it must be conceded that this comparison does excite interest.

“The figures given here are founded on those of Southern California, which are lower in the laboratory industry than elsewhere in this country, with the possible exception of some of the Southern states. And it is my impression that dental fees are lower in Southern California, hence probably the general nationwide average is approximately the same.

“Bushwhackers

“There is an evil class of alleged dental technicians, known in this industry as ‘bushwhackers,’ who are the worst kind of offenders in illegal practice. They do laboratory work not under the initiative of the dentists, but on their own, so to speak, directly for the public, as well as whatever legitimate work they may obtain from operating dentists. And are many of them caught? So far as I have been able to learn, very few have been apprehended, and even fewer have been punished. In the state in which I live, in less than a year’s time there have been over a dozen cases picked up, without a single conviction. A suspended sentence or at the most a small fine is all that has been given in the way of
punishment. Of course, this is in no wise the fault of the dentists themselves. The system is to blame.

“Anyone who wishes may become what is commonly known as a dental technician and open a private laboratory. A barber having less than six months’ experience in a commercial laboratory opened up his own business. And this is not the only one of that sort, by a long shot.

“Such men do not, as a rule, produce good work or maintain a high, honorable standard, but they get the cut-rate business, and militate against the high standing of the first-class technician who works on a definite, legitimate price basis. If this kind of technical work were unionized, these price-cutters would be forced out of the industry or have to pay a proper wage scale for good help; thereby indirectly creating a minimum price scale, inasmuch as the cost of teeth and materials is about the same for the small laboratory as for the large ones.

“From the technician’s point of view, a license law would greatly improve the situation—both for themselves and for the operating dentists. This legislation might well be drawn up so as to place legitimate dental technicians under some measure of control by state dental boards. The technicians then would be carefully selected, examined, and limited in their field of work.

“Incidentally, no dental technician wants to be anything else. He does not aim to be a dentist; his ambition is to be a skillful technician and assistant to the operating dentist. And in my opinion this aim is well justified, entirely legitimate, and praiseworthy.

“It is true that such a limitation of technicians would tend, under union scales, to give a boost to the costs the dentist would have to pay for his laboratory work; but even a 35 per cent increase in laboratory prices should not mean more than, say, a 10 per cent increase in the dentist’s fee to his patient.

“How do we arrive at this figure? Like this: Say a piece of work done by the laboratory is charged for at $15.00. Usually the dentist will charge his patient for that piece about $50.00. Now to increase the laboratory charge by 35 per cent would make the dentist’s cost $5.25 more, or a total of $20.25 for this particular piece of work. The dentist might augment his charge to the patient by 10 per cent, making it $55.00. Deduct his laboratory cost at the higher rate of $20.25 and the dentist’s net profit is $34.75 as against his present one of $35.00—and the technician is enabled to earn something like a decent return on his time and financial investment.
"Others Licensed"

"When we consider that barbers, beauty shop operators, x-ray technicians, medical technicians, and dental hygienists are carefully licensed—and it is well known that to acquire sufficient skill in these lines of work does not take anything like so much time or monetary investment as it does to train and develop a competent dental technician—it does seem that the dental technician really has excellent grounds for alleging that he is being discriminated against.

"Again, the dentist would assuredly receive a far better kind of work, on the average, by the careful selection of licensed dental technicians. He might well be justified in telling his patients that they are getting a superior type of work, using the fact of superior workmanship as a selling factor.

"Another little point, at this juncture, which may bring down upon my head many a verbal whack: Why should dentists try to make their clientele believe that they personally do their own laboratory work? The oculist does not claim that he grinds his own lenses, nor does the physician assert that he compounds his own prescriptions.

"But enough of this. The case for dental technicians may not be made; but if this article has brought out the fact that they do have what seems to be a well-justified claim for as good recognition as the licensed barber, who far more readily learns his less technical and not difficult art, then these words shall not have been written in vain."

In the same issue of the Laboratory Technician the editor discussed Dr. Edward's paper, as follows:

"M. D. HELPS CLARIFY TECHNICIAN SITUATION"³⁰

"The Case for the Dental Technician," reprinted in this issue by special permission of Oral Hygiene, drags into the open the rather touchy subject of the relative return on denture work to the labman and to the dentist. The article was written by Dr. John Fassett Edwards of Pomona, California.

"The subject can well stand a little airing. It reflects a condition which has been studiously avoided by both the dental and dental laboratory press, for obvious reasons. If Dr. Edwards gets the dental profession to do a little serious thinking about its mark-up on denture work he will have done a genuine service to dentistry. It is the disparity be-

³⁰Laboratory Technician, 11, 14; 1938, Feb.
tween the only too evident intrinsic value of a denture and the 'sale' price to the patient which sends patients looking for illegal practitioners, and which is one of the factors behind the movement for state dentistry. A dentist is entitled to a fee for professional services in connection with the construction of a denture. It should be itemized as such, however, not padded into the 'costs' of the appliance.”

A second paper by Dr. Edwards appeared in the Dental Laboratory Review, as follows:

“SHOULD TECHNICIANS BE LICENSED?31

“There seems to be a vague feeling among some members of the dental profession that dental technicians are a necessary evil, and that it would be possible to get along without them if a determined effort were made to do so.

“Such a belief, however, is not reasonable. The dentist, busy at the chair, cannot afford to spend hours in the laboratory wrestling with the technical problems when he should be recuperating or planning tomorrow’s work. His essential stock in trade is his time (and skill); consequently his time must be carefully conserved. Probably all of us are agreed that it is sheer waste and bad business, to devote one’s hours in the office to unprofitable work when profitable work elsewhere clamors for attention.

“It is pertinent to say that this writer does not favor the unionization of dental technicians, although mention of the fact should be made that such a union has already been formed, as a part of the American Federation of Labor.

“Men who have developed sufficient skill to be recognized as capable technical assistants to the dental profession should be marshaled into regular ranks and the fly-by-night bushwhacker, who cuts prices and practices illegal dentistry, should be weeded out. Thereby the dental profession would be assured of getting highly competent work. Under present conditions, any such assurance of technical integrity is a matter of personal examination and opinion on the part of the dentist.

“We realize, of course, that there exists an objection on the part of some dentists to having dental technicians recognized and licensed, on the ground that the technicians’ fees would be increased, and they might then even attempt to practice dentistry.

31Dental Laboratory Review, 13, 20; 1938, May.
"The latter premise we may dismiss as illogical. As to the former allegation, it is the author's opinion that fees would perhaps be raised, but not to any great extent. They might be raised to a maximum of not over 30 per cent more than those that obtain at present; but such an increase when spread over each case would not amount to more than a few dollars—and could be handled easily by personal adjustment with the patient. What the patient wants (and is entitled to get) is high-grade work. Quality service is the essential factor, and it will be remembered long after the price is forgotten.

"This writer has often heard capable technicians assert that when they are well compensated for their work, they take keen interest in it and turn out restorations of the highest quality. This is rendering into financial terms the saying that 'the laborer is worthy of his hire.'

"After long study of this question, it would seem that all examinations of dental technicians, with a view to their licensing, should be under the direct control of the Dental Examining Board of each State—perhaps with a sub-board appointed solely for the specific purpose of handling dental technicians. In this way the dental profession would have and retain complete technical control of these aspirants, and the examination could be made a suitable, reasonable one.

"The dental hygienists are carefully examined and licensed, yet their work is a trivial thing to learn compared with what a dental technician must know. Comparison of the dental technician with the druggist is fitting; just as the druggist helps the physician, so the dental technician should be equipped and recognized as being able to render full aid to the dental surgeon. While all dentists are able to do their own laboratory work, most of them cannot afford to do it.

"A Suggestion

"We offer as a suggestion that provision be made for each State Dental Examining Board to examine candidates for license. Candidates would be divided into three classes, as follows:

"Class A. Dental Technicians—Persons who have been in the industry for at least five years and who can pass an examination equivalent to the prosthetic examination given to members of the dental profession when applying for license to practice. (No impressions to be taken.)

"Class B. Dental Mechanics—Those employed in the industry for at least three years and who can pass an examination equivalent to the junior examination for college entrance.

"Class C. Dental Apprentices—Those employed in the industry for
at least one year, who can qualify in the fundamentals of laboratory work of this nature. Class A would consist of (1) ceramists, (2) gold men, (3) top-flight denture men, and (4) supervisors or foremen. Class B would consist of everyone not classified in Class A or Class C. Class C would consist of anyone employed in the laboratory (except in the office) —either whole or part-time, as a technician’s helper, as for instance, plaster boys and polishers.

"Under such a system it seems probable that the examination for a dental technician’s license might be even more difficult—because of its concentrated, persistent character—than would the average State Board examination of graduate dentists. At all events, it would not be entirely simple.

"The examination for dental technicians would be about the equivalent of the average college final examination for graduates.

"The examination for dental apprentices would be founded on such fundamentals as dental anatomy, head and neck anatomy, metallurgy, the theory of various laboratory procedures and a practical knowledge of materials used in the laboratory.

"Teaching Facilities Lacking

"Incidentally, since the abolition of the old preceptor system, there seems to be a dearth of teaching facilities for dental technicians. In recognition of this fact in Argentina, South America, a course has been established in the Dental School of the Faculty of Medicine, University of Buenos Aires, to train dental technicians. Students are given the degree of Dental Technician, and when graduated operate under a stiff law which says that if found guilty of practicing dentistry illegally they shall be forthwith deprived of both their title and their diploma.

"A factor of great importance to those concerned is that dental technicians test dental materials, to ascertain which best suits the purpose for which it is designed. A sample: One of my technician friends heard high praise of a certain type of artificial stone. He obtained a specimen, mixed the powder with water, and filled a test tube to its top. At the same time he made a control test with the kind of artificial stone he habitually used. Next day the new, highly-extolled stone was found to have split the test tube, whereas the technician’s own kind had neither contracted nor expanded.

"This is a pointed example of where the dental technician can be of great help to the busy dentist. The competent laboratory operator must keep in touch with all new developments, and is in a position to inform
his clients, when need arises, as to what materials may be best suited to any particular case. If the dentist has taken the time to keep up with the manifold ramifications, changes and betterments in dental materials and technique he is fortunate indeed, and will not need to ask advice or suggestions. Yet, nonetheless, the technician must be in a position to give sound advice when requested to do so.

"At the risk of writing something known to all dentists, we would like to speak of modern requirements of the dental technician who fully knows his work. Twenty years ago the laboratory received casts and a 'mush bite' from the dentist, then mounted them on a plain line articulator, a sort of glorified barn door hinge. He selected a 1x28 set of teeth of the right (?) shade and set them up. After a try-in by the dentist he finished them in one of two materials—vulcanite or celluloid. To be sure, his work was honest; but in comparison with the manner in which similar work is done today it was almost as crude as the ivory dentures carved out for the Father of Our Country.

"Lab Procedures Today"

"Now the dentist sends in his 'snap' impressions, the laboratory makes individual trays (sometimes special ones) in order to carry out the particular technique desired. When the muscle-trimmed impression reaches the laboratory it is boxed and poured in artificial stone. Trial plates are then made for the particular technique the dentist wishes to use and when the bite has been registered, the technician must consider the following points:

1. The shade and mould of the teeth. These really are the dentist's problems, but often he leaves them to the technician.
2. The median line.
3. The width of the mouth in the cuspid region.
4. The high and low lip lines.
5. The occlusal space—and the curve of Spee.
7. The Gothic arch readings.

"After mounting the case on an anatomical articulator, the technician selects the teeth (one brand alone provides 1,700 possible combinations of shade and tooth form). Anteriors and posteriors are selected separately. The set-up follows, with constant checks of centric occlusion, retrusive and protrusive bites, lateral excursions. The teeth set up, he waxes the case for a try-in. The try-in completed, the technician usually"
is instructed as to the material to be used for the finished denture; also
as to the use of buccal plumpers, labial and lingual finish, relief and
post-dam. Consider the amount of time consumed. With a plain line
articulator, about 30 to 45 minutes; with an anatomical articulator, not
less than two and one-half hours—usually longer.

"In selecting materials the dentist may use vulcanite, a thermoplastic
or a condensite. Each material is processed in a distinctive way, each
demands an individual technique.

"The case is again put on the articulator, checked for changes, and
milled in if required.

"Provided the bite has been skillfully taken—admittedly a difficult
task at best—the patient becomes a pleased booster for the dentist.

"In addition to the strictly mechanical phases of this work, there are
many chemical factors that the technician must know—condensate and
polymeric action, what happens if traces of camphor are in the denture-
base material used, tissue reaction to the denture-base material, the taste
in the mouth of the wearer and a considerable amount of other et ceteras.
Also what materials will afford essential strength to resist the well-known
midline strain (the patient might excusably feel irritated if a compara-
tively new denture was to fall apart in his mouth when negotiating a
beefsteak). It is obvious that there is no 'best' denture material. The
dental technician has tested many sorts. His knowledge may be of great
value to dentists, therefore he is a man to be consulted.

"Technicians do not want to be dentists; they wish to work only as
associates of the dental profession. They are willing that that profession
should regulate their methods of work, examine them in any reasonable
way to ensure quality output; yet the better technicians now feel them-
selves very much at the mercy of unscrupulous, irregular workers in the
laboratory industry who cut prices and illegally practice dentistry.

"In conclusion, the present situation is fraught with grave menace to
both the dentist and the dental technician. Perhaps what pends is some-
thing akin to what has happened already to the medical profession with
respect to the mounting ascendancy of irregular pseudo-medical cults
and their strong entrenchment in the public regard.

"As this writer sees the situation, now is the time for the dental pro-
fession to take a firm stand, in an unequivocal manner, so as to ensure
its future, and that of its associated workers, the dental technicians.

"There is real virtue in the old maxim about prevention being of far
greater worth than cure."
The same issue of the *Dental Laboratory Review* contains the following editorial:

"WHOSE HAND SHALL GUIDE?"

"Elsewhere in this issue of *Dental Laboratory Review* we are publishing an article by John Fassett Edwards, a physician of Pomona, California, that seems to have a significant bearing on the problem of dentist-laboratory relations.

"Exception may be taken to our airing the views of an outsider, especially since he seems to feel the control of the industry should be placed in the hands of the dental profession. Our reason for doing so, however (and we feel it is a valid one), is that there must be considerable verbal fire emanating from the dental profession to cause the literary smoke contained in Dr. Edwards' article; there must be a strong feeling somewhere that a change in the status of the laboratory technician is coming in the near future and that perhaps the industry is not sufficiently interested to desire a part in formulating the steps leading up to that change.

"Let us assume, as an abstract proposition, that a change in the status of the laboratory technician is desirable; that he should be more closely supervised; and that certain laws should be passed to make such supervision a real, practical thing. Assuming the foregoing points have a substantial basis in fact we are immediately faced with this question: 'From which group—the dental profession or the laboratory industry—should come the first moves to initiate that change, and in whose hands should the power of supervision rest?'

"Another question: 'Since the laboratory owners are the ones who engage the services of the technician, who has a better right than they to pass upon the technician's ability?' Also, 'By what right should the dental profession seek to take unto itself the power to dictate the policies of an industry merely because that industry happens to be vitally necessary to (but by no means a part of) it?'

"In that connection, *Dental Laboratory Review* has no desire to dictate the policies of either the dental profession or the laboratory industry, has no wish to pose either as a prophet of doom or an industrial Moses seeking to lead the laboratory to the promised land of more cordial and intimate relations with the dental profession. We would, however, venture two more questions, important or unimportant depending upon how..."
they are viewed: 'Shall dental technicians (and, broadly speaking, that means the industry as a whole) be regimented and placed under a supervisory code of some kind?' 'If so, whose should be the guiding hand behind such a movement?'

Dr. Edwards' article evoked the following discussion in the Dental Laboratory Review for June, 1938:

"ON LICENSING TECHNICIANS"

"I have read carefully the 'Case for the Dental Technician' by Dr. John Fassett Edwards, and it is my belief that the physician is to be congratulated for his accurate analysis of the laboratory situation. To those who contend that an 'outsider' has no place in the discussion, let us say that it is often just such a person who is more competent to arrive at the basic truth of a matter than those most intimately concerned.

"It is unfortunate that the matter of the organization of the industry is seemingly becoming a matter of the 'Dentist vs. the Technician.' The profession evidently is opposed to any move that will bring about unity of laboratory men. Doubtless they have their reasons, but it is difficult to understand what motives could be sufficient justification for their employing lobbies to defeat legislation which a great many technicians consider would be beneficial to the craft.

"The licensing of technicians should, if properly supervised, redound to the mutual benefit of dentists and technicians. However, authority of the licensing board should be vested in laboratory men. Surely, it would not be unreasonable to assume that they would be capable of governing themselves!

"Were a laboratory board to be established in each State to formulate rules and regulations, many of the evils besetting the industry might be eliminated. Laboratory men, however, must work out their own destiny—they must not be denied the right of freedom of action that is the birthright of every man.

"The Typographical Union is one of the finest examples of what can be accomplished by proper cooperation, and there should be no reason why the laboratory men could not organize as effectively. Let us suppose, for instance, that technicians in the State of Ohio were licensed and the Board established the following standards:

"1. Every apprentice must be a high school graduate.

33Dental Laboratory Review, 13, 16; 1938, June."
“2. Laboratories may not take on more than ... apprentices a year.
“3. The apprentice must serve at least 4 years in a commercial labora-
tory.
“4. Upon completion of his apprenticeship he shall be privileged to
take a Technician’s Examination. If he receives a satisfactory grade, he
would be entitled to work as a Licensed Technician.
“5. A man may open his own laboratory only when he demonstrates
his capability to the Board of doing all types of laboratory work satisfac-
torily. In order to operate his own business, he must secure a Master’s
License. This will be awarded to a man who satisfactorily meets the
foregoing requirements and has worked as a Licensed Technician for ...
years.
“6. License shall be revoked upon any technician’s conviction of the
illegal practice of dentistry.

Such a system should elevate the standard of the industry. It would
limit the number of apprentices and avoid overcrowding. Technicians
would receive better wages and the dentist could be certain that the labo-
rary man was familiar with the proper construction of dental appli-
cances.

“By the granting of the Master’s License, a great many of the ‘fly-by-
night’ incompetent laboratory operators, who are a menace to the legiti-
mate operators and the profession, would be eliminated. By the threat
of revocation of license in the event of the technician’s conviction of the
illegal practice of dentistry, we should be able to eliminate much, if not
all, of the ‘bushwhacking.’ Furthermore, we would, I believe, have a
group of men who would be proud of their ‘profession’ (and it might
not be unreasonable to term it such); we would have men who would
be capable of doing first-class work; men who would have a finer edu-
cational background; men who would be a credit to themselves and to
the profession with whom they work.

“Doubtless a limitation of the field in this manner would bring about
increased prices. However, judging from Doctor Edwards’ article and
the experience of many ‘lab’ men it would seem that a ‘raise’ is in order.

“The discussion as to whether the technician shall be licensed, organ-
ized, or continue to pursue in the future the policy of ‘every man for
himself’ will continue—for how long no one can say. But one thing
seems certain—the technicians are striving to better themselves and im-
prove the industry. Surely this should be considered a natural and com-
mendable trait. When, however, the industry reaches the point where
they have the right and ability to govern themselves, then indeed shall the millennium have come!”

The above articles and editorials offer an opportunity for an extensive criticism which for sake of brevity will be reduced to a minimum. Edwards’ figures relating to the cost of training technicians are based on Army and Navy reports and, therefore, do not apply to the commercial dental laboratory technician who enters the industry as a messenger boy, advances as far as he can, depending on his ability, and is paid wages from the day he begins. He is paid for his training as an apprentice—a practice characteristic of a trade or industry. The doctor has been visiting a few of the well-equipped laboratories, for, contrary to his observations, the equipment in the majority of laboratories could be purchased for less than $200. These facts upset the figures submitted to prove that the laboratory technician is financially discriminated against by the dental profession. Further, the doctor is perhaps not aware that thousands of dentists are not receiving a fee of more than $40 for two dentures, which sometimes includes the fee for extractions. The statement that “no dental technician wants to be anything else” (than a technician) is erroneous, as is well known by those in the industry. The irrelevant and usual analogies, namely, barbers, beauty shop operators, x-ray technicians, medical technicians, and dental hygienists are cited as evidence in favor of licensing dental technicians. The author failed to mention that all of these relating to the professions, are trained and examined by the professions, and remain under the control of the professions even after they have been licensed. The laboratory owners would object to such an arrangement as shown in the editorial, “Whose Hand Shall Guide?” from which the following statement is copied. “By what right should the dental profession seek to take unto itself the power to dictate the policies of an industry merely because that industry happens to be vitally necessary to (but by no means a part of) it?” The above question reflects the attitude of com-
mercial interests which in part control the dental laboratories and which would make every effort to prevent licensing of dental technicians as assistants to the dental profession (similar to dental hygienists in dentistry, also technicians, and nurses in medicine). The laboratory owners insist on training dental technicians. This training is generally abbreviated, and specific, thus limiting the technicians' earning power and reducing the possibility of his opening a laboratory of his own. They insist on examining technicians, and they insist on having their own State Boards; in other words, they demand complete control of the training and licensing of dental technicians.

Technicians, in reality, work for the dental profession. The owner furnishes the space and provides the capital; the patronage depends on the quality of work the technicians can do. By transferring the technician from the commercial dental laboratory into the offices of dentists, by educating him under the control of the dental profession, by examining him by the State Board of Dental Examiners, and by certifying him as an adjunct of the dental profession, the problem will be solved in so far as it is humanly possible to arrive at a solution. Such a procedure obviously overlooks the laboratory owners, many of whom are honestly and sincerely working for the best interests of the dental profession. Thus we find ourselves in a dilemma. License of dental technicians can never be satisfactory unless it is under professional control and devoid of commercialism, while on the other hand, there is constant agitation for license of technicians under commercial control of the industry which is "by no means a part" of the profession of dentistry.

Members of the College Discuss Dentist-Laboratory Relations

We include in this report two discussions of this problem; first, because it is advisable to record for future reference any statements made by members of the college that may be helpful ulti-
mately in solving this problem, and secondly, to record the reactions of the laboratory leaders to those statements. Accordingly, we present, first, a discussion by Dr. Alfred Walker: 34

"THE COMMERCIAL DENTAL LABORATORY"

"Time was when the commercial dental laboratories in the city of New York were so few and inconspicuous that it required diligent inquiry to locate more than a half-dozen establishments. With but few exceptions, these were one- or two-man shops. This scarcity of commercial laboratories was not due to any lack of prosthetic work, but to the fact that most of the dentists of the day had their private laboratories. Until state authorities in 1896 raised predental educational requirements for candidates for the D.D.S. degree, a large percentage of dental students were young men who had served under dentist-preceptors. When they were ready to enter dental school, they were, as a rule, well qualified to perform most of the tasks that made up the laboratory routine at that period. In consequence, when they set up in practice they, as a matter of course, did their own prosthetic work. In a few instances the early commercial laboratories were conducted by licensed dentists, but for the most part the laboratories were operated by men who had been trained by practicing dentists or by their laboratory assistants.

"With the gradual raising of predental educational requirements the number of preceptor trained young men entering dental school declined and in a comparatively few years they became non-existent. To many of the later graduates laboratory work was not only difficult, but distasteful as well. Consequently, they sought what was then commonly termed the 'outside laboratory.' The commercial laboratory was found to be a great convenience, and as the number of preceptor trained graduates declined, there came an increasing demand for the services of the 'outside laboratory.' As the laboratories increased in number to meet the growing demand it was inevitable that competition should enter. At first, competition was of a healthy nature and manifested itself in improved products and service. But, unfortunately, some of the elements of competition that have now enveloped the commercial laboratory have brought about a situation that is giving both the reputable laboratory owners and the dental profession much concern.

"The dentist is responsible to his patient for whatever treatment the latter receives at his hands. In prosthesis this responsibility includes the

type of restoration, its fit, adaptability and conformity, the quality of the material of which the restoration is made and the conditions under which it was produced. Dentists may not legally or morally permit the laboratory owner or his employee to perform on the person of the patient any part of the service incidental to the production of the prosthetic restoration. In spite of the moral and legal restrictions to which all should conform, many dentists (we use the word 'many' advisedly) not only permit the laboratory man to take impressions and fit dentures, but actually insist upon this being done as a condition of patronizing the laboratory. These instances are not unusual. They have become so common that laboratory owners who may be averse to the practice find it a business expedient to accede to the demands of these dentists.

"Price competition with the evils that inevitably accompany it has also reached a serious stage. And here too the dentist has played his part. Far too often has he failed to give due consideration to all of the factors that enter into the production of a dental restoration. There are few dentists indeed who would knowingly place in the human mouth a laboratory product which had been designed and made to meet a price regardless of all other considerations, yet the dentist who believes it smart business to play one laboratory against the other in the matter of price must accept responsibility should sub-standard products be used. We are not suggesting that the dentist should meekly submit to any charge that the laboratory may propose, but the dentist, by training and experience, should have at least an approximate idea of the cost of producing prosthetic work and he should be willing to pay a price that gives the producer a fair return, even as he justly expects and should receive adequate compensation for his own service to the patients.

"Another serious evil that is all too prevalent is that of laboratories dealing directly with the public. This practice is growing in spite of the number of convictions in the courts and for this situation the laboratory owner is in most instances solely responsible. While these transgressions are more prevalent among the smaller laboratories, some larger concerns have been equally guilty. Instances are known where dentists have for two dollars taken the impressions for persons referred to them by a laboratory, the finished dentures being delivered directly to the patient. The explanation for this procedure is that the laboratory owner cannot for obvious reasons risk having his employees know of such law violations. We are not unmindful of a belief among some laboratory owners that they should be permitted to serve the public directly. In fact, we have heard it stated by a laboratory representative that inasmuch as the labor-
ratory performed the major part in the production of the denture, the laboratory should be entitled to the major part of the fee. As long as some dentists continue to demand that laboratories include impression taking, tooth-shade matching and denture fitting as part of their expected laboratory service and as long as they continue to send patients directly to the laboratory for denture repairs, frequently not even seeing the patient but giving him directions by telephone, just so long will the laboratory owners have a basis for their demands to the right to serve patients directly, regardless of how dangerous to public health such procedure may be.

"Statutory regulation of laboratories is a weighty problem. Some of the measures that have been proposed have their good points, others are fraught with much danger to all concerned, viz., the public, the profession and the laboratory owners. No move in this direction should be made without the careful consideration and mutual agreement between the dental profession and the laboratory owners.

"Most laboratories like most dentists are reputable. As we see it, the situation could better be served by a friendly understanding rather than by legislation. Such an understanding implies that the dentist shall neither demand nor encourage transgressions of the law. He should insist upon quality both in material and workmanship and be willing to pay a price that will insure production under sanitary conditions, allow fair compensation for the laboratory employees and a reasonable profit for the laboratory owner.

"Laboratory owners should adopt a code that would, among other things, bind laboratories to refrain from illegal or unfair practices and to report to the authorities any dentist who attempts to induce a laboratory owner or employee to violate the provisions of the code. Dentists on the other hand should agree to patronize only those laboratories who subscribe to the code. We have shown that the commercial laboratory is not something that has intruded itself upon the profession, but that it is an offspring of, and entirely dependent upon the profession. It fills a real need and is here to stay. The evils discussed in the foregoing could be eradicated through cooperative effort. But no effort, however great, will succeed unless it is approached with mutual trust and understanding."

An editorial comment on Dr. Walker's paper appeared in the Laboratory Technician of November, 1937, as follows:35

35Laboratory Technician, 11, 14; 1937, Nov.
"FINDINGS"

"This dentist is NOT afraid of ghosts—Galgano or other.

"'Tis indeed refreshing, and encouraging, to read 'A. W.'s' article in the December issue of The New York Journal of Dentistry, 'The Commercial Dental Laboratory.' Particularly refreshing, in fact, after the article in the October Dental Outlook, 'The Galgano Ghost Walks Again,' which we discussed in some detail in the October issue of The Technician.

"'A. W.'s' article is so true a statement of the general laboratory situation that it is reprinted in full in this issue. While the writer masks his identity behind the initials 'A. W.' we have a suspicion who he is. If he is the dentist we suspect mere mention of his name would add in-calculable weight and authority to what all must admit is a sound, fair and extremely sane statement of facts.

"'A. W.'s' views on profession-fostered price competition among dental laboratories should make illuminating reading for many dentists. Equally enlightening should be his statement about dentists forcing laboratory men, as a condition of their patronage, to take impressions for them. And while holding no brief for laboratories who thus overstep their legal right and who go still further and construct dentures direct for patients, he is broad-minded enough to add that those in the profession who force laboratories to aid them in the preparatory technics in denture work, directly or indirectly, give some laboratory men a basis for thinking they should be allowed to work for patients direct.

"That no reputable laboratory man harbors such thoughts, 'A. W.' admits. Unfortunately, there are enough not-so-reputable laboratory men as to make illegal practice a serious matter.

"'A. W.' also finds it possible to discuss 'statutory regulation' of dental laboratories without calling it anything worse than a 'weighty problem.' This even the most rabid pro-license labman will gladly admit. He also says 'some of the measures that have been proposed have their good points; others are fraught with much danger to all concerned, viz., the public, the profession and the laboratory owners.' This, too, no one will deny. And 'A. W.' adds, 'No move in this direction should be made without careful consideration and mutual agreement between the dental profession and the laboratory owners.'

"That is just what the laboratory owners in New York State have been trying to get. They would be only too glad to work with 'A. W.' and other dentists of his caliber toward such a mutual agreement.

"'A. W.'s' suggestion that the dental laboratories could stop illegal
practice and correct unfair practices by adopting a code of practice is good in theory but has a couple of weak points. First, there is no power on earth today to compel all laboratories to subscribe to any code. That means that the ones who really need regulation would not subscribe. And any thought to put teeth into the code by having dentists patronize only code members is equally futile.

"Dentists who today ask or force laboratory men to take impressions for them and fit dentures, knowing they are asking the technicians to violate the law, would still want those services. Just as dentists who induce their laboratories to sell them gold in violation of the Federal statutes and local sales taxes would still want those services. A laboratory code, unless backed by state enforcement, can neither keep laboratories from shady practices nor reform conniving dentists. And state enforcement gets you right back to something approaching 'statutory regulation.' It is well-nigh inescapable.

"The Technician hopes to hear more from 'A. W.'"

The second article is an abstract by Dr. William J. Gies, of his extemporaneous address, "Application of the Golden Rule to Dentist-Laboratory Relation," before the Associated Dental Laboratories, Inc., on March 1, 1938. This paper is unique in that it contains the first carefully formulated plan looking toward mutual agreement between the profession and the laboratories. The original paper was presented at a meeting of the First District Dental Society of the State of New York, February 7, 1938, and published in the New York Journal of Dentistry in the May and June issues, 1938. The abstract appeared in the Laboratory Technician, and in The Dental Craftsman. The abstract follows:

"APPLICATION OF GOLDEN RULE TO GUIDE DENTIST-LABORATORY RELATION

By WILLIAM J. GIES, B.S., M.S., Sc.D., LL.D.
Columbia University, New York City

"'Self-preservation is the first law of nature.' Livelihood is a means of self-preservation. To earn an income sufficient for a life in self-

86Laboratory Technician, 11, 3; 1938, May.
87The Dental Craftsman, 12, 4; 1938, July."
respect and comfort is a worthy purpose which every man should have for himself and family and to which it is un-American to object. Our socio-economic system should invariably be fair not only to the most privileged, but also to the least fortunate. In a democracy the Golden Rule should always be at the bases of economic conditions, progressive developments and corrections of injustice.

"The many varieties of activity, ranging from self-help to work for others, in every community, have collectively been divided into many definite services. In this division of labor there are differences in grades of responsibility, understanding, ability, activity, etc., requiring dissimilar degrees of aptitude, comprehension, devotion, education, skill, etc.

"In the field of health service, the main divisions of labor are those in charge of public-health officers, physicians, dentists, pharmacists, etc. Each worker, in this broad field, is educated and trained to perform services that are responsibly and directly related to the conservation of the health of individuals or of the community.

"The public welfare requires that all health-service functions, however independent they may be in some respects, should be intimately coordinated to the common end of giving the greatest value of service in return for adequate remuneration. In this coordination, each service and each servant—like the parts in an efficient machine—bear different though definite mechanical and functional relations to one another, in which both major and minor correlations combine to make the effective whole.

"Dentistry is a natural division of health service. It is one of the autonomous health-service professions. In the United States only those who, after personal examination by official representatives of a state, have been adjudged to be adequately educated and competent to perform the whole range of duties in dental health-care are admissible to the responsibilities and privileges of dental practice.

"Unfortunately, despite the presumptive understanding and precautions of each state's examiners, some men who are unworthy of this trust are unwittingly admitted to the practice of dentistry. This undesirable condition in dentistry is like the similar public misfortune in all other professions, in each of which the proverbial 'black sheep' also appear.

"Wrong View of Dentures

"It is often lightly assumed that artificial dentures and similar dental restorations—the production and adjustment of which are important phases of dentistry—'can be made and put in place' by anybody having the requisite mechanical skill; and also that such replacements are as
purely mechanical in production, use and import as an ordinary crutch. This superficial idea was acceptable a hundred years ago, when dentistry was regarded chiefly as a mechanical trade and not taken seriously as a factor in the conservation of health. But the advancement of biological knowledge of dental prosthetic sequelae has reduced such irresponsible views to absurdity.

"Dental restoration or substitution, a common aspect of dental health-service, is a mechanical treatment of a biological state. The biological requirements of an abnormal or pathological dental condition determine the scope and nature of the most desirable mechanical treatment. Mechanical dental restoration cannot be dental health-service unless the restoration is concordant with the attendant variable biological condition. Dental prosthesis is an essential phase of sincere and effective dental practice. The dentist who disregards this obvious fact is one of the professional 'black sheep' mentioned above.

"The practice of dentistry may be conveniently envisaged as consisting of (1) primary procedures inside, and (2) secondary procedures outside, of the mouth of the patient. Dentists are educated and trained to do 'everything' in each group of procedures; but, in the conduct of the secondary group, may obtain the help of any person competent to give the needed assistance.

"The boundary between dental practice and technical assistance may be indicated by the statement that a technician may lawfully perform any cooperative act outside of the mouth that would aid a dentist to conduct a procedure of legitimate dental practice within the mouth. It is obvious that a practitioner who, in prosthetic work, takes accurate impressions, does all of the preparatory work with a patient, and correctly idealizes, designs, plans—and biologically and esthetically evaluates and adjusts—an appliance, need not be his own executant of the extra-oral procedures, but may properly obtain the help of technicians in the purely mechanical aspects of this work. In fact, where he can devote practically all of his working time to intra-oral care for his patients, it would be a waste of his more valuable talent and time in direct-health service if he did not obtain such assistance for this purpose.'

"Rise of Laboratories

"As the practice of dentistry expanded, and the applications of the sciences to intra-oral procedures multiplied, the work of competent technical assistants rose to the importance and dignity of a vocation. Dental technicians, as assistants in dental practice, have become desirable adju-
vants in an increasing number of dental offices; and the number of commercial dental-laboratories has grown rapidly in accord with—perhaps in advance of—the call for technical assistance in dental practice.

"In the dental field, the natural and desirable aspirations common to all groups of men to improve their social status and promote their economic welfare, have tended to obscure some essential conditions, two of which are these:

"(1) Dental practice is authorized and regulated by the state for the benefit primarily of the whole body of citizens, not primarily for the benefit of dentists.

"(2) Dental technicians are assistants to dentists, not substitutes for dentists. Dental technicians are not trained to be dentists nor to practice any part of dental health-care. This statement is quite as correct as the assertion that dentists are not trained to be physicians or pharmacists, nor to be substitutes for them—or as the reverse.

"Problems arising from the relations between dentists and technicians (laboratories), and directly affecting the public welfare, have become important and their solution is urgent for several reasons, among which are these:

"(a) Some dentists encourage, invite, or permit technicians to render, within the mouths of patients, services which, by statute, only licensed dentists may give.

"(b) In this way the dental statutes are being violated not only by some technicians, but also by some dentists who are unwilling or unable to meet current requirements in dental practice.

"(c) Some technicians, on their own initiative, violate the dental statutes by preparing and independently inserting what they represent to be adequate dental restorations.

"(d) Some commercial dental-laboratories, as in effect organized groups of technicians, knowingly participate in unlawful dental practices.

"The health-welfare of the public requires strict enforcement of the statutes that prohibit intra-oral services by any person not licensed to perform them. None of the dentist's professional obligations to the patient, in direct personal intra-oral treatment, can be lawfully or rightfully delegated to any technician under any circumstances—excepting in states where dental hygienists may clean the exposed surfaces of teeth under the direct supervision of dentists. Technicians are receiving demoralizing evidence to the effect that some dentists—untrue to their professional obligations—induce the technicians to violate the dental-practice acts. Accord-
ingly, technicians are naturally encouraged to raise this question: If some technicians are concededly more competent than some dentists to practice various aspects of prosthetic dentistry, why should not technicians be given legal authorization to do this work? It is a public obligation of licensed dentists, who owing to their proficiency have been entrusted by the state to serve the public in dental health-care, to take effective measures, especially through the influence of professional organizations, to halt and to prevent recurrence of illegal practice of dentistry, wherever it occurs.

"Technicians, giving manual assistance to dentists, should aim to do this work well and dependably, but should neither wish nor be willing to encroach upon the dental practitioner's professional responsibility. A technician's purpose to be a competent and reputable technician is an honorable aim that merits approbation and support. But such a technician does not desire to be a pseudo-dentist. The public welfare requires that each technician who wishes to become a dentist should be required to graduate from an acceptable dental school, pass a licensing examination, and be duly licensed to practise dentistry.

"These very deplorable conditions (summarized in (a) to (d) above), which seem to be growing worse, portend not only deficient dental health-care for the public but also disaster for both dentists and technicians. What can and should be done constructively, in the interest of all concerned?"

"Suggested Solution"

"Believing that all of these problems can and should be solved in complete harmony with the best interests of the public as a whole, and also with due regard for the welfare of dentists and technicians, the following procedure has been suggested:

"Ascertain, and compile a statement of, all the significant realities in existing conditions, and apply the philosophy of the Golden Rule to their correction and coordination in the public interest. To this end conduct a systematic inquiry that would reveal all that ought to be learned reliably. Agree—dentists and laboratories—upon a sincere and faithful mutual procedure that the outcome of the proposed inquiry would indicate. Then formally list, recurrently, for the information of all concerned, the technicians and laboratories that are officially adjudged to be reputable and worthy of dental patronage."

"To implement these general proposals—to protect the public interest, and to facilitate intimate and fortunate accord between dentists and
commercial dental-laboratories (technicians) without disability for either—the following first step has been proposed:

"Organized dentistry and the organized commercial dental-laboratories should conduct a joint study (a) of the conditions and procedures in the relationship between dentist and technician (laboratory); (b) of the training of technicians, and (c) of the organization, quality and efficiency of existing commercial dental-laboratories."

"The proposed study should be conducted, without prejudice or hostility, on a basis of strict and complete fairness to every interest concerned—on the Golden Rule, applied faithfully to the interests of the public, the profession and the technicians (laboratories). The plan could be initiated and tested, for the nation, in this metropolitan district. Representatives of the three groups—public, profession, laboratories—should be included in all phases of the study.

"It is probable that this study would enable organized dentistry and the organized commercial dental-laboratories to develop a working agreement (code) on desirable relationships, amicable cooperation, just procedures, etc., under which could be established and maintained a mutually satisfactory means for the public accreditation (registration) of individual dental technicians and of individual dental laboratories."

In the same issue of the Laboratory Technician is an editorial, as copied below, which discusses Dr. Gies' paper.28

"FINDINGS

"Dr. Gies Discusses Dentist-Laboratory Relationship

"In an illuminating article by William J. Gies, one of the outstanding figures in dental education, the role of dentistry and the laboratories in attaining the ideal of public health service is clearly stated. Dr. Gies therein stresses that the responsibility for illegal practice is shared (1) by those among the dentists who encourage intra-oral services by the technician, and (2) by those among the technicians who independently undertake such services.

"Of special interest to the laboratories is Dr. Gies' statement that the technician's aim to be a competent and reputable technician is honorable and deserves approval and support; also that such a technician does not wish to be a pseudo-dentist.

28Laboratory Technician, xi, 14; 1938, May.
"To overcome the tendency toward illegal practice, Dr. Gies suggests the cooperation of the public, organized dentistry and the organized laboratories toward a joint study-plan leading to a ‘code’ of desirable procedures and to the eventual ‘registration’ of dental technicians.

"Dr. Gies’ impartial survey of existing evils and his proposals merit your careful attention and consideration."

**Who Shall Do The Laboratory Work?**

In the *Dental Items of Interest* for June, 1938, appeared an editorial entitled “The Dentist in Recession”. This editorial elicited a rather bold reply in the *Dental Observer* of July 1, 1938, therefore an abstract of the pertinent parts of it are given and followed by the reply.

**"THE DENTIST IN RECESSION"**

"Furthermore, there is only one common-sense road to recovery and that is the old-fashioned road of hard work, illuminated by a willingness to be honest and fair with the other fellow. To this end it is suggested that all dentists become acquainted with their fellow practitioners, attend dental meetings, and above all, apply themselves to their professional tasks as they never have before. The idle hours are here. Why not dust off the old Vulcanizer, and do our own laboratory work? Admittedly, mechanical dentistry is hard work, yet it is in no sense degrading and it will really turn those idle hours to a nice profit. . . .

"The satisfaction that one derives from doing his own laboratory work is far more than a saving, for there is a real pleasure derived from the creation of a fine piece of mechanical dentistry that cannot be measured in monetary terms.

"The above suggestions should, in no sense, be considered antagonistic to the legitimate commercial laboratories; far be it from such, for used intelligently they are indispensable to the practice of modern dentistry. They do not, however, have any place in the denture construction of dentists who have idle hours on their hands. Nor do they have any place in professional service where they are used to maintain a practice on a mass production basis.

"Hard times are with us and we must view with suspicion laboratories that are edging in on the dental supply business. Their ambition for

---

*Dental Items of Interest, 60, 575; 1938, June.*
expansion might possibly lead them to include the practice of dentistry as a legitimate part of their activities." . . .

The above editorial was followed by an editorial in the Dental Observer as copied below:

"POOR REASONING 40

"In a recent editorial, one of our contemporaries makes what (he) it considers to be a constructive suggestion to the dentists. (He) It suggests (?) that inasmuch as the summer months are upon us with the consequent let-down in business that the dentist should occupy his leisure time with something entertaining and at the same time profitable. Our worthy contemporary suggests that the dentist do his own laboratory work.

"The foolhardiness of such a suggestion is immediately apparent. In the first place most dentists have shunned such work for so long that any attempts they may make in that direction cannot help but be noticeably inferior to that done by a skilled technician. By so doing the dentist is risking, not only the good will and faith of his patients, but the very health and well-being of their practice(s).

"In the second place the suggestion is obviously economically unsound. Granted that the dentist is capable of turning out as expert and finished a job as the skilled technician. Granted that since he has nothing else to occupy his time, (and) to do such work would be to save himself money, in the long run he would be the loser. The many dental laboratories and the technicians dependent upon (dentists') his patronage for existence would be thrown out of work. A vicious cycle of unemployment and reduced living standards would result that would react unfavorably on the profession as a whole with a still greater reduction of business. Also, these many unemployed technicians, with hungry mouths to feed, would be forced into illegal practice and cut further into the legitimate dentist's practice.

"We suggest that the dentist apply his leisure time to more constructive pursuits than to add further to one of the greatest economic crises ever facing the profession and its allied trades. Firstly, we believe that every member of the profession has been storing up a mass of literature and reading matter that he has never had the time to read. Some of these slow days may be put to admirable advantage to catch up on his reading.

"However, the most important use to which the practitioner can put

40Dental Observer, 3, 4; 1938, July.
his spare time, we believe is to the making of friends. Dentists are not allowed to advertise, but there is no law that says they may not make friends, join civic and social organizations, be prominent in local movements. In this way they become known and looked up to and with their growing popularity and as their circle of friends and acquaintances expands, so will their practice(s).

“We have never favored the principle of living at the expense of somebody else. The dentist has a right to live and to earn a reasonable living—but so has the technician. There is enough work for both, if it is sought in the proper manner.”

The above critical editorial presumes that the laboratory phases of prosthetic dentistry belong by right to the technician. If some of the technicians boldly try to appropriate what has not been granted to them by license, what might we expect, if and when the activities of commercial laboratory technicians should be legalized by license? Such an outburst as this will make the dental profession more opposed to licensing technicians and more determined in protecting its own rights.

Proposed Questionnaire to Selected Groups of Dentists

Looking to the future, the Committee submits for the consideration of the Regents a questionnaire which is self-explanatory. This would be sent to two thousand dentists, approximately. The problems of expense and the probable value of such data are referred to the Regents for advice and instruction:

PROPOSED QUESTIONNAIRE SUBMITTED BY THE COMMITTEE ON DENTAL PROSTHETIC SERVICE OF THE AMERICAN COLLEGE OF DENTISTS TO SELECTED GROUPS OF AMERICAN DENTISTS.

NOTE: Please read all of the questions before you begin to answer any of them. Answers will be regarded confidential.

1. While you were a student in dental school, did you receive sufficient technical laboratory and clinical instruction in prosthetic dentistry to enable you to satisfactorily make full and partial dentures, crowns and bridges for your patients when you began to practice dentistry in your own office? Yes____. No____.
Were you qualified to do the laboratory work as well as the chairside work involved in the above prosthetic restorations? Yes. No.

2. How much technical and clinical prosthetic work do you estimate should be made by a dental student while in school, so that he will be properly prepared to adequately care for his patients after he enters practice? Please state how many crowns, bridges, partial dentures and full dentures a student should make in the technical or preclinical work, and how many should be made for patients in the school clinic.

<table>
<thead>
<tr>
<th></th>
<th>Number in technic</th>
<th>Number in clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crowns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial dentures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full dentures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. (a) Were you required while a student in the dental school to do all the laboratory work connected with your prosthetic restorations, (b) or were some of the laboratory steps done for you by technicians either inside or outside of the school? (a) Yes. No. (b) Yes. No.

4. Were you taught to be self-reliant (Yes. No.) or were you taught to depend upon the commercial dental laboratories after graduation? Yes. No.

Were you told anything about the commercial dental laboratory when you were a student? Yes. No.

Did your teachers approve, condemn, or remain silent on the laboratory question? (Underscore.)

5. Have you found it necessary to call upon a laboratory technician for assistance in making impressions, or in designing restorations, especially partial dentures, selecting artificial teeth or other work for your patients? Yes, for impressions, design, selecting teeth, or other chairside work. (Underscore.) No.

6. Do you patronize the commercial dental laboratory? Yes. No.

If you patronize the laboratory, please check reasons below:
(a) Because of inadequate training while in dental school.
(b) Advertising by laboratories.
(c) Dislike for laboratory work.
(d) Salesmanship of laboratory representatives.
(e) It is more economical.
(f) It saves time.
(g) I do not have space for laboratory.
(h) Lack of laboratory equipment.
(i) I cannot do certain kinds of work...
(j) The laboratory can do the work better than I...
(k) Some other reason

Are you satisfied with the work done by the commercial dental laboratory? Yes No

State deficiencies and needed improvements

Did you make up your mind while a student to send your prosthetic work to the commercial dental laboratory after graduation? Yes No

Were you already in practice before you decided to patronize the commercial dental laboratory? Yes No

Please list below all those steps you have done by the commercial dental laboratory when making (a), (b), (c) and (d) below.

Note: If you do all of your own work, mark (all) in the proper places. If you do not do all your own work state whether you are assisted by an assistant or a technician in your own office, or by the commercial dental laboratory.

(a) Crown
(b) Bridge
(c) Partial denture
(d) Full denture

What particular kind of work does the commercial dental laboratory do best?

State the total annual volume of business you send to the commercial dental laboratory. $.

Do you explain to your patients that you have the commercial dental laboratory do part of your work? Yes No

Could you continue to practice prosthetic dentistry without the assistance of the commercial dental laboratory? Yes No

Do you estimate your fees on the basis of the laboratory charges? Yes No

Would you charge the same fee if you had done all of the laboratory work yourself? Yes No

7. In view of the prevalence of dental laboratories, do you think that dental schools should continue to teach dental students how to do the technical and laboratory procedures involved in making crowns, bridges and dentures? Yes No
8. What is your reaction to the fact that some commercial dental laboratories have developed and exclusively control the fabrication of partial dentures of stainless steel, which material cannot be fabricated by the average dentist?
   Explain: ____________________________________________________________

9. To what causes would you attribute the rapid growth and widespread patronage of the commercial dental laboratory since 1920?

10. In seeking a satisfactory profession-laboratory relation, do you favor:
   (a) Licensing dental technicians (as they are) by the state? ________
   (b) Training, and examining dental technicians by dental schools, then certifying them to assist the dentist? ________
   (c) Professional supervision of already existing commercial dental laboratories? ________
   (d) Laboratories organized, operated and supervised by the dental profession? ________
   (e) An assistant or technician in your own office and under your own control? ________
   (f) Disregarding the present situation in the hope that it will correct itself? ________
   (g) Some other plan of your own, as follows: __________________________

11. Can you see any danger to the profession in the rapid numerical growth and in the widening scope of the activities of the commercial dental laboratories? Yes_____. No_____.

12. Do you believe the dental laboratories will demand laws permitting them to practice prosthetic dentistry, independent of the dental profession, if and when conditions are favorable for such legislation? Yes_____. No_____.

In concluding its report your Committee is pleased to refer to friendly overtures now being made by those larger laboratories whose business is interstate in character. The regulations of the new Wages and Hours Bill will impose an increase in operating expenses unless it can be shown that such laboratories are in reality a Professional Service Industry. The profession has been ap-
proached for an official statement which would declare the laboratories an adjunct of the profession and therefore entitled to exemption. This latest move affirms what the profession has always maintained, namely that the laboratories are adjuncts of the profession and can function harmoniously as such, only when under the jurisdiction of the profession. In view of this conciliatory attitude on the part of the influential laboratories the way is now opened for a conference between the profession and the laboratory. Such a conference is imperative. The longer we postpone a study of our mutual problems the more difficult it will be to find an amicable solution. Your Committee has been informed that the better laboratories are waiting for dentistry to make the next move. They agree that the technician problem can never be solved until the profession helps to solve it. Further they believe that it is the duty of the profession to train the technicians and to exert supervisory control of the industry which in reality is an adjunct of the dental profession. Complete cooperation has been assured and the friendly laboratories await the profession’s answer.

Recommendations

1. There should be greater vigilance by the profession to prevent the licensing of technicians.

2. There should be more widespread employment of dental technicians by dentists in their own offices.

3. Widespread appeals should be made to the members of the dental profession to protect the oral health of the public, and to discharge their professional responsibilities, by refraining from the use of dental technicians as assistants in performing intra-oral phases of prosthetic practice.

4. A joint study of the profession-technician relation should be undertaken by a committee composed of members of the American College of Dentists and representatives of the laboratory technicians.
5. The College should suggest to the American Association of Dental Schools that they sponsor a study of the need for, and of plans for, training, examining, certifying and supervising dental technicians, by the dental profession.

6. There should be wider distribution to the profession of information on the important question of profession-technician relationship.

XII. JOURNALISM

J. Cannon Black, D.D.S., Chairman

The Commission, reporting on its activities for the year 1937-1938, desires to call attention to the discussion which has been taking place since 1936 in the Journal of the American College of Dentists between the editor of that Journal and numerous editors of proprietary dental journals.

As a basis for this discussion, a letter was sent to editors of all proprietary dental journals with a brief statement of the affirmative side of the question, “Should proprietary dental journals be discontinued?”, and inviting them to present the negative. The invitation was welcomed by a number of the editors and their associates.

In the early communications many of these opinions were biased and became lengthy dissertations, influenced by emotion rather than judgment. Two editors withdrew their names from editorial boards. As the discussion progressed, thought was given to an essential understanding of existing conditions.

From facts presented in this discussion, it became evident that a reclassification of dental journals was necessary, emphasizing control rather than ownership. Therefore, for consideration


and study, the editor of our journal suggested the following classification for discussion:

(A) Periodicals controlled and owned by dental societies.
(B) Periodicals controlled by dental societies, but privately owned.
(C) Periodicals privately controlled:
   (a) By owners exclusively engaged in the business of publication.
   (b) By owners not exclusively engaged in the business of publication.

Your Commission, after giving this suggestion careful study, recommended to the Regents at the Chicago meeting, February 13, 1938, that the above classification be adopted. This they unanimously did, and the ruling became effective as of that date for the American College of Dentists.

After the new classification, special attention was given by the Commission to the status of the American Journal of Orthodontics and Oral Surgery, and a report was presented to the Regents for their decision. Following due consideration and subsequent favorable action, notices were sent simultaneously, on February 24, 1938, to the President of the Association of Orthodontists and to the owners of the Journal. The text follows:

"The Regents of the American College of Dentists, at a meeting in Chicago on February 13, 1938, received from the Commission on Journalism a report that included references to the American Journal of Orthodontics and Oral Surgery, and a report was presented to the Regents for their decision. Following due consideration and subsequent favorable action, notices were sent simultaneously, on February 24, 1938, to the President of the Association of Orthodontists and to the owners of the Journal. The text follows:

"The Regents of the American College of Dentists, at a meeting in Chicago on February 13, 1938, received from the Commission on Journalism a report that included references to the American Journal of Orthodontics and Oral Surgery, and a report was presented to the Regents for their decision. Following due consideration and subsequent favorable action, notices were sent simultaneously, on February 24, 1938, to the President of the Association of Orthodontists and to the owners of the Journal. The text follows:

"The Regents of the American College of Dentists, at a meeting in Chicago on February 13, 1938, received from the Commission on Journalism a report that included references to the American Journal of Orthodontics and Oral Surgery, and a report was presented to the Regents for their decision. Following due consideration and subsequent favorable action, notices were sent simultaneously, on February 24, 1938, to the President of the Association of Orthodontists and to the owners of the Journal. The text follows:

"The Regents—acting on this report and believing that the Association's control of the A.J.O.O.S., which is now only nominal and informal,
could be made actual and formal to the great advantage of the dental profession, the Association, the owner, and the journal—voted (a) to remove the \textit{A.J.O.O.S.} provisionally from the Commission's list of non-acceptable journals; (b) to give that journal publicly a temporary accreditation as a periodical controlled by a dental society; and (c) to continue that temporary accreditation until the present nominal control has been converted into legal control, by formal contract between the Association and the owner, providing the said legal control will be obtained before the adjournment of the annual meeting of the A.A.O. in 1939."

At the present time, so far as the Commission has been able to ascertain, no communication has been received from the officials of the A. A. O. or the publisher of the A. J. O. O. S. regarding any action taken.

Realizing that no authentic data was available as to the space which was being occupied for the publication of original articles in our journals, or the subject matter chosen by the writers, your Commission made a survey of such articles, using as their authority the official \textit{Dental Index} for the years 1935, 1936, and 1937. Editorials and President's addresses, although classed as original communications, were omitted. For comparison, the proprietary and non-proprietary journals were separated.

It was of interest to note that with 106 non-proprietary dental journals listed as being published in 1936, only 38 of them, over the three years surveyed, contained articles of sufficient value to be recorded in the \textit{Dental Index}.

The articles were classified under eleven headings. Pathology led the list of subjects chosen, with Oral Surgery, Orthodontia, and Operative Dentistry following.

There was an increase of 1013 pages in 1936 over 1935, but a decrease of 80 pages in 1937 over 1936. This loss becomes greater when we consider that the 1937 survey included \textit{The Dental Cosmos}, formerly a proprietary journal, which in 1936 was indexed as having 1055 pages.

A comparison of the merger of \textit{The Dental Cosmos} and the
Journal of the American Dental Association is also interesting. In 1936 the Journal of the American Dental Association published 2070 pages of original articles, and The Dental Cosmos 1055—a total of 3125 pages. In 1937, the journals having been united, only 1475 pages were devoted to original articles,—a loss of 1650.

Using the same classification of subjects in the proprietary survey, we notice that in 1935 pathology comes second, in 1936, first, and in 1937, third. The number of pages on all subjects indexed for 1935 was 3340; for 1936, 3683; and for 1937, 2314—this year having 1369 less pages than 1936 when The Cosmos was not in their ranks.

These findings are further reduced, if the number of original articles published in the Dental Items of Interest and the International Journal of Orthodontia and Oral Surgery are removed. It was noticed that most of the articles indexed from the Dental Items of Interest were continued in sequence from month to month, giving rise to the thought that they were not designed as unified articles for journalistic publication, but as a serial presentation for a later book.

The International Journal of Orthodontia and Oral Surgery, although classified as a proprietary journal, receives nearly all of its original articles from a professional organization. It should by right be placed in the non-proprietary group. If this assumption is correct, then removing these two journals from the proprietary group, the final result would be: total number of pages in 1935, 1707; in 1936, 1659; and in 1937, 418. It will be noticed there is a gradual loss during the three years, but the excessive loss in 1937 is evidently the result of the transfer of The Dental Cosmos.

Let us look at three of the proprietary give-away magazines, Oral Hygiene, the oldest publication of its class, whose editors have for years been endeavoring to justify its existence as a
magazine which was of great value to the profession, and whose present editor took a leading part in the discussion on proprietary journals, falls far short of the claims made for it. The survey shows that there were only six pages, during the last three years, which were considered of sufficient value to be indexed and these were in the year 1935. Can the professional value be high when the monthly distribution is free?

*Dental Survey* has a little better record in the Index, for during the year 1937 thirty-three pages were recorded. Some time ago this publication was declared the official journal of the Pierre Fauchard Academy. Since then the Commission has been looking for an announcement of the purpose of the organization, the names of the men who are guiding its activities, and the qualifications for membership.

*Nutrition and Dental Health* is in its fourth volume, but we do not find any mention of this journal in the Index during the last three years. It is noticeable that the size of the publication has been reduced, and that their editorial board is constantly changing. We also note that its policy is under the sole control of the editors with the advice and counsel of the editorial board, but in order that it may be distributed free to the members of the profession, a commercial company gladly takes care of the expense.

Speaking of control, the following is quoted from an article on "Dental Economics" published in the September, 1938, issue of this journal, written by C. B. Warner, who is the latest addition to its editorial board:

"The press often recites how doctors split fees or do dishonest operations, yet can you name me a newspaper that is not influenced by its political party or by its advertising contracts? If that is not dishonesty I do not know the word. Of course, all newspapers claim that their editorial policy is not affected by its advertising, but try running a radical newspaper and see how quickly big business makes you flop."

Does big business control the circulation of this publication?
Can a journal exist without readers? Who controls the policy? The statement made by an associate editor of the subsidized publication, is convicting.

These are only a few of the facts shown in the survey, a copy of which is attached to this report.

Since our last report a new journal named *Cal* has been presented to the profession by Coe’s Laboratories. Quoting from an editorial in the October, 1938, issue, they state their motive for launching such a publication.

“Last month we asked the profession for comments on *Cal*. Although quite a few wrote in, we do not believe that the response represented a true extent of interest. The success of *Cal* is important to us. If the profession is interested in material of this type, the Certified Laboratories and ourselves are prepared to carry the program further. We now have under consideration the preparation of attractive ethical educational material for placement in your reception room and for distribution to patients.”

While posing as a journal of professional value to dentists, you will notice that they state in the editorial that “the success of *Cal* is important to us.” Also that they, as laboratories, are desirous of assuming the prerogatives of a profession in attempting to educate the public in dental health.

This leads us to an allied subject—*The Dental Institute of America*—which was promoted in 1935 by a few representatives of dental laboratories who suggested raising funds for the purpose of creating an organization whose duty would be to make the public dental-minded through the press.

Control of this organization was said to be placed in the hands of the dental members serving on the board of governors, this board consisting of five dentists; ten representatives from the dental trades and laboratories; and two from the public. This made seventeen members in the governing body, with the five dentists having the right to rule. Such a method of authority could not be accepted by those who were asked to participate;
therefore a change was made, and a board of directors consisting of dentists was elected, but with a representative of the laboratories as one of the officers.

With dentists as a front to aid in approaching the profession, an effort is now being made to educate the public under lay supervision.

The Secretary of the Institute is President of the laboratories which are publishing the new proprietary journal, Cal. He admits that their laboratories will furnish material to educate prospective patients along professional lines.

The President of another large laboratory is attempting to raise funds to carry on the work of the Institute.

Have the dental representatives on the Board control when the finances are secured by such methods?

There is an outstanding need for educating the public to a keener appreciation of oral health, and an effort must be made by organized dentistry to make such knowledge available, but your Commission cannot condone the activities of a group of men who are endeavoring to promote public health without the guidance of the organized profession.

In our 1937 report reference was made to the appointment of a sub-committee by your Commission, with Dr. E. G. Meisel as chairman, to make a study of dental journals looking to their improvement. This Committee was still active when a communication was received from the chairman of a similar committee appointed by the American Association of Dental Editors, stating that a recommendation had been presented to that body suggesting a study of all non-proprietary dental publications, to determine ways and means for betterment; that the Commission on Journalism of the American College of Dentists be asked to cooperate, and from this recommendation the Survey Committee was created. Our Commission was then asked to assist.

The aims of the committees being identical, the study being
conducted by the Commission’s sub-committee was discontinued, and Dr. Meisel was appointed to cooperate with the Committee of the Editor’s Association. Two questionnaires have been sent to all editors, and excellent cooperation is being shown. A detailed report of the Committees’ activities will be presented to the Association of Dental Editors during their meeting in St. Louis.

In the report of the Commission, last year, special emphasis was placed upon the study which had been made in regard to the presentation of an Editorial Award. A plan was recommended and offered to the Regents for their approval. After their serious consideration, a committee of three was appointed—one each from the Dental Editors Association, the Regents, and our Commission—to review the award situation and report their findings at the next Convocation.

Your Commission, although realizing the assignment is difficult and that there are many obstacles to overcome, is still of the opinion that an award should be given: a gold medal for the best editorial in a non-proprietary journal, and a silver medal for the best student editorial.

Since the presentation of *The Dental Cosmos* to organized dentistry, many have been dissatisfied with the contract which was given the S. S. White Company, and with the consolidation of the journal with our official publication.

The Trustees of the American Dental Association, as an aid in their study of the problem, referred the question of the disposition of the journal to a Committee which was ordered to report at the St. Louis meeting.

Early in the year the Commission recommended to the Presidents of all State societies that the cause of non-proprietary dental journalism be given some definite recognition at their next State meeting. Their response was generous and encouraging.

Many progressive thinkers in the profession are becoming concerned regarding the lack of space in which to record our
dental literature. Articles of scientific value, having been presented, are still awaiting publication.

The Dental Society of the State of New York is now endeavoring to create a publication which will furnish them adequate space for material of merit. A regional journal is proposed, embracing the nine State societies in the Atlantic seaboard states. The plan suggested has already been approved in principle by the Executive Councils of New York, New Jersey, and Massachusetts, and definite action is expected to be taken soon. Their goal is a journal professionally owned and controlled.

Recommendations

1. That the College commend the effort being made by some of our leading men in the East to establish a regional journal for the Atlantic seaboard states.

2. That the College refuse to sanction any effort made to educate the public, through the lay press, on dental health problems, unless sponsored and controlled by organized dentistry.

(The above recommendations were approved by the Regents.—Ed.)

* * *

The Survey


The following is the result of a survey of the non-proprietarv dental journals published in the United States. The object has been to determine the number of pages, pages of discussion and illustrations of all original articles published during the years 1935-1936 and the first eleven months of 1937, these being classified under eleven subjects. President's addresses, editorials and transactions have been omitted. The information was secured from the official files of the Dental Index.
Classification

Dental Anatomy, Histology, Physiology
Pathology
Oral Hygiene
Operative Dentistry
Children's Dentistry
Orthodontia

Radiography
Oral Surgery
Periodontoclasia
Prosthetics
Dental Jurisprudence, Ethics, Socio-economics

Dental periodicals from which original articles were listed in the Dental Index:

Journal of the American Dental Association, 1935-1936
Journal of the American Dental Association and Cosmos, 1937
Illinois Dental Journal
Apollonian
The Bur
Dental Outlook
Harvard Dental Record
Texas Dental Journal
Impressions
Contact Point
Wisconsin Dental Review
Northwest Dentistry
Journal of the California State Dental Association
Journal of Periodontology
Angle Orthodontist
New York Journal of Dentistry
Journal of the Michigan State Dental Society
Journal of the Tennessee State Dental Association
Journal of the American Dental Hygienists Association
Journal of Dental Education

Bulletin of the North Carolina State Dental Society
Journal of Dental Research
Minneapolis Dist. Dental Journal
Washington University Dental Journal
Annals of Dentistry
Journal of the Missouri State Dental Association
Georgetown Dental Journal
New Jersey St. Dental Soc. Journal
Dental Hygiene Quarterly
The Dental Assistant
Journal of Ohio State Dental Soc.
Journal of the Nebraska State Dental Society
Florida Dental Journal
Journal of Am. Coll. of Dentists
Temple Dental Review and Garretsonian
Columbia Dental Review
Journal of the Indiana State Dental Association
Archives of Dental Oral Pathology
Total, 38

*These two journals were published as The Journal of the American Dental Association and Dental Cosmos during 1937.*
Number of non-proprietary dental publications reported by the Commission on Journalism of the American College of Dentists in their 1935-1936 report, 106.

Number of pages of original articles and discussions under classification for years 1935-1936 and first eleven months of 1937:

<table>
<thead>
<tr>
<th>Classification</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Anatomy, Histology, Physiology</td>
<td>113</td>
<td>223</td>
<td>216</td>
</tr>
<tr>
<td>Pathology</td>
<td>559</td>
<td>919</td>
<td>797</td>
</tr>
<tr>
<td>Oral Hygiene</td>
<td>27</td>
<td>80</td>
<td>83</td>
</tr>
<tr>
<td>Operative Dentistry</td>
<td>257</td>
<td>352</td>
<td>331</td>
</tr>
<tr>
<td>Children’s Dentistry</td>
<td>104</td>
<td>116</td>
<td>112</td>
</tr>
<tr>
<td>Orthodontia</td>
<td>275</td>
<td>358</td>
<td>335</td>
</tr>
<tr>
<td>Radiography</td>
<td>47</td>
<td>41</td>
<td>123</td>
</tr>
<tr>
<td>Oral Surgery</td>
<td>286</td>
<td>439</td>
<td>397</td>
</tr>
<tr>
<td>Prosthetics</td>
<td>361</td>
<td>505</td>
<td>317</td>
</tr>
<tr>
<td>Periodontoclasia</td>
<td>124</td>
<td>261</td>
<td>308</td>
</tr>
<tr>
<td>Dental Jurisprudence, Ethics, Socio-economics</td>
<td>539</td>
<td>411</td>
<td>414</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2692</strong></td>
<td><strong>3705</strong></td>
<td><strong>3433</strong></td>
</tr>
</tbody>
</table>

**Supplement**

Under the original survey some of the December articles were included in the Dental Index files for November, as is customary. The following report concludes the remaining December material:

<table>
<thead>
<tr>
<th>Pathology</th>
<th>December 1937</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Journal of the American Dental Association and The Dental Cosmos</td>
<td>6</td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>5</td>
</tr>
<tr>
<td>Dental Outlook</td>
<td>3</td>
</tr>
<tr>
<td>California State Dental Association Journal</td>
<td>1</td>
</tr>
<tr>
<td>International Journal of Dental Research</td>
<td>67</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>82</strong></td>
</tr>
<tr>
<td>Field</td>
<td>Journal</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>ORAL HYGIENE</td>
<td>Illinois State Journal</td>
</tr>
<tr>
<td></td>
<td>Contact Point</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>OPERATIVE DENTISTRY</td>
<td>Contact Point</td>
</tr>
<tr>
<td></td>
<td>California State Dental Association Journal</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>CHILDREN’S DENTISTRY</td>
<td>Michigan State Dental Society Journal</td>
</tr>
<tr>
<td></td>
<td>Nebraska State Dental Association Journal</td>
</tr>
<tr>
<td></td>
<td>Texas State Dental Journal</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>ORTHODONTIA</td>
<td>Michigan State Dental Society Journal</td>
</tr>
<tr>
<td></td>
<td>Dental Outlook</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>ORAL SURGERY</td>
<td>Journal of the American Dental Association and Dental Cosmos</td>
</tr>
<tr>
<td></td>
<td>New York Journal of Dentistry</td>
</tr>
<tr>
<td></td>
<td>Wisconsin Dental Review</td>
</tr>
<tr>
<td></td>
<td>Dental Outlook</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>PROSTHETICS</td>
<td>Dental Outlook</td>
</tr>
<tr>
<td></td>
<td>Missouri State Dental Association Journal</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>DENTAL JURISPRUDENCE, ETHICS, SOCIO-ECONOMICS</td>
<td>California State Dental Association Journal</td>
</tr>
<tr>
<td></td>
<td>Dental Outlook</td>
</tr>
<tr>
<td></td>
<td>Illinois Dental Journal</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>
Number of original articles and discussions under classification for the twelve months of 1937:

Dental Anatomy, Histology, Physiology ........................................ 216
Pathology .................................................................................. 882
Oral Hygiene ................................................................................ 96
Operative Dentistry ....................................................................... 338
Children's Dentistry ..................................................................... 131
Orthodontia .................................................................................. 340
Radiography .................................................................................... 123
Oral Surgery .................................................................................... 420
Prosthetics ....................................................................................... 331
Periodontoclasia ............................................................................ 308
Dental Jurisprudence, Ethics, Socio-economics ................................. 440

Total ................................................................. 3625

A study of the paging of the Journal of the American Dental Association and the Dental Cosmos, a proprietary publication, for the years 1935 and 1936, and the combined paging of these journals in 1937, compared with the total paging of the ten journals in 1936, reveals interesting figures. (These two journals were merged in 1937.)

Total number of pages of original articles and discussions in the Journal of the American Dental Association for the years:

1935 .................. 1388 1936 .................. 2070

Number of pages in the Dental Cosmos:

1935 .................. 1066 1936 .................. 1055

Number of pages in the Journal of the American Dental Association and the Dental Cosmos:

1937 .................. 1475

Number of pages in both journals:

1936 .................. 3125

Comparing the total number of pages of the two journals for 1936 with the total number of pages under the consolidation in 1937, there is shown a loss of 1650 pages.
### DENTAL ANATOMY, HISTOLOGY, PHYSIOLOGY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. D. A.</td>
<td>49</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>32</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>J. of Dental Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td>32</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Harvard Dental Record</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwestern Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Mich. St. Dental Soc. Jour.</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>113</td>
<td>63</td>
</tr>
</tbody>
</table>

### ORAL HYGIENE

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. D. A.</td>
<td>9</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Apollonian</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>New Jersey St. Dental Soc. J.</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Dental Hygiene Quarterly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td>21</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Dental Outlook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Publications</td>
<td>1935</td>
<td>1936</td>
<td>1937</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>No. pages</td>
<td>Disc.</td>
<td>Total</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>372</td>
<td>23</td>
<td>395</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>19</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Apollonian</td>
<td>14</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>The Bur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Outlook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvard Dental Record</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Impressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>4</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>17</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td>6</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>11</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Wash. Univ. Dental Jour.</td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>66</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>New Jersey St. Dental Soc. J.</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>J. Missouri St. Dental Assn.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>536</td>
<td>23</td>
<td>559</td>
</tr>
</tbody>
</table>

**1936**

<table>
<thead>
<tr>
<th></th>
<th>No. pages</th>
<th>Disc.</th>
<th>Total</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>569</td>
<td>6</td>
<td>575</td>
<td>163</td>
</tr>
</tbody>
</table>

**1937**

<table>
<thead>
<tr>
<th></th>
<th>No. pages</th>
<th>Disc.</th>
<th>Total</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>336</td>
<td>336</td>
<td>183</td>
<td></td>
</tr>
</tbody>
</table>

**PROCEEDINGS OF ST. LOUIS CONVOCATION**
### OPERATIVE DENTISTRY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. pages</td>
<td>Disc</td>
<td>Total</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>149</td>
<td>4</td>
<td>153</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>20</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>J. of Dental Education</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>The Dental Assistant</td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>Dental Outlook</td>
<td>28</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>Apollonian</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Mich. St. Dental Soc.</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Soc.</td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td>9</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>New Jersey St. Dental Soc. J.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Ohio St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvard Dental Record</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Nebraska St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>249</td>
<td>8</td>
<td>257</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>58</td>
<td>58</td>
<td>80</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>18</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apollonian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Outlook</td>
<td>17</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>The Bur</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Dental Hygiene Quarterly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida Dental Jour.</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>9</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Am. Col. of Dentists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Dental Assistant</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temple Dental Review and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garretsonian</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>104</td>
<td>80</td>
</tr>
</tbody>
</table>
# Orthodontia

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. D. A.</td>
<td>94</td>
<td>94</td>
<td>132</td>
</tr>
<tr>
<td>J. A. D.A. and Dental Cosmos</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Dental Hygiene Quarterly</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td>167</td>
<td>167</td>
<td>123</td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Wash. Univ. Dental Jour.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>J. Nebraska St. Dental Soc.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Total</td>
<td>273</td>
<td>2</td>
<td>275</td>
</tr>
</tbody>
</table>

# Radiography

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. D. A.</td>
<td>29</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Apollonian</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>The Bur</td>
<td>11</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td>7</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>2</td>
<td>47</td>
</tr>
</tbody>
</table>

**Orthodontia Total**: 275 pages (255 pages, 358 pages, 335 pages, 21 pages)

**Radiography Total**: 47 pages (46 pages, 41 pages, 4 pages, 28 pages, 47 pages)
<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. A. D. A.</td>
<td>153  3</td>
<td>156  4</td>
<td>144</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>21</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Apollonian</td>
<td>19</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>The Bur</td>
<td>37</td>
<td>37</td>
<td>23</td>
</tr>
<tr>
<td>Dental Outlook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Columbia Dental Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash. Univ. Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Missouri St. Dental Assn.</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Dental Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Indiana St. Dental Assn.</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Ohio State Dental Soc.</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Harvard Dental Record</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archives of Dental Oral Pathology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>279  7</td>
<td>286  202</td>
<td>438  1</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>244</td>
<td>244</td>
<td>231</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Apollonian</td>
<td>11</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Dental Outlook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wash. Univ. Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida Dental Jour.</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td>30</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>J. Nebraska St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>J. Missouri St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Impressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Ohio State Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Indiana St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Am. Col. of Dentists</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Temple Dental Review and Garretsonian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>8</td>
<td>361</td>
</tr>
<tr>
<td>Publications</td>
<td>1935</td>
<td></td>
<td>1936</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------</td>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>37</td>
<td>37</td>
<td>112</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>J. of Dental Research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td>37</td>
<td>37</td>
<td>17</td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apollonian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Bur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Outlook</td>
<td>8</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>New Jersey St. Dental Soc. J.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Hygiene Quarterly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Harvard Dental Record</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California St. Dental Assn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Ohio St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>124</td>
<td>256</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>--------------</td>
</tr>
<tr>
<td>J. A. D. A.</td>
<td>162</td>
<td>162</td>
<td>8</td>
</tr>
<tr>
<td>J. A. D. A. and Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Dental Jour.</td>
<td>76</td>
<td>7</td>
<td>83</td>
</tr>
<tr>
<td>Northwest Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. of Dental Education</td>
<td>9</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Apollonian</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>The Bur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Columbia Dental Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Dental Assistant</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>J. Am. Col. of Dentists</td>
<td>52</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>New York J. of Dentistry</td>
<td>23</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Dental Hygiene Quarterly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Outlook</td>
<td>35</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Florida Dental Jour.</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Contact Point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Ohio St. Dental Soc.</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>J. of Periodontology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. A. D. Hygienists Assn.</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Angle Orthodontist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minneapolis Dist. Dental Jour.</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>New Jersey St. Dental Soc. J.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publications</td>
<td>1935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>Annals of Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown Dental Jour.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Tennessee St. Dental Assn.</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Bul. N. Carolina St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. California State Dental Soc.</td>
<td>54</td>
<td>3</td>
<td>57</td>
</tr>
<tr>
<td>J. Michigan St. Dental Soc.</td>
<td>25</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>J. Ohio St. Dental Soc.</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Wisconsin Dental Review</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>J. Missouri St. Dental Assn.</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>J. Nebraska St. Dental Soc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Indiana St. Dental Assn.</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>506</td>
<td>33</td>
<td>539</td>
</tr>
</tbody>
</table>

**DENTAL JURISPRUDENCE, ETHICS, SOCIO-ECONOMICS—CONTINUED**

**PROCEEDINGS OF ST. LOUIS CONVOCATION**
A Survey of Proprietary Dental Periodicals Published in United States in 1935, 1936, and First Eleven Months 1937, by the Commission on Journalism of the American College of Dentists, February, 1938.

The following is the result of a survey of the proprietary dental journals published in the United States. The object has been to determine the number of pages, pages of discussion and illustrations of all original articles published during the years 1935-1936 and the first eleven months of 1937, these being classified under eleven subjects. President's addresses, editorials and transactions have been omitted. The information was secured from the official files of the Dental Index.

Classifications

Dental Anatomy, Histology, Physiology
Pathology
Oral Hygiene
Operative Dentistry
Children's Dentistry
Orthodontia
Radiography
Oral Surgery
Periodontoclasia
Prosthetics
Dental Jurisprudence, Ethics, Socio-Economics

Dental periodicals from which original articles were listed in the Dental Index:

Dental Cosmos, years 1935-36
Dental Digest
Dental Survey
Dental Items of Interest
International Journal of Orthodontia and Oral Surgery
Mouth Health Quarterly
Northwest Journal of Dentistry

Oral Hygiene

Number of pages of original articles and discussions under classification for years 1935-1936, and first eleven months of 1937:

<table>
<thead>
<tr>
<th></th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Anatomy, Histology, Physiology</td>
<td>163</td>
<td>258</td>
<td>25</td>
</tr>
<tr>
<td>Pathology</td>
<td>672</td>
<td>696</td>
<td>336</td>
</tr>
<tr>
<td>Oral Hygiene</td>
<td>71</td>
<td>125</td>
<td>95</td>
</tr>
<tr>
<td>Operative Dentistry</td>
<td>453</td>
<td>230</td>
<td>132</td>
</tr>
<tr>
<td>Children's Dentistry</td>
<td>199</td>
<td>147</td>
<td>69</td>
</tr>
</tbody>
</table>
In breaking down this survey further it was noticeable that most of the original articles indexed from the Dental Items of Interest were continued in sequence from month to month, giving rise to the thought that the intention was to publish them later as books.

The International Journal of Orthodontia and Oral Surgery, although classified as proprietary, receives nearly all of its original articles from a professional organization. These articles should by right be placed with the non-proprietary group.

A summary, therefore, follows with these journals removed:

<table>
<thead>
<tr>
<th>Year</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total of all journals</td>
<td>3440</td>
<td>3683</td>
<td>2145</td>
</tr>
<tr>
<td>Less Items of Interest and I. J. O. O. S.</td>
<td>1733</td>
<td>2024</td>
<td>1777</td>
</tr>
<tr>
<td>Total remaining six journals</td>
<td>1707</td>
<td>1659</td>
<td>368</td>
</tr>
</tbody>
</table>

NOTE: 1937 total—The Dental Cosmos omitted.

Supplement

Under the original survey some December articles were included in the Dental Index files for November, as is customary. The following report concludes the remaining December material:

<table>
<thead>
<tr>
<th>Pathology</th>
<th>December 1937</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>29</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>3</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
</tr>
</tbody>
</table>
### ORAL HYGIENE

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Items of Interest</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

### OPERATIVE DENTISTRY

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Items of Interest</td>
<td>9</td>
<td>9</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12</td>
<td>12</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

### CHILDREN’S DENTISTRY

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Digest</td>
<td>5</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

### ORTHODONTIA

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>54</td>
<td>5</td>
<td>59</td>
<td>49</td>
</tr>
</tbody>
</table>

### ORAL SURGERY

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Digest</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PROSTHETICS

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Survey</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td>8</td>
<td>8</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>24</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

### PERIODONTOCLASIA

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Survey</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

### DENTAL JURISPRUDENCE, ETHICS, SOCIO-ECONOMICS

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
<th>Total</th>
<th>Disc.</th>
<th>Illus.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Survey</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of pages of original articles and discussions under classification for the twelve months of 1937:

- Dental Anatomy, Histology, Physiology: 25
- Pathology: 371
- Oral Hygiene: 113
- Operative Dentistry: 144
- Children’s Dentistry: 74
- Orthodontia: 659
- Radiography: 57
- Oral Surgery: 435
- Periodontoclasia: 48
The additional pages of original articles contained in the December, 1937, issue of the Dental Index changes the findings as shown in the original survey. They now are:

Total of all journals .................................................. 2314
Less Items of Interest and International Journal of Orthodontia and Oral Surgery ................................................. 1896

Total remaining six journals ........................................ 418
### DENTAL ANATOMY, HISTOLOGY, PHYSIOLOGY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>98</td>
<td>98</td>
<td>109</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>6</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Journal of Orthodontia and Oral Surgery</td>
<td>53</td>
<td>4</td>
<td>57</td>
</tr>
<tr>
<td>Mouth Health Quarterly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>4</td>
<td>163</td>
</tr>
</tbody>
</table>

### PATHOLOGY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>405</td>
<td>405</td>
<td>194</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>26</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>106</td>
<td>106</td>
<td>35</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>43</td>
<td>43</td>
<td>11</td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>39</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>672</td>
<td>672</td>
<td>299</td>
</tr>
</tbody>
</table>
## ORAL HYGIENE

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>57</td>
<td>57</td>
<td>49</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>International Journal of Orthodontia and Oral Surgery</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mouth Health Quarterly</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>71</td>
<td>71</td>
<td>59</td>
</tr>
</tbody>
</table>

## OPERATIVE DENTISTRY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>113</td>
<td>113</td>
<td>78</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>26</td>
<td>26</td>
<td>70</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>250</td>
<td>250</td>
<td>376</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>30</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>453</td>
<td>453</td>
<td>560</td>
</tr>
</tbody>
</table>

PROCEEDINGS OF ST. LOUIS CONVOCATION

179
### CHILDREN'S DENTISTRY

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>9</td>
<td>9</td>
<td>63</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td></td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>29</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>150</td>
<td>2</td>
<td>152</td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>197</td>
<td>2</td>
<td>199</td>
</tr>
</tbody>
</table>

### ORTHODONTIA

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>91</td>
<td>91</td>
<td>98</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>62</td>
<td>62</td>
<td>49</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>539</td>
<td>59</td>
<td>598</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>698</td>
<td>59</td>
<td>757</td>
</tr>
<tr>
<td>Publications</td>
<td>1935</td>
<td>1936</td>
<td>1937</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Dental Cosmos</td>
<td>44</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>12</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>6</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Dental Survey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>62</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>128</td>
<td>128</td>
<td>68</td>
</tr>
<tr>
<td>Dental Digest</td>
<td>66</td>
<td>66</td>
<td>128</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>72</td>
<td>72</td>
<td>56</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>14</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>12</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td>292</td>
<td>275</td>
</tr>
</tbody>
</table>
### PROSTHETICS

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th></th>
<th></th>
<th>1936</th>
<th></th>
<th></th>
<th>1937</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>89</td>
<td>89</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td>66</td>
<td>1</td>
<td>67</td>
<td>60</td>
<td>60</td>
<td>226</td>
<td>50</td>
<td>1</td>
<td>51</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>238</td>
<td>238</td>
<td>199</td>
<td>296</td>
<td>296</td>
<td>246</td>
<td>198</td>
<td>198</td>
<td>247</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>107</td>
<td>108</td>
<td>122</td>
<td>90</td>
<td>90</td>
<td>104</td>
<td>47</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>479</td>
<td>2</td>
<td>481</td>
<td>535</td>
<td>535</td>
<td>716</td>
<td>295</td>
<td>1</td>
<td>296</td>
</tr>
</tbody>
</table>

### PERIODONTOCLASIA

<table>
<thead>
<tr>
<th>Publications</th>
<th>1935</th>
<th></th>
<th></th>
<th>1936</th>
<th></th>
<th></th>
<th>1937</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Cosmos</td>
<td>69</td>
<td>69</td>
<td>48</td>
<td>80</td>
<td>80</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td>18</td>
<td>18</td>
<td>30</td>
<td>19</td>
<td>19</td>
<td>36</td>
<td>13</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Dental Survey</td>
<td>28</td>
<td>28</td>
<td>25</td>
<td>28</td>
<td>28</td>
<td>31</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>20</td>
<td>22</td>
<td>18</td>
<td>29</td>
<td>29</td>
<td>11</td>
<td>7</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth Health Quarterly</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>35</td>
<td>2</td>
<td>37</td>
<td>27</td>
<td>27</td>
<td></td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>4</td>
<td>174</td>
<td>189</td>
<td>189</td>
<td>145</td>
<td>39</td>
<td>39</td>
<td>49</td>
</tr>
<tr>
<td>Publication</td>
<td>1935</td>
<td>1936</td>
<td>1937</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Cosmos</td>
<td>43</td>
<td>112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Digest</td>
<td>6</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Items of Interest</td>
<td>7</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Survey</td>
<td>10</td>
<td>24</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Journal of Orthodontia &amp; Oral Surgery</td>
<td>34</td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwest Journal of Dentistry</td>
<td>8</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Hygiene</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>179</td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

PROCEEDINGS OF THE SUBSECTION ON DENTISTRY
FOURTH ANNUAL MEETING: RICHMOND, VA., DEC. 28, 1938.

Compiled by THOMAS J. HILL, D.D.S., F.A.C.D.
Secretary of the Subsection, and Dental Representative in the Council of the American Association for the Advancement of Science,
Western Reserve University, Cleveland, Ohio

(Concluded from March issue, pp. 56-70)

II. AFTERNOON SESSION—CONTINUED


This is a report of an investigation made to ascertain whether the prevention or control of caries before 14 years assures prevention after 14 years; if quiescent periods occur at various ages, in individuals; and if this might be a factor in the results observed in any group, especially if only a short period of time is covered. The report covers three pairs of twins seen on an average of three or four times a year continuously over a period of 14-11-15 years, also 80 cases seen on an average of three or four times a year continuously over a period of 15 years from ages of 6 to 21 years. Numerical incidence of new caries according to ages show variations. Less variation was shown in the identical twins than in fraternal twins. In the study of the group, quiescent periods were shown to be always present. Middle and late years of adolescence are the times at which the greatest evidence of dental caries is shown.


Data were presented showing a concomitant increase in the incidence of caries for the mouth as a whole with an increase in
the number of first permanent molars extracted in 500 boys and girls between the ages of 15 to 19 years. In a second examination of 940 boys and girls between 15 to 19 years of age whose first molars were all present in the mouth and were either all free from caries or from one to all four carious or filled, it was found that the incidence of caries for the mouth as a whole increased with the increase in the number of first molars in the mouth that were filled or carious. When these averages were compared with a group of children in whom one to all four of their first molars had been extracted it was found that in all cases children with one to four of their first molars extracted showed a higher incidence of caries than those with a corresponding number of first molars filled or carious but remaining in the mouth.

Correlation of data on groups of children with one to four first molars extracted in relation to the remaining ones being free from caries, filled or carious, showed: (1) there is an increase in the incidence of caries for the mouth as a whole with the increase in the number of first molars filled or carious; (2) there is an increase in the incidence of caries with the increase in the number of first molars extracted as well as with the increase in fillings or caries in the first molars remaining in the mouth, and (3) that the incidence of caries was in all cases more intensified among those with one to four first molars extracted than among those with an equal number of first molars filled or carious but remaining in the mouth.

Briefly, a child with one to four of his first molars filled or carious showed a corresponding increase in the incidence of caries, in the mouth as a whole. The incidence of caries was intensified, however, with the increase in the number of first molars extracted.

III. Evening Session


The acid neutralizing power of the saliva has been shown to be
definitely affected by diet, a high carbohydrate diet decreasing it, while a diet high in protein and low-carbohydrate vegetables increases it. It is usually, but not always, increased by chewing paraffin, gum, etc. Depending to a great extent upon the food taken, the acid-neutralizing power may drop or rise shortly after eating, returning to normal in a few hours. Since the solution of the enamel in dental caries is undoubtedly a chemical process, and since variations in the hydrogen ion concentration of the surrounding media markedly affects its solubility, it would seem necessary to control all of these factors which may temporarily affect the composition of the saliva in attempting to prove or disprove any relationship between the acid-neutralizing power of the saliva and dental caries.

18. SALIVA AND CARIES. Harry C. Trimble, Ph.D., Boston, Mass.

(a) The rate of secretion of saliva and incidence of dental caries. Under certain standardized conditions, the rate of secretion of saliva by young men is reproducible in tests made at intervals of six to twelve months. Individuals having lower than average rate of secretion of saliva had higher than average incidence of caries during periods of one year. (b) The pH of localized areas and caries. In localized areas of the mouth the acidity, as indicated by the pH, is higher than that of samples of saliva representative of the oral cavity as a unit.


Findings concern rampant decalcification of the enamel of the teeth caused by various drugs and foods in everyday use, which are taken in complete ignorance of their destructive effect on the teeth, and the menace of which the profession does not yet seem to have recognized.

20. CHEMICAL FACTORS IN DENTAL CARIES. L. S. Fosdick, Ph.D., Chicago, Ill.

The very complex problem of dental caries was studied from
a purely chemical point of view. All of the known facts concerning the composition of the saliva and oral tissues were correlated in respect to the chemically possible effects on the teeth. It was suggested that the primary factors that may influence decalcification of the teeth were as follows: 1. The $H^+$ concentration of the saliva. 2. The calcium and phosphate ion concentration of the saliva. 3. The foreign ion concentration of the saliva. 4. The concentration of organic constituents in the saliva.

In so far as the $H^+$ concentration was found to be the most important variable, evidence was given that this was most influenced by the action of enzymes on free sugar, which by a very definite series of reactions is rapidly converted to a series of acids such as phosphoglyceric acid, pyruvic acid, and lactic acid.

Evidence that substantiated the theory that dental caries consists of short intervals of intensive decalcification followed by long intervals of proteolysis of the organic matrix was furnished.


No abstract submitted.

22. CHEMICAL COMPOSITION OF ENAMEL AND DENTIN. Harold C. Hodge, Ph.D., Rochester, N. Y.

Chemical analyses of sound enamel and dentin from carious and non-carious teeth show no significant differences in Ca and P content. Certain physical properties show significant changes in caries.


Composition of salivary mucin; method of preparing mucin from saliva; reactions of mucin with organic acids and with bases, illustrated experimentally; application of these reactions to the inhibiting of dental caries.
Out of the maze of bewilderment, uncertainty, and confusion of the present era of living looms a question which is uppermost in the minds of those members of the dental profession who are cognizant of the existence of a swiftly changing order. There is a growing interest and speculation as to what effect current social, economic, and political developments will have upon the future status of dentistry. Dentists are greatly concerned over this question because it involves their future security as citizens and professional people.

Prediction of our future status in an atmosphere of chaos is too hazardous to attempt with a reasonable degree of success and satisfaction because it demands unprecedented analysis of factors, rare judgment, and daring imagination. We may, however, consider some of the factors involved and anticipate their possible effects upon the state of our profession tomorrow. The future status of dentistry will be determined by an understanding and solution of our current problems.

There are several major issues which are certain to influence our future standing. They have all been created out of the evolutionary development of dentistry, but some of them have assumed extraordinary significance due to the influence of socio-economic and political developments. The most disturbing and troublesome issue before us today, and the one which holds out to us either opportunity or disaster, is our socio-economic problem.

The health service professions are faced with social and economic problems with which they are comparatively unfamiliar and which, consequently, they are unprepared to meet. Individuals and groups of people are conditioned for life largely by their past experiences. All knowledge has its origin in experience. In the conditioning for dental practice our experience has been
largely in the field of dental and medical art and science. An un-
balance has occurred between the scientific and socio-economic de-
velopment in dentistry. We have devoted by far the major
portion of our time and effort to the improvement of the quality
of our service. This is by no means a fault in itself, but we have
neglected to develop satisfactory methods of distribution of den-
tal service for a large section of our population, most of whom
are, in reality, or are said to be, unable to purchase it but all of
whom need it for the enjoyment of health and comfort. The
major socio-economic problem of dentistry is to develop ways
and means of bringing the benefits of our highly developed pro-
fessional and scientific service to those who need it for the enjoy-
ment of comfortable, healthful living; to establish improved and
perhaps new methods of distribution so that a better and more
adequate dental service may be provided for the low-income and
border-line group of our population at low cost. This great prob-
lem has been created as a sequence to evolutionary, and in some
instances, revolutionary changes which have occurred during the
past half century.

This is an era of probably unprecedented worldwide social,
economic, and political change, unrest, and chaos. The major
nations of the world are scrutinizing each other's actions closely.
There is a lack of confidence and trust between and within neigh-
boring nations. New theories of government are being promul-
gated, all in the general direction of radicalism. National security
is a major item in most political party planks and programs
throughout the world. In America there are three legs to the
tripod of social security planning. Old age pensions and work-
men's compensation have already been realized. Health insur-
ance, the third leg of the tripod, is now before the Congress of
the United States for consideration, promoted and backed by the
New Dealers.

It is now certain that the health service professions cannot es-
cape socialization in some form. The State has entered the field
of health service, injecting the influence of politics and finance.
It has become a "pressure" competitor of the professions. The A.M.A. and the A.D.A. have both registered their willingness to cooperate with the Government in a long range program of public health improvement. The professions now definitely advocate preventive and voluntary plans of delivering their services to the low income group as an adjunct to the traditional fee system. Government is committed to compulsory health insurance. In some states private and government cooperatives have either been established or seriously proposed. In one state a compulsory health insurance plan has already been established by a vote of the people. We must realize that the people are going to decide the issues involved by their ballots, directly or indirectly.

Dentistry has not been given serious consideration in the plans thus far proposed. Why, we may ask. The principal reason is that the nature of a large portion of our services creates an entirely different and more difficult problem with respect to administration, distribution, and cost as compared to medical services. Restorative dental service is costly and frequently cannot be placed permanently. The delivery of adequate restorative service at low cost to the adult population offers probably insurmountable obstacles to an insurance plan.

The American concept of adequate dental service has never been provided in any insurance scheme yet established. The most practical, effective, and economical possibilities for the improvement of the dental health of the nation and extension of the benefits of dental service to a larger section of our population are to be found in preventive dentistry and educational programs. Restorative dentistry programs from early pre-school age through the approximate age of 18 years, in addition, are worthy of experimentation. If the youth of our nation could be adequately served and protected up to that approximate age by any system under professional control, it may be possible to include sufficient dentistry under some insurance plan, either with medicine, or independent of it, but administered always under professional control.
The medical aspects of dental service could probably be included in any health insurance program which medicine may adopt. This, however, would endanger the autonomy of dentistry and open the field to the long-scorned, impractical master-technician scheme of service. Some laboratory owners and technicians have long cherished the opportunity to disrupt the unity of dentistry. It is thought by some that the problem of distribution to the masses can only be solved by education on varying levels. It is true that more dentists will be required when service is provided under group plans, but the demand will not be so acute that the shortage will be serious. It will require several years to institute a satisfactory plan of distribution, and the law of supply and demand will provide a sufficient number of operators. Education at varying levels will break up the unity of dentistry and create practitioners with varying abilities and degrees of usefulness to society.

The most uncertain factor in the ultimate solution of our socio-economic problem is the influence of so-called “pressure groups” upon the method of delivering health service to the public. It is to be hoped that those groups, namely labor unions, social service groups, and legislators, will not become impatient and stampede the professions into a position where unwise, inadequate, and dangerous plans will be hurriedly formulated to meet unreasonable demands.

The medical and dental professions, it is true, have been conservative and reluctant to recede in the direction of socialization, because of the well-known faults inherent to the system itself. In the future, dentistry must be watchful in order to prevent an unbalance from occurring in favor of some particular problem by devoting too much attention and energy in the direction, for example, of the socio-economic problem and neglecting others. American dentistry has progressed rapidly toward its objective of becoming the health service equivalent of an oral specialty of medicine. The great progress made has been due, basically, to research in medical and dental science. We can reach the position
to which we aspire only through the background of research, with a continuance of the development of dentistry as an art and science, and the establishment of methods of distribution which will bring our services to a larger number of people.

If we are to attain our objective of professionalism, we must also continue to improve and control our journalism. The organization of the Commission on Journalism of the A.C.D. a few years ago marked a new and effective effort to purge the profession of undesirable dental journals. A continuance of the same quality of effort will assure a satisfactory future for dental journalism.

Dentistry over a period of nearly one hundred years of existence as a profession has gained notable recognition from medicine as an important division of health service. We are still unsatisfied with our medico-dental relations, but there are many hopeful indications of improvement. Dentistry will either continue as a profession and ultimately gain the objective of equivalence to an oral specialty of medicine where independence with interdependence is perpetuated, or be relegated to the status of a trade, through being disjointed by the pressure of opponent forces.

The future status of dentistry is unpredictable, due to current confusion and uncertainty in socio-economic and political developments. We may, however, anticipate a favorable future for dentistry as an important division of health service if our leaders will analyze our problems wisely, prepare the remedy unselfishly and with reasonable freedom from "pressure groups" and apply it honestly for the benefit of the masses of our population who need it for health and comfort.—G. W. W.

"National Dental Internships"

Each year, usually beginning in January, an increasing number of senior students in dental schools are concerned with the problem of obtaining information on available dental internships in
hospitals, clinics, dispensaries, and similar institutions. These stu-
dents, having decided that they want to devote a year to such prac-
tice, are interested in knowing where they may take this training
to their best advantage. As a rule, their sources of information
generally are inadequate and incomplete.

The administrative officers of the schools offer assistance in vari-
ous ways: prospecti received from certain institutions are posted
for the general information of the student body; current needs of
local hospitals are outlined; oral surgery departments, usually
composed of hospital staff men, offer suggestions. Perhaps the
school officers have a selected list of a few institutions to which
the attention of those students who show interest is directed. A
few hospitals may make selections through personal solicitation
by their staff members, medical or dental. Notices in dental peri-
odicals occasionally appear. In general, however, the means
whereby these students may get the information they want, are
at the best, haphazard, uncertain, and perfunctory.

It would seem, in recognizing this situation, that there is a
definite and urgent need to aid students wishing internships. Sev-
eral groups within the profession are now conducting studies of
the entire dentist-in-hospital problem, and it is likely that in time
these groups will consider this matter. But other factors, which
must be studied first and more completely, may cause delay in
bringing this type of help to the future dental intern. With that
in mind the following suggestion is presented.

A comprehensive list of Class A hospitals, clinics, dispensaries,
and other institutions throughout the country which offer dental
internships could be compiled by a responsible dental organiza-
tion. This listing could contain all the data which, in the opin-
ion of the organization making the compilation, are necessary
for a graduating student to evaluate accurately the advantages of
applying for a position at any of the institutions listed. All de-
tails which may aid the prospective intern in making that decision
could be included. Location, size of hospital, nature of dental
services, special requirements, statements concerning board, room, and honorarium (if any), facilities for study, research, and general medical training are but a few of the data which might be included.

This list—perhaps called "National Dental Internships"—could be arranged under state headings and further suitable subdivisions, and could be printed or set up in mimeograph form. In December of each year this listing could be sent to the administrative officers of all dental schools in the country with the request that they direct the attention of their graduating students to the list, and that it be posted on the school bulletin board or otherwise made available to any student interested.

The preparation of such a listing necessarily would require considerable and painstaking work, but it would be of inestimable value to students. Further, it would impress students with the thoughtfulness and guardianship-attitude of the professional organization sponsoring the list, and it would indicate definitely that this professional organization was meeting still another of the mounting responsibilities which dentistry as a health-profession is assuming.

—T. McB.

ERRATA

On page 61, March issue of the Journal, numbers reading .027%, .105%, .40%, .04% and .11% should be read 2.7%, 10.5%, 40%, 4% and 11% respectively; on page 62, .003% should read .26%. — (Ed.)
NOTES AND COMMENTS

COUNCIL ON DENTAL EDUCATION

The following statement of aims and purposes1 has been submitted by the Secretary of the American Association of Dental Schools for the benefit of readers of the Journal. Much more has been published in a primary statement of the Council relative to policies, principles and criteria which indicates a very definite forward move in dental education. For that, however, the reader is referred to the Journal of Dental Education. — (Ed.)

AIMS AND PURPOSES

The aims and purposes adopted by the Council on Dental Education are as follows:

a. To correlate in accord with the evolution of scientific knowledge, clinical experience, and social and economic conditions—the procedures of dental education with the problems involved in meeting oral health needs—and to interpret the relations of dental education to the dental profession and to the public.

b. To organize and administer criteria for accreditation of institutions for the study of dentistry in the United States. This will include consideration of:
   (1) predental education, and requirements for admission to dental schools;
   (2) undergraduate dental education, and requirements for the (D.D.S.) or (D.M.D.) degree in dental schools;
   (3) Graduate and post-graduate education in dentistry and requirements for the accreditation of specialists in dental practice; and
   (4) such other educational activities as may come within the Council’s jurisdiction.

c. To list recurrently for publication the acceptable agencies of dental education, in a manner to give the dental profession and the public authoritative information.

d. To facilitate effective coordination of the efforts of dental schools, dental state boards, and dental societies toward maintenance of adequate standards of professional proficiency.

e. To promote more complete understanding—in universities, in medical schools, and by the public—of the current needs of progressive dental education and dental research in the public interest, and to stimulate the continual development of dental education.

f. To inform the dental profession regarding the nature and scope of the current problems of dental education, and of the conditions and procedures for their solution.

g. To foster constant improvement in the methods of teaching in dental schools, and to encourage the establishment of conditions that would attract an increas-

1J. D. Educ., 3, 236-45, 1939, April.
ing number of men of outstanding ability to the career of dental teaching.

h. To study the educational needs of the practitioner and to recommend ways and means by which he may be provided with opportunities for organized study to maintain proficiency.

* * *

IS LOWERED DENTAL TRAINING THE SINE QUA NON FOR ECONOMIC INABILITY TO SECURE DENTAL SERVICE?

It may seem paradoxical that, at this particular period and point of the development of dentistry in the field of health service, there should be recommended, in part at least, a return to the old order that those of low income might be able to secure dental service because of less investment on the part of those so trained. This is like bringing the mountain to Mohammed instead of Mohammed doing the wise thing and the easier by going to the mountain.

In this 100th year of dental development there have come two propositions, one from the Atlantic Coast and one from the Pacific Coast: the one recommending a three-year course in dentistry as “sufficient to qualify for simpler work”; and from the latter there emanates the principle of teaching hygienists to prepare and fill class I cavities in very young children. This is referred to as “simple dentistry”.

Dentistry has developed into a regular health service and we have something now to provide for the people which we did not have under this old order. The two sides of a question, particularly when applying to supply and demand, do not always go together; so when one is brought to a certain point, the other then must be brought up to that level. We have been concerned during the years, and rightly so, with the development of our service to its highest point of efficiency. We have done that in many technical lines. We have brought the preventive aspect of our work to a high plane of usefulness and which is now being rapidly carried to a still higher plane, particularly by the American Association for the Promotion of Dentistry for Children.

Now, it is ours as a profession to develop an otherwise untouched area within our field, namely, the socio-political, by which and through which, when the solution becomes visible, health service, including all services as well as dentistry, will be more thoroughly available to the people. We cannot accomplish this by lowering our standards or by doing even as one of these suggested — furnishing our offices inefficiently or at low cost, nor by reducing the cost of our training through reduction in time. We can only accomplish it by making possible a method to supply that service now available. Both of these schemes are receiving determined opposition from the profession generally.
OUR ADVERTISEMENTS

A policy intended to safeguard professional interests and to encourage the worthiest industrial endeavor

The basis and conditions of our policy relating to advertisements are set forth below (J. Am. Col. Den., 2, 199; 1935):

I. Advancement of the material aspects of civilization is largely dependent upon the expanding production and distribution of commodities, and their correlation with individual needs and desires. Successful practice of modern dentistry, on a broad scale, would be impossible without an abundance of the useful products of dental industries. Leading dental manufacturers and dealers have been providing invaluable merchandise for the dental practitioner. The business of supplying dental commodities has been effectually organized and, as an auxiliary to oral health-service, is more than sufficient to tax the greatest ingenuity and all the attention and integrity of each dental producer and distributor.

The American College of Dentists aims, in the public interest, to strengthen all wholesome relations and activities that facilitate the development of dentistry and advance the welfare of the dental profession. The College commends all worthy endeavors to promote useful dental industries, and regards honorable business in dental merchandise as a respected assistant of the dental profession. Our Board of Editors has formulated "minimum requirements" for the acceptance of commercial advertisements of useful dental commodities (J. Am. Col. Den., 2, 173; 1935). These "minimum requirements" are intended, by rigorous selection on a high level of business integrity and achievement, to create an accredited list of Class-A dental products and services, and include these specifications: Advertisements may state nothing that, by any reasonable interpretation, might mislead, deceive, or defraud the reader. Extravagant or inappropriate phraseology, disparagement, unfairness, triviality, and vulgarity must be excluded. Advertisements relating to drugs or cosmetics, foods, dental materials, education, finance—to any phase of interest or activity—will be accepted for only such commodities or services as merit the commendation, approval or acceptance of the National Bureau of Standards, American Dental Association, American Medical Association, Council on Dental Therapeutics, Dental Educational Council, Better Business Bureau, and other official bodies in their respective fields of authoritative pronouncement. The
welfare of the consumer is our paramount consideration. In accordance with the recommendation of the American Association of Dental Editors, the placement of advertisements will be restricted to the advertising section.

II. An advertisement, to be accepted or repeated, not only must conform with the said “minimum requirements,” but also must meet the special test applied through a questionnaire that will be repeatedly exchanged confidentially with numerous referees in all parts of the United States, and which contains the following inquiries:

Questionnaire for referees on acceptance of advertisements.—(1) Has __________ (person, company, service, etc.) always been honorable and fair in (his, their) dealing with you personally? (2) If not, indicate confidentially your experience to the contrary. (3) Has __________ (commodity, service, etc.) always been, in your use of it, what its advertisers claim for it? (4) If not, indicate claims that were unwarranted when made. (5) Would the accompanying (copy of a proposed) advertisement of __________ (commodity, service, etc.) be warranted, in your judgment, as a recognition and encouragement of useful dental commercialism? (6) If your answer to Question 5 is Yes, will you agree to test, critically, the above-named commodity (service, etc.) and to respond at intervals to our further inquiries as to whether all the claims published currently in its behalf, in advertisements in the Journal of the American College of Dentists or elsewhere, are justified?

III. The advertisers whose claims are published on the succeeding pages stand high in commercial character and on the recognized merits of their products (services, etc.). They are not among those who seek advantage from misrepresentation, and need no assistance from a prejudiced or insincere journalistic policy. They are above the temptation to try to control or influence any aspect of the conduct of this Journal, which in all its phases is completely independent, and fully representative of the professional ideals and the professional obligations of the American College of Dentists. We commend each advertiser in this issue to the patronage of all ethical dentists.
20 Years of practical research

Williams "XXX" casting gold has the benefits, not only of extensive scientific study, but also the practical research of actual dental practice—twenty years of it! And during this time, Williams "XXX" has been progressively improved, the addition of Indium being the most recent metallurgical improvement. Today, Williams "XXX" with Indium is one of dentistry's finest partial denture casting golds. Information on request. Williams Gold Refining Co., Buffalo, N. Y.; Fort Erie, N., Ont.; Havana, Cuba.

WILLIAMS "XXX" WITH INDIUM
PARTIAL DENTURE CASTING GOLD
AMERICAN COLLEGE OF DENTISTS

STANDING COMMITTEES (1938-39)

By-laws—W. J. Gies (39), chairman; H. M. Semans (41), M. S. Aisenberg (40).

Centennial Celebration (establishment of dentistry as a separately organized profession—(1939-40)—H. S. Smith (41), chairman; Harry Bear (43), W. H. Mork (42), D. F. Lynch (40), J. H. Ferguson (39).

Certification of Specialists—J. O. McCall (43), chairman; M. E. Ernst (42), C. O. Flagstad (41), E. W. Swinehart (40), H. C. Fixott (39).

Education—A. W. Bryan (43), chairman; J. T. O'Rourke (43), F. W. Hinds (42), L. M. Waugh (42), R. S. Vinsant (41), Harry Lyons (40), J. E. Aiguiér (39).

Endowments—E. W. Morris (43), chairman; A. H. Merritt (42), D. U. Cameron (41), Abram Hoffman (40), Herbert C. Miller (39).

Hospital Dental Service—Howard C. Miller (43), chairman; Leo Stern (42), C. W. Stuart (41), E. A. Charbonnel (40), R. W. Bunting (39).

Journalism—J. C. Black (40), chairman; H. J. Noyes (43), E. G. Meisel (42), R. C. Willett (42), T. F. McBride (41), W. B. Dunning (41), G. M. Anderson (40), Leland Barrett (39), Walter Hyde (39).

Legislation—B. L. Brun (40), chairman; W. A. McCready (43), M. L. Ward (42), W. N. Hodgkin (41), G. S. Vann (39).

Necrology—B. E. Lischer (43), chairman; F. H. Cushman (42), J. V. Conzett (41), R. R. Byrnes (40), William Shearer (39).

Nominations—J. B. Robinson (42), chairman; H. O. Lineberger (43), W. F. Lasby (41), P. V. McParland (40), E. F. Brady (39).

Oral Surgery—M. W. Carr (41), chairman; W. I. Macfarlane (43), E. R. Bryant (42), J. R. Cameron (40), C. W. Freeman (39).

Prosthetic Service—W. H. Wright (43), chairman; A. P. O'Hare (42), W. H. Grant (41), F. M. Hight (40), A. H. Paterson (39).

Public Relations—J. O. Goodsell (43), chairman; Wilmer Souder (42), O. W. Brandhorst (41), Nathan Sinai (40), T. E. Purcell (39).

Research—A. L. Midgley (42), chairman; W. D. Cutter (43), P. C. Kitchin (43), J. E. Gurley (42), A. B. Luckhardt (41), L. M. S. Miner (41), P. J. Hanzlík (40), Irvine McQuarrie (40), L. R. Main (39), A. M. Schwitalla (39).

Socio-economics—C. E. Rudolph (43), chairman; G. W. Wilson (42), W. R. Davis (41), B. B. Palmer (40), M. W. Prince (40), E. H. Bruning (39), Maurice William (39).

Announcements

Next convocation of the College: Milwaukee, Wis., Sunday, July 16, 1939.

Next sessions of the Regents of the College: Milwaukee, Wis., July 14, 1939.

Fellowships and awards in dental research. The American College of Dentists, at its annual meeting in 1937 [J. Am. Col. Den., 1937, 4, pp. 100 (Sep.) and 256 (Dec.)], 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. Applications 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, Sep.]

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

Issued quarterly. Subscription price: $2.00 per volume. 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. Address: Journal of the American College of Dentists, 350 Post St., San Francisco,