

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

VOL. 7 DECEMBER, 1940 No. 4

Contents

American College of Dentists:

Cleveland Convocation, September 8, 1940:

Necrology: Report of the Committee on Necrology. <i>John V. Conzett, D.D.S., Chairman</i>	285
---	-----

Addresses:

Presidential: <i>Alvin W. Bryan, D.D.S., President</i>	297
Inaugural: Dentistry's New Horizon. <i>George W. Wilson, B.S., D.D.S., President-elect</i>	300
Dental Education: Report of the Committee on Dental Education. <i>F. W. Hinds, D.D.S.</i>	311
Trends in Dental Education: A Symposium. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D., Presiding</i>	320
Trends in Dental Education: Chairman's Introductory Remarks. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D.</i>	320
Trends in Dental Education. <i>L. M. S. Miner, D.M.D., M.D.</i>	323
Trends in Dental Education. <i>H. H. Horner, A.B., A.M., Pd.D., LL.D.</i>	328
Trends in Dental Education. <i>A. L. Midgley, D.M.D., Sc.D.</i>	334
Hidden Dangers in the New "Harvard Plan" of Dental Education. <i>W. H. Wright, D.D.S., B.S., M.S., Ph.D.</i>	343
The Import of the Prospective New Dental Program at Harvard University. <i>Wm. J. Gies, Ph.D., Sc.D., LL.D.</i>	350
Chairman's Concluding Remarks. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D.</i>	369
Proceedings of the Cleveland Convocation, Sep. 8, 1940: Abstract of Minutes; Convocation and Regents. <i>Otto W. Brandhorst, D.D.S., Secretary</i>	371
Editorials	376
News and Notes	384
New Books	384
Supplement	386
Index	389
Title pages and contents: Volume 7	i-iv

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, 1940, by the American College of Dentists
Made in United States of America

AMERICAN COLLEGE OF DENTISTS

Convocations have been held on this schedule (since organization in *Boston*, Aug. 20 and 22, '20): (1) *Chicago*, Jan. 26, '21; (2) *Milwaukee*, Aug. 13 and 18, '21; (3) *Montreal*, Jan. 25, '22; (4) *Los Angeles*, July 16 and 19, '22; (5) *Omaha*, Jan. 23, '23; (6) *Cleveland*, Sep. 12, '23; (7) *Chicago*, Mar. 5, '24; (8) *Dallas*, Nov. 12, '24; (9) *Louisville*, Sep. 22, '25; (10) *Philadelphia*, Aug. 22, '26; (11) *Chicago*, Jan. 26, '27; (12) *Detroit*, Oct. 23, '27; (13) *Minneapolis*, Aug. 19, '28; (14) *Chicago*, Mar. 24, '29; (15) *Washington, D. C.*, Oct. 6, '29; (16) *Denver*, July 20, '30; (17) *Memphis*, Oct. 18, '31; (18) *Buffalo*, Sep. 11, '32; (19) *Chicago*, Aug. 6, '33; (20) *St. Paul*, Aug. 5, '34; (21) *New Orleans*, Nov. 3, '35; (22) *San Francisco*, July 12, '36; (23) *Atlantic City*, July 11, '37; (24) *St. Louis*, Oct. 23, '38; (25) *Milwaukee*, July 16, '39; (26) *Baltimore*, March 17, '40; (27) *Cleveland, Ohio*, Sep. 8, 1940. [Next Convocation, *Houston, Texas*, Sunday, October 26, 1941.]

Sections and dates of meetings in College year of 1940-41 (between convocations):—

(1) *Kentucky*: (2) *Northern California*: (3) *Maryland*:
 (4) *New York City*: Dec. 13, '40. (5) *Minnesota*: Feb. 24, Apr. 15, '41. (6) *New England*:
 Dec. 10, '40. (7) *Wisconsin*: Mar. 24, '41. (8) *Colorado*: (9) *Pittsburgh*:
 (10) *Iowa*: May 5, '41. (11) *Illinois*: Dec. 9, '40; Feb. 16, '41. (12) *St. Louis*:
 (13) *Oregon*: (14) *Texas*: Apr. 20, '41. (15) *Florida*:
 Nov. 11, '40. (16) *Indiana*: (17) *Southwestern*: (18) *Washington, D. C.*: (19) *New Jersey*: Dec. 19, '40.

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, for *remuneration*, under any condition other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited 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 (1940-1941)

Officers of the College and Regents ex-officio

President: GEO. W. WILSON, Milwaukee
Vice-President: W. H. SCHERER, Houston
Treasurer: HAROLD S. SMITH, Chicago

President-elect: E. G. MEISEL, Pittsburgh
Secretary: OTTO W. BRANDHORST, St. Louis
Assistant Secretary: WILLIAM J. GIES, New York

Elective Regents of the College

W. N. HODGKIN (45), Warrenton
 WM. F. LASBY (44), Minneapolis
 ALBERT L. MIDGLEY (42), Providence
 E. G. SLOMAN (43), San Francisco
 J. CANNON BLACK (41), Chicago

Editor: JOHN E. GURLEY, San Francisco

Associate Editor: Secretary of the College

Assistant Editor: Assistant Secretary of the College

Contributing Editors

WM. J. GIES (45), New York, <i>Chm.</i>	L. E. BLAUCH (45), Washington, D. C.
GEORGE C. PAFFENBARGER (44), Washington, D. C.	CHARLES F. HARPER (44), Jersey City, N. J.
THOMAS F. MCBRIDE (43), Pittsburgh	WALTER HYDE (43), Minneapolis
WILLARD C. FLEMING (42), Oakland (Calif.)	CLARENCE W. KOCH (42), Little Rock
PAUL R. STILLMAN (41), Longwood (Fla.)	WILLIAM R. DAVIS (41), Lansing

AMERICAN COLLEGE OF DENTISTS

REPORT OF THE COMMITTEE ON NECROLOGY¹

JOHN V. CONZETT, D.D.S., *Chairman*²

Dubuque, Iowa

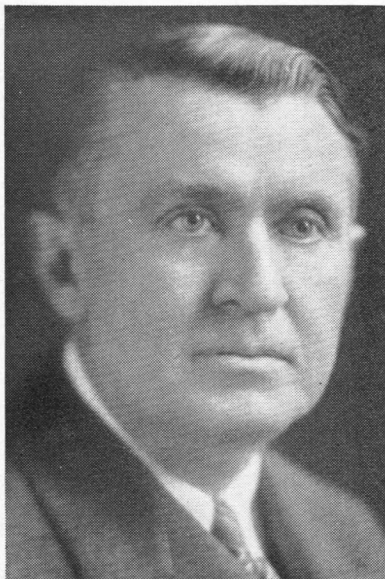
Fellows of the College: We shall not attempt a eulogy for those individuals who have passed away. Their epitaphs are written in letters of gold upon the scroll of life, by the pen of their words and deeds. Their eulogy was pronounced by the Board of Censors when after a diligent and searching investigation into their lives, their professional, cultural, civic and family contacts, they nominated them as worthy of Fellowship in the College. This is the highest encomium that can be given to a dentist by his fellows. So, the Board of Regents counted them worthy of the College accolade and bade them enter into the Fellowship of their peers. This is *prima facie* evidence of outstanding character, as men and as dentists. This then is their eulogy which passes beyond any words which we might pronounce at this time.

We indeed deplore their loss and grieve over their going but we know that our loss is infinitesimal in comparison with that which assails the hearts of those nearest and dearest to them. To their families and to their friends, we extend our heartfelt sympathy and condolences. We indeed suffer with them, but while we recognize the loss we are cognizant of the magnificent memory that does and will obtain.

Since the Milwaukee meeting, the following Fellows have passed on:

¹Presented at the Convocation in Cleveland, Ohio, Sep. 8, 1940.

²The other members of this Committee (1939-40): R. R. Byrnes, F. H. Cushman, B. E. Lischer, W. H. Scherer.



GEORGE B. WINTER, D.D.S.
St. Louis, Mo.

1878-1940

Fellowship conferred in 1923. Graduated from St. Louis University School of Dentistry in 1900; past president American Dental Association; Honorary member of American Dental Society of Europe; American Dental Society of the Argentine Republic; Ohio State Dental Society; Oregon State Dental Society; Oral Surgery Section, Second District Dental Society of New York; Past president Missouri State Dental Association; St. Louis Dental Society and Alumni Association of the St. Louis University School of Dentistry. Gave clinics at Guy's Hospital, London, England, and the American Hospital, Neuilly, France. Also, Research reports at the International Dental Congress, Paris, France. Author of the books "Exodontia" and "The Impacted Mandibular Third Molar". Author and narrator of the sound-on-film motion picture "Fundamental Principles for the Technical Removal of the Mandibular Third Molar".

CHARLES J. MARCINKIEWICZ, D.D.S.
Detroit, Mich.

1894-1940

Fellowship conferred in 1938. Graduated from Dental Department, University of Michigan in 1918. Member of Michigan State Board of Dental Examiners for eight years, serving as Secretary of the Board for five years. Member Michigan State Dental Society; Detroit First District Dental Society and Detroit Dental Clinic Club.





CHARLES J. McCARTHY, D.D.S.
San Francisco, Calif.

1876-1940

Fellowship conferred in 1936. Graduated from University of California, College of Dentistry in 1897. Past president San Francisco District Dental Society; California State Dental Association; California State Academy of Periodontology.

WILLIAM HIRAM McCracken, D.D.S.
Detroit, Mich.

1901-1939

Fellowship conferred in 1938. Graduated from University of Michigan Dental Department in 1923. Member First District Dental Society of Detroit; Omicron Kappa Upsilon. A student in the field of periodontal diseases.





WILLIAM B. POWER, D.D.S.
Seattle, Wash.

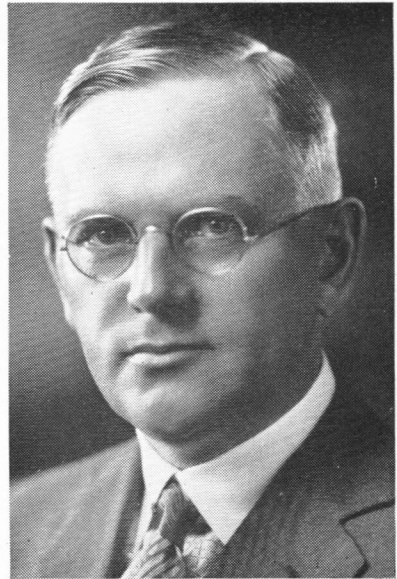
1881-1940

Fellowship conferred in 1929. Graduated from College of Dentistry, Northwestern University in 1900. Past president King County (Washington) Dental Society. Member Washington State Board of Dental Examiners; Washington State Dental Society and Pacific Coast Society of Orthodontists.

OTTO G. KRAUSE, D.D.S.
Milwaukee, Wis.

1876-1940

Fellowship conferred in 1927. Graduated from the Dental Department of the Old Milwaukee Medical College in 1903. Member of the faculty, Marquette University Dental School for 35 years. Past president of Wisconsin State Dental Society.





T. L. GRISAMORE, D.D.S.

Chicago, Ill.

1875-1939

Fellowship conferred in 1923. Graduated from Chicago College of Dental Surgery in 1898. Past president Chicago Dental Society; Past vice-president American Dental Association and Trustee of that organization from the Illinois District. Member Chicago Odontographic Society; Delta Sigma Delta and Omicron Kappa Upsilon.

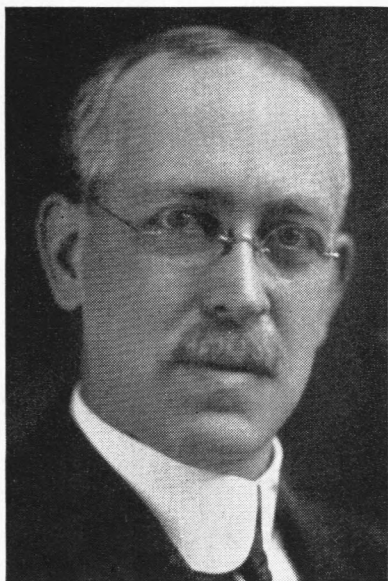
FINIS MARLIN HIGHT, D.D.S.

Houston, Tex.

1885-1939

Fellowship conferred in 1931. Graduated from Texas Dental College in 1916. Past president National Society of Denture Prosthetists. Member of American Academy of Restorative Dentistry.





CHAS. R. BAKER, D.D.S.

Davenport, Ia.

1859-1940

Fellowship conferred in 1922. Graduated from the Dental Department, University of Pennsylvania, in 1883. Past president of the Iowa State Dental Society. In active dental practice 54 years.

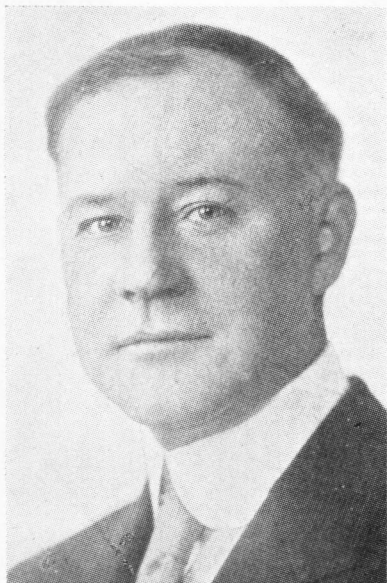
JAMES EDWARD CHACE, D.D.S.

Ocala, Fla.

1875-1940

Fellowship conferred in 1934. Graduated from the Dental Department, University of Pennsylvania, in 1896. Past president of Florida State Dental Society; National Dental Association; Marion County Dental Society and former member Florida State Board of Dental Examiners.





JAMES FRANCIS CLARK, D.D.S.
Pawtucket, R. I.

1880-1940

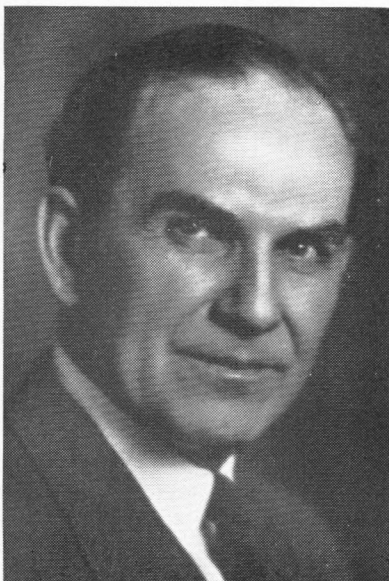
Fellowship conferred in 1934. Graduated from Baltimore College of Dental Surgery in 1903. Past president and member of the Rhode Island State Board of Registration in Dentistry.



CHARLES D. COLE, D.D.S.
Washington, D. C.

1882-1940

Fellowship conferred in 1935. Graduated from the Dental Department, University of Michigan, in 1916. Past president District of Columbia Dental Society and attending dentist to former President Hoover.



OSCAR DEFOREST DAVIS, D.D.S.
Cleveland, Ohio

1885-1940

Fellowship conferred in 1939. Graduated from the Dental Department, University of Minnesota, in 1909. Past president Minneapolis District Dental Society. Member National Society of Denture Prosthetists; Academy of Restorative Dentistry and Omicron Kappa Upsilon.

OREN HENRY GAVER, D.D.S.
Baltimore, Md.

1892-1940

Fellowship conferred in 1931. Graduated from the Dental Department, University of Maryland in 1918. Past president Baltimore City Dental Society. Member of Omicron Kappa Upsilon and Psi Omega fraternities.





ALFRED P. LEE, D.D.S.
Philadelphia, Pa.

1871-1940

Fellowship conferred in 1923. Past president Academy of Stomatology; Pennsylvania Association of Dental Surgeons; National Association of Dental Examiners and the Dental Alumni Association of the University of Pennsylvania. A peerless book collector and connoisseur of fine printing. Dr. Lee gained a permanent niche in Literature's Hall of Fame with the publication of his bibliography of Christopher Morley, the result of more than ten years' patient research in a well-loved field.

CHARLES R. LAWRENCE, D.D.S.
Enid, Okla.

1876-1940

Fellowship conferred in 1933. Graduated from Cincinnati College of Dental Surgery in 1897. Past president Oklahoma State Dental Society. Organizer and promoter of first Tri-State Dental meeting. Founder and first editor of the Bulletin of the Oklahoma State Dental Society. Life member of the Illinois State Dental Society. Former Trustee of the American Dental Association.





CRAIG M. WORK, D. D. S.

Ottumwa, Ia.

1870-1940

Fellowship conferred in 1932. Graduated from the Dental Department, Iowa State University in 1896. Past president Iowa State Dental Society; Southwestern Iowa Dental Society and Ottumwa Study Club. Past president and member of the Iowa State Board of Dental Examiners.

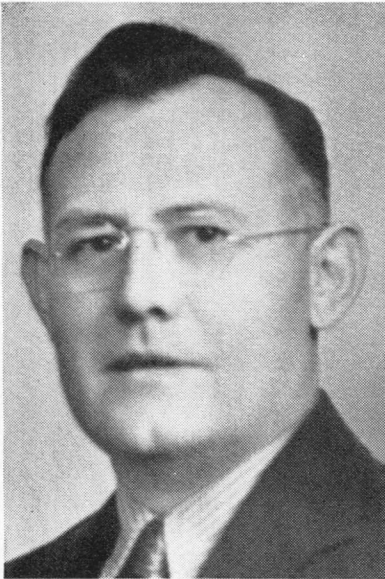
WALTER H. RICHARDSON, D.D.S.

Worcester, Mass.

1873-1940

Fellowship conferred in 1923. Graduated from the Dental Department, University of Pennsylvania in 1897. Member Massachusetts Dental Society; Worcester Dental Society; New England Dental Society; American Academy of Dental Science and Delta Sigma Delta fraternity.

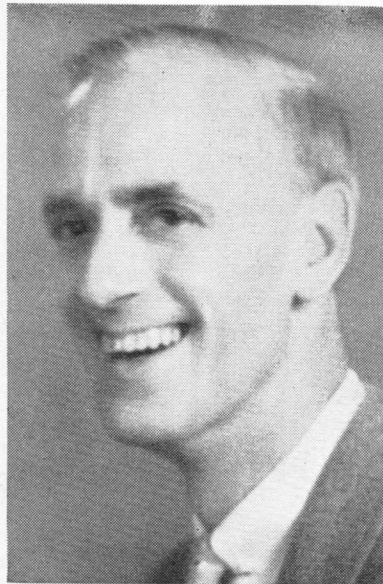




LOUIS ROSSMAN, D.D.S.
Baltimore, Md.

1893-1940

Fellowship conferred in 1938. Graduated from the Baltimore College of Dental Surgery in 1915. Past president of Maryland State Board of Dental Examiners and a member of the Baltimore Association of Dental Surgeons.



WALTER EARLE FANCHER, D.D.S.
Yonkers, N. Y.

1890-1940

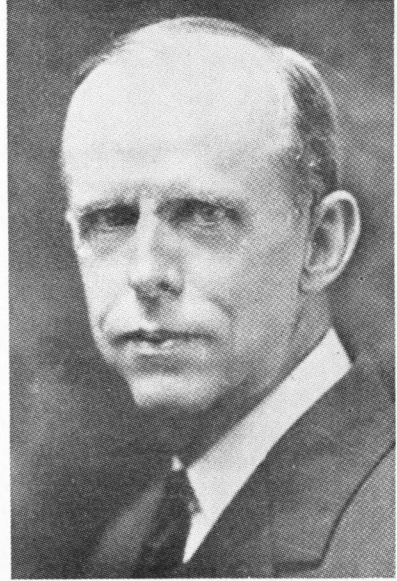
Fellowship conferred in 1939. Graduated from the Dental Department, University of Pennsylvania, in 1911. Past president Ninth District Dental Society (N. Y.). Member New York State Dental Society and Yonkers Dental Study Club.

JOSIAH G. FIFE, D.D.S.

Orange, Texas

1861-1940

Fellowship conferred in 1933. Graduated from the Baltimore College of Dental Surgery in 1891. Past president Texas State Dental Society; former vice-president National Dental Association and American Dental Association. "Father of Dentistry in Texas."



AMERICAN COLLEGE OF DENTISTS

PRESIDENTIAL ADDRESS¹

ALVIN W. BRYAN, D.D.S., *President*

Iowa City, Iowa

Following the custom which has prevailed since the establishment of an inaugural address, my remarks will be confined to a brief statement of the work of the year. I shall always look back with pride upon having been chosen for the administrative responsibility of this organization during the year of the centennial celebration of dentistry. I shall in no way consider that it was because of any particular qualification for such a position but rather that fortune smiled upon me and allowed me to participate in the activities of the College during such an important occasion. It has been a year filled with incidents to inspire one to greater interest in and effort for the advance of dentistry.

In December it was the privilege of the Board of Regents to be entertained by the Greater New York Dental Society. At that time a very successful meeting of section representatives was held. I extend to the Greater New York Society the appreciation of the College for its hospitality.

Because of the celebration in Baltimore, of the establishment of the first dental school a century ago, the College held a special meeting and convocation. All of you received a program and many of you attended. For those who were there it is not necessary for me to tell of the success of our program which served as a preliminary preparation for the Centennial Celebration during the following four days. To those who were not there, we give assurance that it was one of the most inspiring convocations which the College has held.

¹Delivered at the Convocation, Cleveland, Ohio, Sep. 8, 1940.

Now we are in our second program of the year. The papers which we heard this morning and those which are still in store for us attest to the good work which has been done during the year by the committees and others responsible for arranging the program. At this time, I wish to thank the officers, the Regents, and the members of the various committees for their loyal support during the year. They have made the work of the presiding officer easy and pleasant.

Just a few moments ago fellowships² in this College were conferred upon many deserving men of the profession who have proven their worth by contributing something just a little beyond the ordinary to dentistry. In accepting fellowship in this organization, they have signified their willingness and intent to assume responsibility in helping to solve the problems of the profession in the next quarter of a new century. Those problems will be many in number; how to render adequate dental health service to the masses; research in an effort to find the cause of the most prevalent disease in the world, dental caries; placing dental periodicals on the highest journalistic plane; improved methods in dental education; and last but not least defending and maintaining our position as an autonomous profession.

What is the role of the American College of Dentists in this program of the future? The message of the president printed in this program states that the College is a group of earnest men banded together, not for the purpose of appropriating the work of other organizations in dentistry, but for wholeheartedly cooperating with all groups in meeting problems which confront the profession. During the current year an editorial in a dental publication questioned the purposes of our organization and raised doubts as to the unselfishness of its motives. Those who know the history of the College are able to look back to a time when many thousands of dollars were given by it in an effort to help solve the problem of

²See Secretary's Minutes, p. 382, this issue.

dental health service through a study of systems used in other countries. Only recently, the College has set aside substantial sums for research. I submit these two instances to the men who have just been received into this organization as evidence that they are now associated with professional men who are not afraid to give and to work. I use the same two examples to refute the editorial reflection that our motives are selfish.

Fellows of the College, a century of progress in dentistry lies behind us. We honor the men who carried on in the past but we must now set our minds to the opportunities and responsibilities ahead. They are ours. I have faith that the College as an organization, and that its members as individuals, will not fail in this duty.

AMERICAN COLLEGE OF DENTISTS

DENTISTRY'S NEW HORIZON¹

GEORGE W. WILSON, B.S., D.D.S.

Milwaukee, Wisconsin

CONTENTS

I. Introduction	300
II. Education	302
III. Endowments	304
IV. Medico-Dental Relations	305
V. Hospital Dental Service	305
VI. Research	306
VII. Certification of Specialists	306
VIII. Dental Literature	307
IX. Dental History	307
X. Organization	307
XI. Prosthetic Service	308
XII. Socio-Economics	309
XIII. Finale	310

I INTRODUCTION

At this convocation of the College, we are witnessing the passing of the final chapter of the Centennial of American dentistry. We are seeing an impressive portrayal of the beginnings of the profession, and of its growth and development under the leadership of those staunch pioneers who accepted the challenge of skepticism and ignorance, combined with the genius of those eminent leaders who founded and sponsored the professional and scientific elements of dentistry. We now understand better, and appreciate more, the heritage that is ours.

We have been impressed and inspired during this Centennial year with the progress made in the past century. During this period, the efforts of our predecessors, combined with the efforts of the leaders of the present generation, have established dentistry as an art and

¹Presidential Inaugural Address, delivered at the Convocation, Cleveland, Ohio, Sep. 8, 1940.

as a science. They have linked it closely with the biological sciences and have given surgical anaesthesia to suffering humanity; they have extended research in dentistry; improved educational standards; eradicated the quack and the charlatan; improved the quality and control of dental literature; and, finally, they have established for dentistry a professional status, thus extending its scope of usefulness to mankind.

Dentistry reveals a record of dynamic progress in the past. It must continue in a similar path in the future. To guide it in the right direction is the solemn responsibility of those who are to carry on such worthy traditions.

At the dawn of a new century for our profession, we find ourselves living in a world convulsed by the tragedy of war. It is but human to view the future with doubt and skepticism, because the world is passing through what many consider the darkest days in the history of civilization. We are engaged in a struggle between two ways of life. The old, established political and social order is apparently passing. A new force is now loose in the world. How will it affect us? We know too well that the future of democracy is hanging perilously in the balance. Since our profession has been founded and developed as a democratic institution, the future perspective of dentistry in America will be profoundly influenced by the outcome of this titanic struggle. If democracy is lost to the world, so too will the democratic characteristics of our profession be lost. If the philosophy of totalitarianism dominates future generations, it is inevitable that new, and perhaps unsound, professional concepts will be established.

But even in the face of the discouraging outlook created by turbulent world conditions, we must strive to adopt an optimistic attitude. This will help us to look confidently to the ultimate perpetuation of our American kind of democracy in the next century.

With that outlook, then, will we view dentistry's new perspective in the period of reconstruction ahead. Since we have assumed a social responsibility as health servants, we must strive objectively to build

ourselves into the new era as a potent influence for public good.

The Centennial Celebration Committee of the American Dental Association appropriately designated education, literature, and organization as the tripod upon which dentistry has advanced in the century just past. A consideration of the future may therefore be made from this same point of view. From this vantage point we may survey the problems confronting us, and thus try to see through them, in the uncertain period ahead, the new horizon of dentistry. Only by means of a recognition and understanding of our problems may we eventually institute a long-range program to achieve further progress.

As we view dentistry's new horizon, there are tasks confronting us which must be accomplished, if, in the present and future, we are to perpetuate the past and assure our professional, scientific and social status. These tasks are all interrelated, and fall within the three channels indicated above, and through which we have evolved to our present state. To maintain the autonomy and independence of dentistry and to continue the present unity and scientific advancement of the profession is the largest task ahead. It must be accomplished in a convulsive world.

II EDUCATION

An educational program characterized by high standards and unification of effort is a basic element in the new perspective. Such a program includes within its scope five major points: adequate endowment for undergraduate and graduate education; the establishment of a more effective medico-dental relation; research; hospital dental service; and the certification of specialists.

In connection with the problem of the education of dentists, and the related health benefit to the public, Dr. William J. Gies,² recently stated:

"Should not the professional phase in the education of dentists be so

²Gies, Wm. J.: *J. A. D. A.*, 27, 857-8; 1940, June.

conducted that its primary purpose would be the maximum health benefit for the individual dental patient, with due regard for the self-respect, economic welfare and contentment of the individual practitioner?

"Does not this question answer itself in the affirmative? Have I been in error in concluding that the public welfare would not be promoted either (a) by transferring dental practice to medical practice or (b) by partitioning dentistry to permit the practice of prosthetic dentistry by technicians? If these conclusions are sound, the continuance and steady improvement of dental practice and dental education, in charge of the separately organized profession which has brought oral health service to its present high level of excellence, and which may be trusted to go on faithfully with that development in the public interest, is a conservative as well as progressive program."

New proposals for undergraduate education at variable levels are of two types, those which would lower standards, and those which aim to elevate them. They have appeared from varying sources with increasing frequency in recent years. Both types are destined to influence dentistry's perspective. Those proposals which sponsor less pre-dental preparation in the sciences, and shorter periods of professional training, are all based upon the erroneous premise that there exists such a thing as a "simple dental operation," and therefore that less training is necessary to perform it. This type of proposal has been offered for two purposes—to attract more young men and women to dentistry, by reducing the time and costs of education; and to fill the waning ranks of dentistry so as to meet the anticipated future demands upon the profession, subsequent to the extension of dentistry to the masses.

The second type of proposal purports to improve the standards of dentistry, by bringing dentistry and medicine closer together through revision of the undergraduate curricula of dental schools, as at present established. All dental educational programs, which suggest the transfer of control to medicine, should be most carefully scrutinized. Does the progress made in advancing dental education, under the control of dentistry during the past century, call for a transfer to medical education?

Probably the greatest inherent danger of both proposals is that they foster education on variable levels, and thus endanger the autonomy of dentistry. These may be expected to encourage service of variable quality, thus causing the loss of our present professional status and perhaps our independence. *Dentistry needs to be made better—not different.*

To prepare young men and women to enter practice and, in the public good, render the best possible quality of service, in so-called simple or complex operations, to the high and the low, the rich and the poor, the young or the old, is clearly the objective of dental education. Those we serve have a right to be satisfied with no less. Does dentistry's new horizon reveal prospects of a breakdown in the progress of a century in dental education, and a lowering of its quality and value in human economy?

III ENDOWMENTS

Dentistry has been retarded in its progress since it has taken its place as a profession, and will continue to be hampered in the future, unless it is successful in claiming the attention and generosity of private and public endowment for education and research. The continued lack of recognition of dentistry as the full health service equivalent of an oral specialty of medicine is a major concern of the future. Dentistry needs more recognition and financial aid, to gain in status and usefulness.

The endowment system in America is going out of existence; it is being destroyed because of the pressure of social, political, and economic change. Financial aid for public health groups is gradually passing from private sources to government. The introduction by United States Senator Murray of a bill to provide for dental research is a current example of this transition. While this type of aid is encouraging and will no doubt bring to the profession new knowledge for the public good, will it continue to encourage individual initiative, as did the endowment system? Will it stimulate the same

quality of effort and effective results? The use of funds allotted by the government should be planned carefully, with this question as a danger signal.

IV MEDICO-DENTAL RELATIONS

A more intimate cooperation between the medical and dental professions is necessary for the promotion of health service to the public. This problem has long been discussed. Basic principles and desirable features of a close relation have been accepted. But does the end of the first century of dentistry as a learned profession find us as well established as a health service group as we believe we should be? Have we attained the prestige and standing with medicine which is desirable for future professional advancement and security? In my opinion, we have not.

What influences are there to be seen on the new horizon which will bring us to the high level to which we aspire? The answer will be found basically in the quality and scope of the future undergraduate and graduate educational programs in dental and medical schools; a program of education for practitioners that will improve their knowledge of the biological phases of dental procedures, especially as they relate to joint problems; the extension of dentistry's opportunities in the field of public health service; and the acceptance of dentistry by medicine as the equivalent of an oral specialty of medicine. Our future status as a profession is dependent, to a large extent, upon a satisfactory medico-dental relation.

V HOSPITAL DENTAL SERVICE

If dentistry is to expand to its full possibilities of usefulness and appreciation as a health service, a program of hospital training in the examination, diagnosis, and treatment of oral pathological conditions in association and cooperation with hospital medical service must be established in the new era ahead. There should be developed a closer educational association between dental and medical

schools, and hospitals, for training the undergraduate dental student for general practice. Dental internship should be strongly encouraged, to broaden the clinical experience of the dental graduate who chooses a career in general practice. It should be *required* of those who choose to specialize. The hospital should not be a strange place to the graduate in dentistry.

VI RESEARCH

Dentistry is urgently in need of generous financial assistance for a well-planned research program. The interrelated problems of dentistry and medicine can be solved only by joining the two groups on common ground. In this way, mutual problems will be revealed, and solutions reached, in the research laboratory. Education of the medical student in the dental aspects of health service will be vitalized by association with the dental student in research problems. The establishment of mutual respect between students of medicine and dentistry is a basic necessity for coordination of effort between the two groups. Research is the field where the hands of dentistry and medicine may join. The new horizon of dentistry is materially clarified by the hopeful anticipation of a program of research. The College, with the need and opportunity of dentistry already visualized, and, with its sense of public obligation long established, will continue to be a vital influence for research in dentistry.

VII CERTIFICATION OF SPECIALISTS

Of growing interest and concern to the future of dentistry is the subject of certification of specialists. So far, consideration of the subject indicates that we are not yet ready to establish legislation for the certification of specialists. However, there is need now, and in dentistry's future status, to set up standards for specialists in fields where type of service lends itself to accreditation. As dentistry reaches higher levels of usefulness and recognition, the need and demand for specialization will become more feasible.

VIII DENTAL LITERATURE

Another essential element in the new perspective of dentistry is its literature. Through its Commission on Journalism, the College has been a potent influence during the past decade, not only in improving the quality of dental literature, but in bringing about desired control of its literature by the profession.

Several needs are paramount to further advance dental literature and journalism in the new perspective. Some of these needs are: a more complete control by the profession; better trained authors, writers and editors; and a revised setup in the type of dental publication, to create more reader interest. A publication of abstracts for the profession, and a journal for public education, should have merit.

In appraising advances made in dental literature and journalism during the past ten years, and considering current preparations for future improvements by recognized groups, the way ahead is encouraging.

IX DENTAL HISTORY

The events of dental history revealed during this Centennial year have been a source of inspiration to the profession. However, a few controversies have arisen regarding the interpretation of the significance of these events. These differences of opinion are doubtless due to the inadequate early records, or the misinterpretation of them.

Dentistry, a comparatively young profession, is still making important history. There is opportunity, in the years ahead, for all of us in this generation to participate in activities which should be accurately recorded for the future. Dentistry's second century will be more accurately recorded than the period since its beginning. This will be an important influence in building dental tradition.

X ORGANIZATION

The third avenue along which dentistry has progressed is organi-

zation. Strong organized forces, under constructive, aggressive leadership, have proved to be a necessary factor in our advance. Organization will be equally vital to *future* progress.

There are some in the profession who do not recognize the worth of honor groups in the family of dental organizations. These groups have, on some occasions, been ridiculed because they openly and impressively manifest their zeal for service. This censure might be deserved to some extent, if exaltation of the individual were the motive. But this is not the case, since promotion of the ideals of dentistry is, in most honor groups, the motive. Obviously, our College could not exist without the American Dental Association. Without the American Dental Association there would be no need for its existence. The College serves as a strong, impartial auxiliary force in attaining the sound objectives of the American dental profession. The new horizon clearly indicates a continuation of strong support by the College for the worthy aims and activities of the American Dental Association.

XI PROSTHETIC SERVICE

Two groups, either inadvertently or deliberately, seem to favor the breaking up of the unity of dentistry. The first group consists of those members of the profession who, because dental prosthesis appears to have some menial demands, prefer to delegate practically all of that service to the commercial dental laboratory. Then there are those members of the profession who, because of the demands for technical knowledge and skill, and lack of interest in self-improvement, delegate to the laboratory technician the entire prosthetic service, frequently even including the taking of impressions.

Is it any wonder that we have the second group—those commercial laboratory operators who have been influenced, misguided and encouraged by this dangerous and careless surrender of professional privilege and are anxious to become licensed, so that they may serve the public direct?

The requirements of prosthetic dental service demand a knowledge of the biological sciences of one who is rendering that service. Only the well-trained dentist is qualified to and capable of rendering this type of service completely, satisfactorily, and safely to the public. A continuance of the trend which has been so persistent during recent years will lead dental practice into two divisions. Does the best possible quality of dental service to the public, in dentistry's new perspective, call for a disjointing of dentistry?

XII SOCIO-ECONOMICS

The problem of providing adequate care to a larger proportion of the population has confronted the dental profession with increasing perplexity and intensity since the onset of the economic depression in 1929. We are aware that there are forces at work which must affect the lives of all the people of this nation. The dental profession cannot escape the impact of these forces. We understand and appreciate the creditable progress made in the art and science of dentistry, in the past quarter century. This progress is most commendable and necessary to the fulfillment of the responsibilities and objectives of dentistry. It represents the evolution of the science and art of dentistry.

During this same quarter century, however, extensive social, economic, and political changes have been taking place. The old order of living has been passing rapidly. Liberalism and, in some directions, radicalism have entered our way of life. This has occurred in the midst of our scientific evolution, without our being aware of it. While our major attention has been directed toward our scientific advances, we have not taken enough cognizance of these evolutionary changes. We have failed to keep step with economic and social progress. This unbalance was to be expected, perhaps, of a traditionally conservative profession. But how will this affect dentistry's new horizon?

The health service professions are now awakening to the reality of social and economic change. Our former attitude of resistance

without constructive proposals is being abandoned. We have now adopted an attitude of open-mindedness. We are energetically seeking methods of extending our services to the public. However, in adjusting ourselves to new conditions, we must not lose sight of the important fact that the best interests of profession and public can be served only through the maintenance of high professional concepts, and the development, control, and application of all plans to extend our services. Our professional status must not be relinquished.

Dental health for the American people may well be the prime objective in dentistry's new horizon. It can be gained by maintaining the independence, unity, and autonomy of dentistry; by promoting the ideals of the dental profession; by advancing its standards; and by extending further, through public understanding and appreciation, its scope of usefulness.

XIII FINALE

Since its organization in 1920, the College has dedicated itself to the service of dentistry, and the public through these principles. It has and will continue to strive faithfully and with altruistic purpose toward this end.

Our efforts should be continuous, not seasonal. The inspirational value of the annual convocation will be minimized without the active interest and support of the sections, now eighteen in number. The officers and regents of the College invite the sections to express freely their points of view on any subject of current interest and concern.

You and I, as members of the College, have an extraordinary opportunity in the reconstruction period ahead to give something back to that which made us what we are. The new horizon presses for a fulfillment of our obligations.

DENTAL EDUCATION¹

F. W. HINDS, D.D.S.

Dallas, Texas

CONTENTS

I. Hospital Internship	311
II. Present Progress and Future Trends.....	312

I HOSPITAL INTERNESHIP

In the last few years the desirability of dental internships has been rapidly increasing in the minds of the recent graduates. A year of internship was the exception a decade ago, but now a large percentage of each graduating class accepts a year of training in a hospital or in some branch of government service. This is encouraging. This is a trend toward increasing the graduates' qualifications for practice and there is no better way of providing him medical contacts.

A condition which gravely affects such training has arisen and it is appropriate that it be discussed along with other problems of dental education. Several states have enacted legislation, and some boards of examination and licensure have interpreted existing laws, to require that internships cannot be held until a license to practice in the state has been acquired. The responsibility of the various boards in protecting the public is recognized and this duty must be carefully guarded. It does appear, however, that the question of encouragement to the young graduate to continue his education and better fit himself to render health service should be given consideration. Is it not true that practically all hospital internships

¹An address, constituting the report of the Committee on Dental Education of the American College of Dentists, presented at Cleveland, Sep. 8, 1940. The other members of this Committee are (1939-40): A. W. Bryan, W. C. Flemming, Harry Lyons, J. T. O'Rourke, R. S. Vinsant and L. M. Waugh.

are under direction of a chief and the service can more or less be compared to that rendered in an undergraduate clinic under teachers? This being the case the likelihood of internes overstepping the bounds in nibbling at private practice is somewhat remote. Assuming the situation to be similar in most respects to medical internship it is only right that licensing bodies give careful thought in instituting legislation covering this matter. Attention should be called to this confusing situation, which, if allowed to continue, will place young graduates in a complicated position. While several states require license for internships, Delaware has just placed a law into effect which requires a year of internship before an examination for license can be taken. The incongruity of such a situation is apparent and emphasizes the need for study by all groups concerned.

II PRESENT PROGRESS AND FUTURE TRENDS

It is an opinion universally held by members of the profession, educators and others interested, that dental education has had remarkable progress during the past century. Even our most severe critics will grant that it is a far cry from the humble beginnings of dental education in Baltimore in 1840 to the modern dental educational institution. One could well spend his time recounting accomplishments to date and they are many. It is interesting to consider progress to the present but essential to calculate and evaluate future trends.

Dental education has undergone since 1917 a tremendous change—a change from three years of professional study following high school to two years of pre-dental plus four years of dental training that became effective in 1937. This means sixty semester hours of academic work with rigid requirements before entering dental college. Therefore, we would naturally assume that dental colleges would now be allowed to consolidate their gains and develop the course as outlined. In his Report on Dental Education in

the United States and Canada, 1926, Doctor Gies,² and in the Curriculum Survey, 1935, Doctor Blauch,³ stated that "dentistry should be continued as an autonomous profession." Quoting from the Preface of Doctor Gies' report:

"The practice of dentistry cannot now be made a specialty of the conventional practice of medicine, but should remain a health service of equal recognition with other specialties of medicine.

"The practice of health service as applied to the teeth and the adjacent tissues cannot be divided between stomatologists as prescribers, on the one hand, and dental technicians as mechanical experts, on the other.....; for the reason that the actual practice of dentistry must be in the mouth itself and requires a union of medical knowledge, tactual skill, and mechanical precision not called for in other specialties of medicine."

Quoting from Doctor Blauch's report:

"Dental Education has definite problems, many of which are distinct from those of medical education. The large amount of training that is involved in restorative dentistry constitutes an example. Even with all the effort now devoted to it, this work is done none too well. There is a strong probability that if dental education were placed under medical education, the students would be inadequately trained to meet the dental needs of the public."

We could well assume that after such thorough study as the Carnegie Report and the Report of the Curriculum Survey Committee, we should spend our time on the development and improvement of dentistry as an autonomous unit of health service. It is apparent that all do not agree, and for that reason we should study some of the suggested trends as well as one radical change in the setup of dental education that is about to be adopted by one of our prominent universities.

The views of the late Dr. Alfred Owre have been reviewed too often to call for a discussion in this report.

²Gies, Wm. J.: *Dental Education in the United States and Canada*; *Bulletin No. 19*, Preface, pp. 16 and 17: The Carnegie Foundation for the Advancement of Teaching, 1926.

³*Report of Curriculum Survey Committee*, American Association of Dental Schools: Course of Study in Dentistry. Chicago, 1935, p. 81.

We can well afford to dismiss the sub-level dentist and the technicians plans as suggested by Doctors Millberry and Tench. These plans were so universally condemned by the dental profession that they can well be thrown into the discard.

We apparently have among us many conscientious objectors, those who object to the profession of dentistry because the greater part of its work is of a restorative nature. They object to dental caries and perhaps feel that the mechanical phase of dentistry is degrading. They feel that we should find the cause, stop decay, and thus make it unnecessary to continue educating dentists to do the high type of restorative work necessary. That is an ideal that we all cherish. The common cold presents a great opportunity for research, yet the medical group has been unable to discover its cause and has been unable to relieve it to any great extent. We have accomplished more in the fight against caries. Those who have submitted to the care of well-trained operators have had the usefulness and the life of their teeth prolonged. These operators have obtained results through a combination of education, prophylaxis, and repair.

At the meeting of the Association of Dental Schools in Philadelphia in March, Dr. Leroy Miner presented the "Harvard Plan." He explained the plan to the members of that body but he added this statement:⁴

"For fifteen years at least, I have been interested in bringing medicine and dentistry closer together, and I mean closer together, not to have dentistry absorbed by medicine, but to bring the two professions together. This is demanded in the interest of the public and in the interest of both professions, it seems to me.

"The plan..... is an extension of these developments, and is proposed for Harvard without any suggestion that it should be adopted universally.

"It is an experiment, then, and not a pattern, and being an experiment we naturally are uncertain of the results. Some of us have some apprehen-

⁴Proceedings of the 17th Annual Meeting of the American Association of Dental Schools, 17, 162, 1940.

sions, perhaps. These may be allayed when the final details are in hand. If we knew how it was coming out it wouldn't be an experiment."

The Harvard Plan should be of deep concern to the dental profession. On June 17, 1940, Harvard University released to the morning papers the announcement of the New Harvard School of Dental Medicine. In this release they do not call it an "experiment" and they do not state that it is "not a pattern." Quoting from this release:⁵

"Through gifts of \$1,300,000 already made towards a required total of \$1,550,000, Harvard University will inaugurate in 1941 an entirely new five-year course in dental education, President Conant announced today. This course will combine the basic knowledge and skills of both medicine and dentistry and is designed to train new types of scientific workers for attack on the great public health problem of dental disease.

"It is a move in the direction of attacking the great public health problem of dental disease at its source, through advancement of the study of causes of such disease and of its prevention. It is hoped that through the plan, the scope of adequate dental protection may be extended to large numbers of our people for whom dental attention is not now available.

"Under the new program, the Harvard Dental School will be renamed the Harvard School of Dental Medicine. Graduates will receive both the M.D. and D.M.D. degrees. Admissions to the School of Dental Medicine will be governed by the same standards and the same committee which govern admissions to the Harvard Medical School.

"There are now some 70,000 practicing dentists in the United States, said President Conant in explanation of this important and pioneering change. In general, the profession of dentistry in the one hundred years of its existence has established remarkable standards of proficiency and service. The precision and ingenuity of reparative methods developed by its leaders and members has been extraordinary. Yet the problem of proper dental protection for our population as a whole has only been partly solved.

"Certain important changes of method in dental education will be involved, bringing dental education at Harvard closer in line with the methods and standards of medical training. The plan envisages the development,

⁵Release, Monday morning papers of the Announcement of the New Harvard School of Dental Medicine, June 17, 1940.

in hospital and other dental clinics, of opportunities for training after graduation."

It is understood that the course at Harvard will cover a five-year period, students who complete the course will receive both the M.D. and D.M.D. degrees. Some specific dental training will be given during each of the five years amounting to one and one-half years. The statement that "the plan envisages the development, in hospitals and other dental clinics, of opportunities for training after graduation" no doubt is meant to cover state board requirements which the five-year plan would find difficult to hurdle. It is also mentioned that post-graduate experience will be necessary to complete technical proficiency in specialized fields. It is too early to attempt a critical analysis of the Harvard Plan. However, it makes a great deal of difference whether it is an "experiment" or a "pattern." Such a radical change in the setup of the dental school in so important an institution as Harvard University deserves consideration and study by the profession. We should consider whether such a plan would develop teachers of technical subjects pertaining to restorative dentistry, which at present is, and may be for a long time to come, an essential and a major part of dental practice. Could it be a complete teaching service and could it serve as a pattern or a replacement for our present day setup in dental education? It makes a great deal of difference whether the Harvard Plan is an experiment or a pattern.

We have two other plans functioning for the training of teachers and research workers, at Rochester and Yale Universities. The Rochester Plan as reported by Doctor Bibby,⁶ on "termination of fellowship of twenty-three men, twenty are teaching and doing research work, one is with the New York State Department of Health and two are in practice."

Under date of August 5th, your speaker received a report from

⁶A Report of Progress at the University of Rochester. Bibby, Basil G., *J. Am. Col. Den.*, 7, 145; 1940 (Sept.).

Dr. Bert G. Anderson, at Yale University and from which I quote:⁷ "In response to your letter of July 29, I have prepared a list of names of all the men who have been associated with the Dental Study Unit at Yale as fellows or house officers during the years 1929 to 1939, inclusive. You will observe that all, with the possible exception of the men listed under Nos. 11-17, have remained associated with dentistry. Since I do not have available the facts concerning other projects being carried out in this institution, I can give you information concerning the dental project only, in reply to your second query. Whether our lack of funds is due to the type of work we are carrying out I cannot say. The School of Medicine and Yale University on several occasions have issued statements praising the work of the Dental Study Unit, and have not to date, at least, indicated in any way that they consider this project a failure."

Doctor Anderson reports on seventeen dental fellows trained at Yale University School of Medicine, 1929-1939, inclusive: seven are dental teachers, two are practicing orthodontia, one practices general dentistry, one dental surgery, one assistant in surgery in a medical college, one in United States Public Health Service, one in private practice, apparently otolaryngology, one is an interne, one is in graduate study and one whose status is not available. It is to be assumed from Doctor Anderson's statement that all reported are connected with dentistry in some capacity, with the possible exception of two.

The University of California should not be overlooked in the work they are doing to develop specially trained men along biological lines. Quoting from their plans, University of California, College of Dentistry, Honors Curriculum:

"It has been our experience that in practically every class of undergraduate students we have one or two outstanding individuals who have definite inclination toward the biological problems connected with dentistry. In the

⁷Personal Communication.

past we have rigidly forced these students into the same curriculum as those interested in the technical phases of dentistry and as a consequence have not encouraged the development of workers in the fields of physiology, histology, anatomy, etc.

"As a state university we are not in a position, nor do we consider it desirable, to devote our efforts toward the development of the entire student body along these lines. It is rather our thought to take these outstanding students with inclination in this direction and do what we can to foster this feeling. With the proper selection of courses and undergraduate research problems in the medical school and other departments of the University we may encourage them in their undergraduate years to prepare themselves in the field of research and teaching."

We no doubt should refrain from being too critical of projects of the above-mentioned institutions. Rather such projects should be observed with great interest—not that dentistry favors any of these schemes as adaptable to dental education as a whole but that they offer opportunities for experimentation and research in methods and scope of dental education. From some of these experiments we may discover a few very valuable findings which may be used to modify advantageously our present scheme of dental education. While your committee subscribes to our present educational program wholeheartedly, it does not feel that it could not be improved as vaguely indicated. As a matter of fact, such is already the case. Relative to men trained at Rochester and Yale Universities, many of these men are making very important contributions to dental education. They are offering the type of educational service hardly obtainable before the Rochester and Yale projects were inaugurated.

Of the paper group, the "Harvard Plan" presents the most radical change. Perhaps the Harvard Plan will make outstanding contributions to dentistry. But these contributions are more likely to be those of a well-endowed research institution and will have to do with increasing our general fund of information regarding dental disease. With regard to the primary purpose of dental education, preparing men for the field of dental teaching and practice there can be little hope that this objective will be easily attained.

Some good may come from this program. However, is it not possible that it might benefit medicine more than dentistry? We should not overlook the fact that the Rochester and Yale Plans are experiments in graduate dental education, the Harvard Plan is not.

Your committee feels that it should emphasize the great need of most Dental Colleges for funds to carry on both teaching and research. It has been conceded by practically all of our critics that dentistry has made wonderful advancement in mechanical and restorative procedures. Let us call to your attention that mechanical and restorative development has financed itself both in the office of the operators and in the schools. It has been paid for by the patient who receives improved service. Biological research will not do so. Patients will admit the value of the service but they will not pay a practitioner to spend hours in the study of the etiology of dental caries. Such time must and has been given by dentists for the love of the work and the love of mankind. The same is true in dental colleges. Such work cannot and should not be financed by tuition and clinic fees. The dental colleges have the facilities, they have the material in their clinics. We feel that no one should say that we do not have the brains or that brains available cannot be developed. If specially trained men are needed, they will be forthcoming. Many colleges would gladly use the graduates of the Rochester and Yale Units if they could properly reimburse them for their time. Other universities and institutions, we can be certain, would gladly train such men if they could find employment after training. It appears to your committee that after such a cursory study of dental trends, as the time has allowed, the crying need in dental colleges today is for more funds to promote teaching and research. Without such funds we can only carry on. Properly financed we can become a dominant force in the fight against dental disease.

All members of the committee reporting are in favor of maintaining dentistry as an autonomous profession.

AMERICAN COLLEGE OF DENTISTS

SYMPOSIUM HELD AT THE CLEVELAND CONVOCATION, SEP. 8, 1940

The following addresses were delivered in a symposium on "Trends in Dental Education," at the Cleveland Convocation of the American College of Dentists, in Cleveland, Ohio, September 8, 1940. They are significant and of great value at this moment of development in dental education, and at this time when dentistry's first century is being concluded and the second beginning, their careful study is recommended.—EDITOR.

CONTENTS

I. Trends in Dental Education. <i>Henry L. Banzhaf</i> , B.S., D.D.S., LL.D., <i>Chairman of the Symposium</i>	320
II. Trends in Dental Education. <i>Leroy M. S. Miner</i> , D.M.D., M.D.....	323
III. Trends in Dental Education. <i>Harlan H. Horner</i> , A.B., A.M., Pd.D., LL.D.	328
IV. Trends in Dental Education. <i>Albert L. Midgley</i> , D.M.D., Sc.D.....	334
V. Hidden Dangers in the New "Harvard Plan" of Dental Education. <i>W. H. Wright</i> , D.D.S., B.S., M.S., Ph.D.....	343
VI. The Import of the Prospective New Dental Program at Harvard Uni- versity. <i>William J. Gies</i> , Ph.D., Sc.D., LL.D.....	350
VII. Concluding Remarks. <i>Henry L. Banzhaf</i> , B.S., D.D.S., LL.D., <i>Chairman</i>	369

I. TRENDS IN DENTAL EDUCATION

Henry L. Banzhaf, B.S., D.D.S., LL.D., *Milwaukee, Wis.*
Dean, Marquette University, Dental School

I was glad to accept the assignment of chairman or leader of this discussion group when the Program Committee invited me to act in that capacity some weeks ago. The interest that the College, as well as its members as individuals, has taken in dental education has always been a source of gratification to me. It is the thing I hoped would happen when some of us who are present here this afternoon, organized the College some twenty years ago.

We have met to discuss trends in dental education, to air out opinions honestly, and fearlessly, and in the friendly, impersonal

spirit of give and take that has always characterized the deliberations of this body. By trends in dental education we mean, presumably, the future of dental education and plans for the future. The speakers this afternoon will try to push the veil of the future aside in order that we may all make the best possible utilization of our energy in the present.

It is evident that in the few minutes I shall take to begin the activities, I cannot, without stealing someone's thunder or possibly lightning, discuss these trends. My close association and friendship with each of the speakers, and my knowledge of what they *might* say concerning the various problems with which dental education is confronted at present, puts it in my power to anticipate their remarks and to wreck the program, should I perversely wish to do so. Thus the discussion of these trends, or in other words, the future of dental education, is denied me. I do have either the *present* or the *past*, but how futile it would be to discuss the *past* of dental education at the end of this Centennial year, during which it has received such intense attention, or the *present* situation in dental education, before the Fellows of this organization, all of whom know it so well. And so I will be brief as it was intended I should be.

Let me refer in a few words to a line of criticism to which the dental profession is subjected, which I resent because of its unfairness. Dentists, according to these critics, are extremely capable of repairing the damage done by dental disease and of replacing missing parts, but they are at fault and subject to censure because they do not know how to prevent dental disease entirely. In some quarters, a revolution in dental education or a drastic reorganization of dental education has been proposed and will be undertaken, because dentistry, while it has gone a long way, has not yet reached its goal in its efforts to find a specific for the prevention of dental caries and other oral diseases.

When such criticism of dentists and dentistry is uttered, those responsible should in the same breath and in fairness, criticize the medical profession, and demand an upheaval of medical education

because a specific for the prevention of heart disease, for cancer, for diabetes, and other common ailments has not yet been found.

If it is possible to find infallible methods to prevent the diseases mentioned, including dental caries, you may be sure that they will be found eventually through cumulative research and clinical study by scientists who may be dentists, who may be physicians, or who may be neither. No upheaval of graduate education, of dental education, or of medical education is necessary at this time. The contents of the volume "Dental Caries" recently published by the American Dental Association, with which you are all familiar, illustrates the extent of study, research, and progress in the most important field of prevention in which dentists are particularly interested.

If President Eliot of Harvard was right in his praise of dental education, some fifteen years ago, how much more correct would we be in commenting favorably upon the remarkable progress in dental education of the past decade. The lengthening of the curriculum to six years, the adoption of high standards for admission, the report of the Committee on Study of the Dental Curriculum, the re-establishment of financial support for the Council on Dental Education so that it can continue to function in behalf of the schools, the profession, and the public, all came during the past five or six years.

But I must get to the business of the afternoon. I will do so after just one more comment. Whenever I get stirred up about some injustice that is perpetrated or some danger to which the profession is subjected or with which it is threatened, I find satisfaction in remembering that we have in this country an organization, the National Association of Dental Examiners, which may be depended upon to take a common-sense point of view. The Examiners not only have always encouraged the advancement of educational standards, but they have also on several occasions disapproved of practices or suggestions that threatened the reputation, the integrity, or the independence of dentistry, and I firmly believe that they may be depended upon to use their influence to the benefit

of the profession in the future, should occasion arise for such action.

Personally, I have at times disapproved of the attitude of the American Association of Dental Schools on certain matters, particularly those relating to entrance requirements for dental schools, which I was convinced, threatened their good reputation. But I have always found deep satisfaction in the ideals encouraged by such particular State Dental Boards as those of New York, Ohio, Michigan, New Jersey, and by the Board of my own State of Wisconsin as well as by the progressive, yet sane group organized as the National Association of Dental Examiners. Let me repeat, it is a comfort to know that, while other types of educational institutions may experiment with bizarre methods or methods presented as new from across the Atlantic, such procedures will find little encouragement in the long run if attempted in dental schools. Change does not always result in progress, and the Examiners through their relationship with the public, and because of experience gained through the enforcement of laws conducive to the development of the best and most efficient type of oral health service, have acquired the practical background to become fully cognizant of this truth.

And now, after these preliminary observations which I hope you will note were commendably brief—which virtue I recommend to all of the gentlemen appearing upon this program this afternoon—I take pleasure in introducing the speakers.¹

II. TRENDS IN DENTAL EDUCATION

Leroy M. S. Miner, D.M.D., M.D., *Boston, Mass.*

Dean, College of Dentistry, Harvard University

In the one hundred years that dentistry has functioned as a formally organized profession, there have been two major developments in dental education. During the first seventy-five years of its existence dental education was chiefly concerned with the tech-

¹Speakers were introduced as addresses are herewith presented.—*Ed.*

niques of repair and replacement, with training in digital skills and with the problems of improving its technical and mechanical procedures. The path of progress in those days, as now, was sometimes rough and stormy, and even violence developed on occasion, as in the case of the amalgam controversy, but the path led always forward in spite of the opposition which today seems shortsighted.

Even in the last twenty-five years, during the period that the second major development or trend has taken place—a concern for a scientific and intellectual growth—brilliant work has been done and substantial progress has been made in dental technology, in acknowledgment of which a medical educator was led to say that “American dentistry still remains a superb artistry, still continues as a reparative and restorative profession of the highest technical skills.” Partly because of this reputation, the dentist has been regarded down through the years as a high-grade technician rather than a scientist.

There are several reasons why the mechanical aspects of dentistry should have received almost exclusive attention in dental schools throughout the first seventy-five years, but the one of greatest influence—the one that outweighed all other considerations—was the lack of a body of knowledge which warranted the thought that dental disease was in any way related either in cause or effect to disease in other parts of the body. The idea that dentists had anything to do with the general health of their patients, or that physical disturbances had any effect on the health of the oral tissues was beyond the horizon.

And then, beginning in 1910, Goadby, Hunter, and others, fired the imagination of the dental profession and awakened an interest in what we now call the biological aspects of dentistry. In the last twenty-five years there has been a mass of evidence piling up from laboratory and clinical research which indicates how closely the problems of health and disease within the mouth are related to the problems of general health and physical disability. The pressure of this growing body of knowledge makes the dentist's participation

in the activities dealing with the general health of the community a necessity. This trend naturally has had a profound effect on dental education, for it has placed a responsibility on the dental schools of so training men that they can participate effectively in community and individual health measures. How then may this be accomplished? Certainly technical dentistry alone, even though it be further developed, is not likely to satisfy these needs; rather does it suggest that the dental students must have the opportunity for acquiring an appreciation and understanding of the basic principles underlying medicine. The need of a closer integration of medical and dental education also seems obvious. We can all agree with Gies¹ that "promotion of the public welfare requires dental surgeons to be as responsible, intelligent, well educated, thoroughly trained, and broadly experienced as physicians, and to be as competent to understand and to perform the health-service duties of dental practice as an oto-laryngologist or an ophthalmologist in his particular field. To regard dentistry as a mechanical art that requires little or no medical education is as unintelligent and as uninformed as to assume that abdominal surgery is nothing more than biological joinery. Each is the practice of health service by mechanical procedures, but both may have fatal consequences from lack of medical understanding, whatever the degree of manual skill in their execution." Although the subject has been quite thoroughly discussed during the entire one hundred years of formal dental education, a rational integration of dentistry and medicine is a problem that has remained unsolved. President Eliot of Harvard, in an address before the American Academy of Dental Science, Boston, October, 1878, made remarks which indicate that at that time, over sixty years ago, the relation of dentistry to medicine was a subject of discussion even as it is today. He said in part:

" . . . Many eminent dentists have regretted the institution of a special dental degree, and have maintained that every dentist should be a doctor

¹Gies, Wm. J.: *Dental Education in the United States and Canada*, *Bulletin No. 19*, 1926, p. 134: The Carnegie Foundation for the Advancement of Teaching.

of medicine. Let it be granted at once as a fact beyond dispute that the full training of a physician and surgeon would be useful to a dentist. . . . Whether or not the dentist shall take the doctorate in medicine is at present a practical question in this country only where the dental candidate for the medical degree is permitted to substitute in the three years' course for this degree all the peculiar dental studies for as many proper medical and surgical studies."²

Eliot undoubtedly had in mind the principle involved an interesting attempt made by the American Medical Association, in 1887, to settle the question of dentistry as a specialty of medicine.

A resolution was passed by the house of delegates of the American Medical Association in that year, recognizing dentists as members of the regular profession of medicine provided their preliminary or general education was equal to that required by medicine, and provided that the fundamental branches of medicine were included in the dental course; the plan of education differing chiefly in the substitution of clinical instruction in dental and oral medicine and surgery for the usual instruction in general medicine and surgery. This was an effort to break down the barriers between the dental schools and the medical schools.

Today there is an important trend in various fields of education which is of significance for dentistry.

As general knowledge has grown, the air-tight compartments between fields of learning and between departments in the university have broken down and collaborative research and instruction have been developed. It is interesting to note, in this connection, that the progress made in extending fields of medical knowledge through research has not infrequently been made by men not graduates in medicine. Combined courses in engineering and business, law and business, and public health and engineering, are being offered, in some instances with provision for acquiring two degrees.

To adopt a similar program in the medical field which provides

²Eliot, Charles W., LL.D.: Address; American Academy of Science, Boston, Oct. 30, 1878. Monograph, Press of John Wilson & Son, Cambridge, Mass., 1879, pp. 17 and 18.

opportunity for those students who are interested in dentistry, and who have the capacity and the resources, to cross boundaries and to broaden their horizons, through additional training in medicine, seems not irrational.

The interests of the public may thus be furthered, and, after all, dentistry and the dental schools do not exist for the benefit of dentists, but because they satisfy a public need and they will exist only so long as they fulfill that need.

In the adoption of the new plan of dental education at Harvard, an effort was being made to serve better the interests of the public.

I am disclosing no secret when I tell you that in some areas the plan has met with harsh disapproval, and it has been bombarded with explosive criticisms, such as "the worst thing that has happened to dental education in a hundred years." On the other hand, from experienced and intelligent educators and from men familiar with public health requirements, have come words of hearty praise. "The finest step forward that dentistry has taken in a generation" reflects another point of view. Nor should we overlook the approval of the plan by prestige organizations which is reflected in gifts of \$1,300,000 to finance it.

Time does not permit an attempt to answer the many questions and criticisms that have reached me, but the idea that technical proficiency is going to suffer seriously is so prevalent that I take this moment to express my opinion that it will not be allowed to suffer, and even if it does there may be compensations.

I would like to quote from a statement made by A. Z. Reed of the Carnegie Foundation for the Advancement of Teaching, for the sake of the technical enthusiasts. He says:³

"If in the gradual development of a satisfactory system of preparation for a learned profession, a desirable element has for the time being been omitted, it is better that vocational proficiency should be sacrificed to science

³Reed, Alfred Z.: *The Origins of Licensing in the Learned Professions*, Thirty-third Annual Report, Carnegie Foundation for the Advancement of Teaching, p. 84, 1938.

than the other way about, if only because the proficiency of individual practitioners dies with them, while an accumulating body of learning has eternal life."

That is a pronouncement that every dental educator will do well to ponder.

It is gratifying that the plan has aroused so much interest, for nothing is more deadly than a complacent indifference. The intellectual ferments in dental education that have been introduced by this and other plans are all wholesome and eventually should result in clarification as most ferments do.

In the meantime it may not be out of place for me to suggest that tolerance is a virtue and so is patience, and that usually it is wise to delay final judgments until all the facts are available. As I suggested in a meeting of the American Association of Dental Schools last spring, "There are many details yet to be ironed out to be sure that the integrity and the dignity of the Dental School will be maintained in the public and professional esteem."

And finally, to quiet apprehensions regarding my own attitude, let me say that I am sure that no one in the dental profession has its welfare and its future any closer to their heart than I have, and that what strength and influence I possess will be devoted to promoting the interests of dentistry and dental education as I see them.

III. TRENDS IN DENTAL EDUCATION

Harlan H. Horner, A.B., A.M., Pd.D., LL.D., *Chicago, Ill.*
Secretary, Council on Dental Education, American Dental Association

As one looks out upon the horizon of dental education today, it would appear that there are numerous "trends in dental education." Out of a possible larger number, however, I have chosen to discuss briefly with you, four of these trends as I see them.

Selection of Students

A distinct awakening is noticeable throughout the country in the

selection of students to undertake the study of dentistry. Perhaps the change which is taking place may be illustrated by a nice distinction between the words admission and selection, in terms of present administrative practice. For altogether too long a period, admission connoted the successful crossing of a quantitative barrier by the prospective student. How long had he been exposed to the possibility of acquiring a basic general education, what credit or hours were recorded on the right side of his high school and college ledgers, and with what fidelity had he pursued the arbitrarily fixed avenue of approach to the study of dentistry, were the principal questions asked of him; and upon his answers, submitted in a formal documentary record, depended his fate.

The selection of dental students now widely prevailing presents a vastly different procedure than mere admission. Dental schools are still quite properly concerned about the length, breadth and thickness of the applicant's predental education, because they believe time and discipline and measurable accomplishment are essential to all education; but they are exhibiting a refreshingly new concern about the fitness of the beginning student, which is indicated by the term "selection." This concern goes far beyond time spent, credits recorded and rituals followed, and inquires about rank attained, range of general study pursued, and disposition to engage in rigorous scientific endeavor. More, the process of selection is frequently elaborated by mental and manual aptitude tests to discover, if possible, adaptability to dental study and practice. In many instances, also, officers of selection are scrutinizing the human side of the ledger the applicant brings with him, in order to determine that his character is above reproach, that his ideals and motives are such as to make him a worthy member of a profession engaged in a great public health service, and that he gives promise of understanding and of living up to the inevitable distinctions between a trade and a profession. In short, a trend is in evidence which presages the universal practice of dental schools to inquire fully into both the quantity and quality of an applicant's predental edu-

cation, his mental and physical fitness for his chosen profession, his character and outlook, and his promise as a man and citizen as well as a successful practitioner of the art and science of dentistry. Selection, as here portrayed, promises to overtake and envelop admission.

University Relationship

One of the most significant and beneficent movements of education in our time and generation has been the disappearance of the proprietary professional school and the gradual absorption of reputable professional education by the universities. It is now universally recognized that sound higher and professional education may not be conducted on a profit-making basis. The notion that a successful medical or dental school could be self-sustaining, much less conducted for profit, has been completely dissipated, and reputable medical and dental schools, except in a very few instances, have been taken over by public and private universities. Engineering and architecture, which largely escaped the early proprietary degradation of medicine and dentistry, are almost entirely university disciplines. Legal education emerges more slowly than most other fields from the toils of private ownership and management; but the outstanding law schools of the country, approved by the Council on Legal Education of the American Bar Association, are mainly under the control of the universities.

Dental education has already been strongly influenced by this movement, which has become more than a trend. Dentistry at the moment can hold its head high among the professions. There is no longer any effort anywhere in America to conduct a dental school on a proprietary basis, and with few exceptions the thirty-nine dental schools in the United States are a part of or are affiliated with universities. The day seems not far distant when there will be no exceptions.

It must be acknowledged that dental education does not yet generally enjoy the university relationship and fellowship which professional schools of medicine, law, engineering and architecture

have attained. Unfortunately university affiliation and university recognition in dentistry do not always signify full university support, control and discipline. There is a trend, which has made noticeable progress in several outstanding institutions, toward the admission of the dental school to its full and rightful place at the university table. Dental education will come to this place in due time through the cheerful willingness of universities to grant it and also through deserving the place by accomplishment. To command the university support now accorded to medicine, for instance, and to meet the tests of university discipline applied to all other professional schools, dental education must undergo a transformation from within and must consciously put on all university habilements. The trend in this direction is marked and hopeful.

Curriculum Changes

Coincident with the gradual occupation of a genuine university setting, dental education is undergoing a curriculum transformation from within which is motivated and guided by university relationship. Quite contrary to mistaken assumptions in certain quarters, many dental educators have long been awake to the possibilities and responsibilities of dentistry as a branch or specialty of medicine and to the growing importance of the biologic aspects of dental teaching. Curriculum changes to this end have been widely introduced, and care is being deliberately taken to prevent the necessary and highly developed techniques of dentistry from displacing or minimizing the importance of scientific approach to all problems of oral disease, oral health and cure. Discernible in these curriculum changes, which are gradually taking place, is the growing development of the scientific attitude in teaching and the emphasis upon intelligently directed research into the causes of dental disease.

There is a disposition in certain quarters—one would hardly call it a trend—to challenge the independence of dental schools as teaching and research units in university administration and to assume that the practices and procedures in medical teaching and

research brought to the relief of dentistry will promptly solve its pressing problems. This attitude arises in part from the readiness of university officials to allow the splendid progress in medicine to overshadow the steady but less conspicuous progress in dentistry in recent years. It also arises in part from the emphasis which has hitherto been put upon manipulative dentistry and from the unfortunate tendency in some dental schools to displace coherent and orderly teaching and basically important research with an undue amount of clinical work in the dispensary or infirmary. One can discern, if he looks closely enough, a trend all along the line to test all teaching and research, and all clinical and laboratory practices, by basic university standards and by the objectives of dental schools generally, which admittedly are to turn out educated men; educated in the ways of the world in which they are to live and work; educated professionally with mind and hand fitted to the chosen task; and ready to devote their lives to the high calling of their profession.

In the main it may be said confidently that those who are most deeply absorbed with the problems of dental education and see most clearly the demands of dental practice in the future feel that dental education must primarily work out its own salvation. There is unmistakably a trend toward hearty cooperation with medicine, both in teaching and in research, and with all other agencies engaged in the promotion of public health; but there is also a marked disposition—one could almost call it a firm determination—to maintain the complete autonomy of dentistry as a separate, distinct, independent branch of medicine. Those who inspire this trend or determination or purpose look eagerly for added support and endowment of dental teaching and research on a true university level and feel that the greatest impetus will be given to the profession on behalf of the public it serves by the employment of existing agencies within the dental schools and within the profession. Genuine scientific endeavor knows no boundaries and no *-pathies*; but enthusiasm and personal zeal and devotion have limitations. The

conviction grows that dental education will be best advanced by hazarding its future upon an equal level with all other professional schools in a university circle and that progress will be made by meeting the tests squarely, and resolutely facing the demands which such company imposes.

Extension of Dental Service

A trend which perhaps stands out more significantly than any other at this time is evidenced by the universal urge to extend the benefits of scientific knowledge and the skills of dental practice to all classes of our society. This movement may be regarded as belonging more properly to the realm of dental practice and public economy than to dental education; but the ideals actuated during student days and the revelation of the challenge of the unsolved problems in dental research have much to do finally with the universal extension of dental service. Our dental schools, in shaping their programs of teaching and research, are alertly alive to the social and economic aspects of the future practice of dentistry. This fact is clearly evident.

This happy trend, finding its inception in the dental schools, has far-reaching consequences. One of the great social crimes of our generation is our failure to carry the science we know and the art and skill we possess to all those who might be cured of disease or relieved of pain. The number of children of pre-school and school age who escape the dental care and treatment to which they are entitled is a national disgrace. Scarcely an adult goes through life without dental disease or the need of dental treatment and, as is well known, not more than a fourth or a fifth of our entire population has dental treatment in any given year. The lowest, meanest, human sufferer is entitled to all we know and can do in dentistry. The trend toward the consummation of such a day, which may yet be long distant, is apparent, and dental education is already predicated upon such consummation.

IV. TRENDS IN DENTAL EDUCATION

Albert L. Midgley, D.M.D., Sc.D.

Providence, R. I.

It is a pleasure to be here and to present some considerations which may be useful in helping us to evaluate recent trends in dental education. Experiences of the past, activities of the present, and plans for the future, have passed in review as I reflected upon this subject. All will finally be gathered up in an attempt to determine what destiny awaits the American plan of dental study and dental service.

The manner in which dental students should be educated for their profession depends, in the last analysis, upon what is understood to be the function of dentistry in its most comprehensive sense. At the close of a century of its organized existence, with one hundred years of professional consciousness at our back, we are in a position to trace very accurately the development of our conception of what dentistry should be, and what a dental education should include. For the first seventy years, the record was one of conscious, determined effort for improvement in all phases of endeavor, characterized by experiment and success in the perfecting of techniques, instruments, and restorative substances, and by the gradual attainment of extraordinary manual skill and precision in the most delicate operations. During the past thirty years, stimulated by the knowledge that diseases of the mouth and teeth are inseparably connected with general health, dentistry has been raised to the rank and responsibility of a learned profession, including in its educational requirements not only the biological sciences, but also a sufficient amount of liberal arts to give the dental graduate a cultural equality with the medical graduate. This action was a direct and logical acknowledgment of the great responsibilities and permanent obligations of dentistry, to which all trends in dental education should naturally conform. Every thoughtful dentist will affirm that the principles and influences which control the education

and training of the dental undergraduate must, now and hereafter, be so organized and applied that he acquires an ever-broadening vision of professional responsibility and an ever-deepening mental culture, inseparably linked with skill and understanding in essential manipulative procedures.

Like every other thing that lives and seeks to grow, dentistry, today and every day, must face the problem of adjusting itself to an ever-changing environment. But we find evidence that present-day trends in dental education may safely take their direction from the standards set by and the achievements of our pioneers. Their ideals had the breadth, the scope and the intrinsic worth which have furnished impetus for present-day accomplishment and aspiration. In their hands, dentistry was never static: with unflagging energy and persistence they pressed on toward the goal of more knowledge, more skill and better service, in the prevention and relief of pain and disability. In what fundamental particular is our present outlook changed? To maintain and consolidate our position in the world of learning, we must pursue with unremitting zeal the knowledge to be derived from scientific research. To improve our professional usefulness and our status as ministers of the health of the public, we must draw continuously from all those arts and sciences which are in any way related to health service. An insatiable capacity for work cannot be made a part of the dental curriculum, but it is still an essential qualification for success in the practice of dentistry, and likewise teaching and research. *Labor omnia vincit.*

Adequate preparation and unlimited opportunity in all pedagogical relationships must be assured, for student and teacher alike, if our requirements are to be fully met. Any form of exclusion, isolation or narrow specialization will breed mental laziness, baneful illusions of self-sufficiency, and a strong temptation to commercialism. If doors are closed and helpful associations denied, how are we to avert weaknesses, deficiencies, or failures? On the other hand, an intimate and mutually inspiring comradeship with medicine, whose purposes we share and whose practices we supplement,

should be an influence leading to natural and healthy growth in professional wisdom and stature.

The purpose of the Dental Educational Council in raising the entrance requirements and extending the curriculum of American dental schools was not merely to round out the undergraduate course and establish a formal scholastic equality with medical schools, but to prepare the way for dentistry to accept and perform its appropriate part in advancing the frontiers of knowledge. Under the conditions which had previously obtained, there was great disparity between dental schools, and the deficiencies of some were undoubtedly visited upon the dental profession as a whole. The two influences which perhaps did most to darken the educational outlook were (1) students with little mental training and aptitude who were attracted by short courses and promises of a profitable career, and (2) teachers of the basic sciences who were inert and uninspiring. By earnest and continuous effort, the picture has been changed. Dental schools that now are organic parts of universities offer broad intellectual advantages and a stimulating atmosphere, which are drawing to our ranks men and women fit to assume responsibilities of health-service in this modern world. Mature professors and eager young teachers now set the pace for research in dental problems, and will more and more seek to coordinate their findings with those of medical teachers.

The International Association for Dental Research, organized twenty years ago, has won world-wide distinction by its notable achievements, affiliations, and its scholarly *Journal of Dental Research*. The American College of Dentists offers the William John Gies research fellowships and grants-in-aid, and has made an initial award for outstanding achievement in research. Not only does the patient work of minute investigation clarify the problems and extend the resources of dental practice, but it also opens the eyes and stimulates the mind of the dentist in his office, deepens his sense of the dignity of his calling, awakens the hope that his own observations may add to the total of professional knowledge; and it

makes him vitally interested in the dissemination of such knowledge by means of dental literature. Dental minds are everywhere alert. Dentistry is indeed alive and growing under the inspiration of expanding opportunity and public recognition of the fact that it is a specially-equipped health-service profession.

A swarm of field activities constitute another expression of this widespread alertness, at the turn of dentistry's first century. Throughout the country everywhere, capable men are energetically illustrating the professional spirit by removing the major and minor obstacles which still obstruct the path of progress. Previous crusades had accomplished much, including the liberation of the dental press from more than a half-century of benevolent but embarrassing trade-house paternalism, and the organization of the American Association of Dental Editors. With the most obstinate impediments already removed, present activities have the zest of constructive effort. Sustained and encouraged by the incomparable stimulus of concurring opportunity and obligation, the dental crusader matches vigor with understanding, and (to speak figuratively) is irrigating the desert with his ideals and carving them in granite upon the mountainside. Literally, he is marking his way with substantial, unmistakable gains in the educational, the professional, and the civic activities and affiliations of dentistry.

Schools, state examining boards and dental societies have achieved and have maintained new levels of interest and proficiency. The importance and values of dentistry have penetrated much deeper into the consciousness of universities, medical schools, hospitals, dispensaries, public health agencies, mothers' clubs, teachers' associations, and the unorganized public. The interest of universities and medical schools in the need of a well-rounded curriculum and program of research has been newly awakened. Many and varied problems of teaching and administration, of helpful alliances and correlations, of acquiring and disbursing adequate funds for the advancement of learning, have been thoroughly canvassed and are apparently solved or well advanced toward solution. High pur-

pose, unified effort, and a dauntless will to succeed have characterized each step in each activity. The seed is sown, and we believe that the harvest will not fail.

Of more than passing significance are the trends observable in the recent revision of dental statutes of many states. The far-reaching decision of the Supreme Court of the United States in the Oregon case—a decision which, among other things, very definitely recognizes dentistry as a health-service profession and not merely a mechanical art—lent dignity and authority to our position, sharpened the issues, clarified the vision, and encouraged the National Association of Dental Examiners and the profession at large in an invincible determination to do their part in further protection of the public from incompetency and disease. The trend in all these recent enactments has been toward the exercise of more penetrating foresight and care in the definition and protection of professional responsibility. The influence of the Oregon decision has been widely beneficial, and what has since been accomplished in legislative affairs is not only encouraging, but, under all the circumstances, really astonishing. Many of the dental statutes have been so completely and effectively revised that the results already attained in the elimination of unworthy practices deserve the highest praise. Some of them are looked upon as models of dental legislative perfection: they are comprehensively drawn, clearly stated, and leave no loopholes for prospective violators or the cheap practices of their wily lawyers, who formerly evaded or nullified the intent and spirit of the law.

Items that have helped to bring dental legislation to a high degree of efficiency are (a) a more complete and precise definition of dental practice and its domain—a masterful curb on the ever-ambitious mechanics, and a bar to all who have not qualified under the course of study prescribed as acceptable; (b) an iron-clad clause pertaining to American citizenship, which will keep out incompetents from Europe and elsewhere; and (c) the relegation of advertising, in the public press and in other ways, to oblivion.

The forward march of dentistry during recent years is due, as I have previously indicated, to the poise, confidence and energy of an enlightened dental leadership, which, under capable direction and by means of planned effort toward well-defined objectives, has not only achieved its immediate ends, but has moved forward so forcefully and consistently as to merit widespread approbation. Educational institutions, the medical and other professions, hospitals, public health agencies, federal, state and local governments, and also a considerable part of the general public, recognize that dentistry is a willing, competent and indispensable agent of health service.

As a result of these attainments and this recognition, an increasing number of philanthropic agencies and individuals appear to be willing to lend a sympathetic ear to those who seek funds for the solution of dentistry's many problems. This trend of philanthropy in dental education should impel us at once to devise further ways and means of enlightening potential benefactors upon the real importance and true values of dental and oral health services, and the ability of the modern American dentist to deliver them according to the principles which medical and dental science has revealed. It is incumbent upon us to be sure that dentistry has excellent and abundant material to deposit within the reach of the mental processes of interested philanthropic laymen. They should be shown that funds intended to finance prevention of dental diseases most effectively should be given directly to dental education. We all know that dentistry, like the unlucky poet, has been too often "damned with faint praise." It has too often happened that philanthropic minds and hearts, naturally bent upon aiding a profession which they admire and trust, have been diverted from dental philanthropic channels by the antiquated device of combining complimentary allusions to the supremacy of American dentistry in manual and digital dexterity, with derogatory insinuations that it is incompetent in the application of biological laws in its ministrations.

Close observers predict that large funds from philanthropic

sources will soon be available for the advancement of dental health-care. From time to time during the past few years, sizable amounts have been given. It is well to stress this fact, for if once the habit or fashion of giving to a cause is started, the publicity attending a gift or grant is likely to inspire others. We ought therefore to give some consideration to the means by which benefactors may be informed and funds secured. It is equally important that we should be on our guard against the subversive practices which have a way of creeping into this activity. It behooves us to scrutinize every appeal—its sources, its environment, the attitude and ideals of its promoters, the plausibility and common sense of their aims and purposes. With funds looming on the horizon, we must, if possible, arrest at their sources such subtle inverted criticisms as "What is the matter with dentistry?" "Why does dentistry remain chiefly mechanical?" "Why do we not have mental dentists as well as manual dentists?" We must also turn the light of truth upon the gross misrepresentations and misunderstandings which still persist in high places. If an important layman can read, accept, and print an academic version of the very sentences which we have just derided, we must conclude that our task of educating philanthropists has hardly been started.

The following statements are taken from the president's review in the annual report of the Rockefeller Foundation for 1938¹:

"Although America leads the world in dentistry, it is a leadership based more upon ingenuity of a mechanical sort than upon the amount or character of research done on the anatomy, pathology, or physiology of the oral cavity. Almost no dentists are trained in such a way that they can do research of a quality comparable to the research in medical schools on medical and surgical problems. Until our dental schools are brought more closely into line with our medical schools, much of the mechanical brilliance of American dentists will remain that and nothing more, and the essential curative and preventive measures will go unstudied."

No one aware of the conditions in Europe, where in some countries

¹Annual Report of the Rockefeller Foundation for 1938: President's Review, pp. 37-38, under the heading *Dentistry*.

the practitioners of dentistry receive a full medical education, and where dental practice is well known to be inferior, would be inclined to make this sweeping statement. American dental education and research have made the implications in this quoted paragraph unwarranted.

In all the effort we have expended to secure a more thorough and well-rounded education for dentists, to awaken the spirit of scientific research, to clear ourselves of encumbrances, strengthen our foundations, build up the opportunity, influence, dignity and solidarity of dentistry, we have done no more than meet our professional obligations as they have become clear to us, and satisfy a resolute purpose to excel. But we have known for thirty years that in developing our research and our health-services we should find it a pleasant and useful thing to enter into a more and more friendly cooperative relationship with medicine. No thought of rivalry, or of infringing on the preserves of a sister profession, has ever occurred to us. We know the size of our own job, and that it would be poor economy for any man, unless on the extreme outposts of civilization, to be part dentist and part physician. In practice, we restrict our medical advice to warnings of dangers in wait for those who neglect the care of the mouth and teeth, or fail to realize that dental and oral diseases may be the cause of or related to disturbances elsewhere in the body.

In cooperative research and in health service, however, we have something to give as well as to receive. Although dentistry is admittedly a comparatively young profession, dentists of today are as old as physicians of today, and their powers of observation and deduction are quite as mature. If I am not mistaken, a majority of them spend quite as much time in professional ministrations as physicians spend; and, contrary to shallow and unsympathetic judgments, these ministrations are "mental" as well as "manual"—the experienced hand, the trained eye and the inquiring mind working together on living tissues which have little or no power of self-repair and yet perform the work of millstones. Dentists, not phy-

sicians, have worked for years on the physiology and pathology of the teeth, in the hope of discovering means of preventing dental caries, which cannot be achieved by any known medical procedure.

In a coordinated program of give and take, therefore, and a mutual recognition of the fact that the dental point of view is sometimes as indispensable to the physician as is the medical point of view to the dentist, we have expected to conserve and enhance the vigor and usefulness of each profession, and hasten the solution of important problems which are common to both. The outlook for such a relationship has become very hopeful, although the mechanism for establishing it has not advanced beyond the stage of earnest discussion. If no adverse influence intervenes, the strengthening and perfecting of our cooperation might safely be left to the friendliness of daily contacts and the transforming power of time.

Just at this point a golden apple, resembling the apple of discord in ancient history, has been flung into the midst of our councils. A new plan of medico-dental education, the financing of which was foreshadowed in the report from which I quoted a few moments ago, has superseded the excellent Dental School of Harvard University, which for generations has supplied a large proportion of dentists for the northeastern states. The new plan, whether it eventually proves to be revolutionary or evolutionary, contemplates not a closer relationship between dentistry and medicine, but the simultaneous existence in one human form of an M. D. and a D. M. D., produced after five years of study, three and one-half in medicine, and one and one-half in dentistry—"mental" dentistry. To sober and unprejudiced minds, this costly scheme, so conspicuously launched, seems neither a trend nor a portent, but simply a misguided purpose. It must, of course, be carefully scrutinized as it goes forward, and there are many points of view from which we might question or criticize the motives and influences behind this intended "drastic reorganization" of dental education. At present it seems enough to say that it looks like an abortive

project, however munificently supported, when compared with the great, wholehearted, eminently successful and peculiarly American system of dental education passed on to us by the pioneers, with a separately organized profession to practice dentistry, further its interests and perfect its efficiency. But we need not dismiss the hope that this new type of dentist, existing in small numbers, may in the end become our ally; for certainly, if the world proves to have no use for him as he is, he must perish or be transformed—perhaps into an inspiring teacher and director of research in a real dental school.

As for any immediate threat to the kind of dentistry that we sponsor, I may, without undue levity, recall the old game of classification—fish, flesh, or fowl—where the chimera and the mermaid were hard to place, both existing in the world of fiction, the one to frighten, the other to beguile. The superdentist—to confer upon him the name which his supercilious training would seem to suggest—can do neither of these things to dentistry, which is competent, fearless, and, we trust, open-eyed.

V. HIDDEN DANGERS IN THE NEW "HARVARD PLAN" OF
DENTAL EDUCATION

A Discussion of Several Aspects of the Proposed Plan¹

W. H. Wright, D.D.S., B.S., M.S., Ph.D.

Pittsburgh, Pa.

*Professor, Anatomy and Prosthetic Dentistry, School of Dentistry,
University of Pittsburgh*

This discussion will be confined to those aspects of the proposed Harvard Plan of dental education which imply a change in the present autonomy and unity of the dental profession and which

¹Due to lack of time and absence of the author, this paper was read by Title.—ED.

involve a threat to the quality of prosthetic oral health service as it is now practiced, namely;

1. The control of dental education by medical educators.
2. Excess medical training for dentists.
3. Implied separation of prosthodontia from the practice of dentistry.

The Control of Dental Education By Medical Educators

The Harvard Plan is an excellent example of high-sounding phrases designed to encourage financial support for a project which avoids present realities in its quest for vagaries of the future. While such statements may sound logical to those who prefer to give financial support to so-called new and experimental projects, they will hardly win the widespread support of informed dental educators who have seen the collapse of such dental educational projects at Rochester and Yale and who are familiar with medically-dominated dentistry in Europe.

The Harvard Plan is presented by the Committee as new and revolutionary, but Doctor Conant states correctly that this idea is not new to dentistry, nor to Harvard. Unfortunately, there is no reference in the report to the fact that similar plans of dental education in Europe and America have ended in a high score of failures for dentistry, but not for medicine. In Europe, where dentists are medically trained, such dentists

1. Do not possess technical skills equal to those of American dentists, as shown by the universal preference for American-trained dentists in Europe, and
2. They do not conduct more significant researches in the cause and control of dental diseases as shown by reports of such researches.

European dental students and practicing dentists have come in large numbers and for many years to America to learn American dentistry. On the contrary, American medical students and medical practitioners have gone for many years past to Europe for medical training.

The high standards of American dentistry are further demonstrated in the recent immigration of dentists and physicians from Europe. All dentists (most of whom are medically trained and possess the M. D. degree) who desire to be licensed to practice dentistry in the United States must complete at least a two-year course in an American dental school and pass the examination of the State Board of Dental Examiners. On the contrary, many of the European-trained physicians are admitted to medical practice without further training in American medical schools, but are only required to pass the respective state medical examinations for license.

These facts justify the conclusion that European dental education under the control of medical educators (who are recognized as equal to, or perhaps superior to American medical educators) is definitely inferior to American dental education which is under the control of dental, not medical, educators. If medically-dominated dental education were likely to succeed anywhere, it should have been abundantly successful in Europe, precisely where it has failed!

For a number of years the dental school at Harvard has been under the immediate charge of the Faculty of Medicine, contrary to the general Harvard policy of having each school under the charge of its own Faculty. While the Faculties of other schools at Harvard are composed of all teachers above the grade of tutor, professors only of the Dental School are members of the Medical Faculty. Further, the report states that medicine has failed to advance dental medicine adequately during the period in which research in other aspects of medicine has made tremendous strides.

These unfavorable conditions under which dentistry at Harvard has struggled for existence are to be expected wherever dental education is dominated by medicine. Medical educators have too many problems of their own to be greatly concerned with the problems peculiar to dental education.

What can be expected of the new school at Harvard under the same medical control which for many years has disregarded the plight of the dental school, allowing it to go improperly supported

almost to the point of being discontinued? Can it be that the present endowment is particularly alluring to the medical group at Harvard, especially since the proposed School of Dental Medicine stands an excellent chance of being unsuccessful?

Excess Medical Training for Dentists

The danger in a plan that proposes three and one-half years of training "essentially identical with the basic course given in medical school as preparation for medicine" and "one and one-half years of specific dental training" is that the graduates will be outcasts among the medical and dental professions. Lacking the standard training of the physician and deficient in the exacting and diversified requirements of dental practice these graduates will find no common ground with either profession.

The awarding of two professional degrees, M.D. and D.M.D., in five years cheapens both degrees and degrades the standards of medical and dental education instead of raising them to "equivalence with those of other university discipline." Such disregard for scholastic integrity will do much to bring both medical and dental degrees into disrepute among university educators and the laity.

The report states that this opportunity challenges some one of the leading dental schools of America to become a farsighted pioneer by breaking entirely and sharply with outworn traditions of the present and calls for a transformation of a leading dental school into an institution of higher learning of university caliber.

There can be no doubt that the awarding of two professional degrees in five years is breaking entirely and sharply with traditions of the present. The future will show whether or not the traditions of the present are outworn and how farsighted the Harvard Plan really is.

Medical and dental education of the present prepares physicians and dentists to meet the realities of practice and, at the same time, to contribute to the advancement of knowledge of disease through broad experience gained in daily practice.

Dental education which partially trains physician-dentists with the expectation that they will be able to advance understanding of causes and prevention of dental disease is unsound, because after many years of medical supervision, dental education in Europe is decidedly inferior to that in America.

Preponderant medical training is neither the solution to dentistry's problems nor is it advantageous to dentistry's future, since it tends to deprive the dental profession of those who are so trained. Having been medically trained, it is natural for the physician-dentist to pursue post-graduate studies in medical specialties, the practice of which are less confining and require less technical facility and visual acuity than the specialties of dentistry.

Dentistry should insist on having what belongs to it. Today, as in the past, it should object to any subterfuge by which sincere applicants for dental education may be diverted, by high sounding phrases and glowing promises, from pursuing an accredited dental course and from entering the practice of dentistry. Fortunately for dentistry, the American Association of Dental Schools has conducted a study and published a report on the dental curriculum. This report "A Course of Study in Dentistry," is now used as a guide in curriculum planning by practically all of the forty-two schools which belong to that Association.

It would appear that the Harvard Committee could have shown professional courtesy and received sound counsel and advice by consulting some of the many experienced dental educators who are fellow-members with Harvard of the American Association of Dental Schools. The secrecy attending the preparation of the Harvard Plan would lead dental educators to believe that the dental advisors at Harvard were unusually competent and informed, or, as may be inferred from the report, the medically-dominated committee worked with minds closed to dentistry.

Implied Separation of Prosthodontia from the Practice of Dentistry

The report states that the "achievements of American Dentistry

are great, and current dental educational methods produce practitioners able to carry out reparative procedures of mechanical nature with extraordinary precision and ingenuity, but modern dentistry has not been as successful in advancing understanding of causes and prevention of dental disease, or in training dentists capable of solving these problems, as it could be under a different plan of education."

In spite of dentistry's ability to carry out reparative procedures successfully, the Harvard Plan proposes to decrease the training in this field and to increase training in the medical sciences. This change, recommended by physicians, is illogical and difficult to understand, in view of the degree of success resulting from the treatment of dental disorders by dentists. The resourcefulness and ingenuity demanded in the practice of general dentistry is scarcely rivaled in the practice of general medicine. Further, the lack of understanding in medicine of the cause and cure of diseases would scarcely qualify medical educators to lead dentistry out of the wilderness of its so-called lack of understanding of causes and prevention of dental diseases. Some of the most common diseases are enigmas to the medical profession.

The curtailment of training in the biomechanical reparative procedures (not mechanical as stated in the report) would sound the death knell of dentistry. So long as the public suffers from the ravages of dental diseases the dental profession must be trained and prepared to render relief even though the cause and cure are unknown, just as the medical profession must alleviate suffering by treatment which does not cure. In this respect the dental profession leads the world, since it can repair the ravages and prevent the recurrence of dental disease and at the same time restore the functional efficiency of the dental organs by means of ingenious biomechanical devices so that the patient's comfort, health, and usefulness to society are restored. To take from dentistry its proficiency in restorative procedures would rob it of the unity of practice which has made American dentistry world renowned. Any plan that pro-

poses to pioneer must make provision for all dental services which the public now receives at the hands of the profession, otherwise a new group of workers will be called in to supply such additional treatment as the public may require. Dentistry has stubbornly and effectively resisted the inroads of all those who, unqualified, have sought to exploit the oral health of the public. Medicine has not done so; and now it is surrounded by groups of licensed practitioners who give peculiar, unorthodox, and sometimes dangerous treatment, yet they have entrenched themselves in public favor and hold their position through political power and license. Dentistry under medical control would be infested with the same kinds of quacks and pretenders who prey upon the public under the eyes of the helpless medical profession.

The proposed medically-dominated Harvard Plan, if widely adopted, would lead to the same lack of unity in dentistry that now exists in medicine. The first group of squatters to stake out a claim in medically-controlled dentistry would be the dental technicians who, at present, are held at bay only by a vigilant and militant autonomous dental profession. This group, who are agitating for licensure, would soon secure the license to practice those aspects of prosthodontia which the physician-dentists had not been trained to do, or regard as beneath their dignity.

This dismemberment of dentistry is not an idle speculation in view of the fact that medically trained dentists (*Zahnärzte*) in Germany have been outnumbered two to one by the dental technicians (*dentisten*) who are now licensed to practice all phases of dentistry, including insurance dentistry, even though their training does not at all equal that required of *zahnärzte*. Thus the public of Germany is at the mercy of those who, at first, presumed to practice only denture prosthesis, have gradually extended the scope of their service to include all types of dental treatment.

The same appropriation of professional privileges by technicians can and will occur in America unless dental education of the future

continues to follow and to perfect the American plan of dental education which under the guidance of dental educators has been increasingly successful in educating dentists to render a complete and inclusive dental service to the public.

The history of dental education both in the United States and in Europe shows that the present broad outlook, the rapid development, the enviable quality, and the professional autonomy and unity of American dentistry cannot be maintained or promoted if dental education is under the control of medical educators.

VI. THE IMPORT OF THE PROSPECTIVE NEW DENTAL
PROGRAM AT HARVARD UNIVERSITY

William J. Gies, Ph.D., Sc.D., LL.D.
New York, N. Y.

I

A world-wide revolution is in progress. Many phases of human interest are being subjected to rigorous reexamination. Education in every field is facing intensive criticism. Every section of professional education is receiving special attention. These conditions have not eliminated the accustomed need, in all relations, for clear thinking, common sense and courage. This afternoon we are considering conditions in dental education. The preceding speakers have discussed some of the many trends. This comment will be focused on an outstanding situation.

Various sciences are basic for all divisions of health service. Adaptation of these sciences, in institutional dental education, was initiated by the first dental school, one hundred years ago. The pressing importance of mechanistic requirements in dental service retarded growth in attention, in dental schools, to the applications of some of these sciences. But with the ascendancy of the concept that dental practice is primarily oral health-service, dental schools—with improving cooperation from medical faculties—have been giving increasingly effective related instruction in biological (“medical”) sciences, without impairment of instruction in mechanistic relation-

ships. Some critics assume that biological sciences should receive a much larger share of attention in undergraduate dental education. Others, less arbitrary in their opinions, anticipate adjustments of instruction in these sciences in proportion to their actual values in dental practice, as ascertained gradually by experiment and observation. Recent conclusions in this relation, stated by Dean F. B. Noyes, present a clear view of some associated trends:

"A considerable part of the medical profession . . . consider the dentist a technician and . . . *would like to have all of the health and medical phases of dentistry confined to the physician.* They believe that the physician should prescribe what dental service should be rendered for the patient and the dentist execute it as a technician without reference to its relation to the health and well-being of the patient, for which the physician would be responsible. Apparently the dentists supporting this view do not realize that this would eventually make of the dentist a technician, comparable to the optician who makes the glasses on the ophthalmologist's prescription. Development on this line is at present unthinkable for a number of reasons, but if for no other reason, it is unthinkable because of the ignorance of the medical profession in all matters of oral anatomy, histology, physiology and pathology—in general, I believe it is a correct statement that the dentist is better grounded than the physician in the facts and principles which make judgment of the relation of mouth conditions to general health possible. The medical curriculum is already overcrowded; it would not be intelligent to try to include specialized training in oral anatomy, histology, physiology and pathology in the education of the general practitioner. The tendency is, in theory at least, away from the idea of the dentist as a technician, only. *The interest in and importance of grounding dentistry in the fundamental medical sciences and of relating clinical medicine and clinical dentistry are reflected in every dental curriculum and occupy a large place in dental literature.* The recognition of this as a desirable objective is extremely important. But while many are aiming at this goal, it is impossible to expect uniformity of attainment. It is a new and difficult problem and we will have to experiment with different methods before a satisfactory program can be evolved. Such experiments are in progress in different colleges of dentistry and undoubtedly their outcome will have a most important bearing on the status of dental education in the future."¹ [Italic not in original.]

¹Noyes: *J. Den. Educ.*, 2, 84 and 85; 1937, Dec.

The evolution in dental applications of biological sciences, the associated extensions of clinical understanding in dental practice, and the social significance of growing appreciation of the health-service relationships of dentistry, have stimulated occasional revivals of the idea that dentistry, or a part of it, should be converted into a medical specialty and the separately organized dental profession discontinued. Numerous illustrations of this trend, in addition to those indicated by previous speakers, might be given. Thus, twenty years ago, the University of Rochester received about \$12,000,000 with which to create a School of Medicine and Dentistry. The General Education Board gave \$4,000,000 of the total amount. A representative of the Board publicly stated that the program at Rochester was expected to transport dentistry into medical practice. Several years later this purpose, having failed to attract practical interest (despite the millions of dollars supporting it), was abandoned at Rochester. Shortly afterward, Rochester University substituted an important, useful and relatively inexpensive program in graduate education for dentists by the fellowship method, which has been sustained by independent gifts.²

Another example of the trend was the recommendation by the Commission on Medical Education, in its Final Report in 1932, that "dentistry should be developed *under* medical education" (p. 217). Recently these aims have been reinvigorated by an official announcement, at Harvard University last June, that a new program—supported by special gifts amounting to \$1,300,000—will discontinue the Dental School and place dental education there completely *under* the Faculty of Medicine, beginning in September, 1941.

Revivals of the idea that dental health-care cannot attain its greatest usefulness unless dentistry becomes a formally accredited medical specialty should be reviewed in the light of historical perspective and present reality. From the earliest times physicians as a

²The nature and outcome of this program, at the end of its tenth year, were recently indicated by Bibby: *J. Am. Col. Den.*, 7, 145; 1940, Sep.

rule, regarding dental diseases as relatively superficial in their relation to human welfare, have been correspondingly unconcerned about means for the amelioration of dental disorders. This inattention by physicians occasioned the gradual development, by craftsmen, of interest and proficiency in the mechanical alleviation of the more distressing dental disabilities. A prolonged era of improving craftsmanship, of attendant increasing personnel, and of growing acceptability of the ensuing reparative and restorative dental services, prepared the way for the evolution in understanding and responsibility that resulted—a century ago—in the establishment of dentistry as a separately organized health-service profession. Since 1840, despite the indifference of physicians to dental diseases and their consequences, the dental profession has continued faithfully and earnestly to develop and perfect oral health-service. Owing to the increasing understanding and efficiency of dentists, dental practice has been progressing steadily in healthserviceability and in public esteem and appreciation. An expert witness as to this was the President Emeritus of Harvard University, Charles W. Eliot, one of America's most distinguished leaders in education. Nearly fifty years after he made the remarks that Dr. Miner quoted, Eliot, in an address to dental students at Harvard in December, 1924, included the following comment:

"I want to congratulate you on the greatly improved standing of the dental profession among the professions. That is one of the most striking changes in public opinion that I have witnessed during my *seventy years of observation of educational progress*. . . . I do not think I have seen during my seventy years of observation of the professions and the means of training them any change so great as that which has taken place in regard to the dental profession, and *to the means of training dentists*. . . . The training a dentist needs is in large part a training in skill of eye and hand. It happens that in acquiring the skill he needs, he must learn to perform with a high degree of skill a great variety of manual and bodily labor. . . . I believe this school acts on the belief that if a young man cannot acquire the necessary skill of eye and hand, then he cannot become a good dentist. . . . *Look for-*

ward, therefore, to the future of your profession with great hope."³ [Italic not in original.]

During the fifteen years since Eliot stated these judgments, the advances in dental education and in dental practice that he acclaimed have continued more rapidly than ever.

The various current trends in dental education reflect the influences of two divergent general views. In one, dentistry would be more effective in health service if a portion of it (mainly mental) were made a specialty of medical practice—the rest (chiefly manual), by technical assistants, to be excluded from that specialty. In the other view, dentistry, under the guidance of the separately organized profession that has been effectively coordinating the mental and manual phases of dental health-care, is becoming independently the full service-equivalent of the best possible oral specialty of medical practice. Increasing recognition of the health-service relationships of dentistry—which have been developed by dentists and their collaborators in the sciences, not by physicians—has been slowly warming the traditional indifference of physicians into hope by some of them that medicine will “take charge” of dentistry. But it is highly improbable that dental service would be made more efficient by a profession that has been traditionally inattentive to dental disorders than it will be by the competent, well organized, and respected profession that has shown itself able to develop dental health-care and to continue its betterment. Nothing in current medicine that is needed in dental health-care is so mysterious, or so difficult to acquire, that it can be learned only by candidates for the M.D. degree. All of the medical knowledge that is desirable for an understanding of the associations of dental conditions with related aspects of clinical medicine can be taught and applied effectively by, or under the auspices of, dental faculties.

³Eliot: “Progress of Dentistry,” etc., pp. 14, 19, 20, 21; Booklet, Harvard University Dental School, 1925.

Promotion of dental health-care does not require dominance of dentistry by a larger or older profession that has been unconcerned about the consequences of dental disorders. Dentistry's infirmities are no greater or more disabling than those of other professions. The "medico-dental relationships" that are now desirable in the public interest are similar to the relations of two intimate friends working together for common causes—not like those of a cat and a canary when the cat "takes charge." "Independence with interdependence" of the medical and dental professions accords with all the requirements of public welfare, and also with every legitimate interest in each profession. "Coordination without subordination" of the medical and dental professions includes every condition that efficiency, self-respect and fairness may require—for the public and for both professions. The honorable democratic position of the main body of physicians, in this relation, was indicated by Dr. F. T. Van Beuren, while Associate Dean of the Columbia University School of Medicine, when, in 1931 at an annual meeting of the Association of American Medical Colleges, he expressed these convictions:

"Medicine and medical education have troubles of their own which will not be alleviated by attempting to swallow whole another profession; a profession [dentistry], which, by and large, does not want to be engulfed. And a profession like dentistry, with a hundred-year history, *deserves to have its feelings considered*. You may call dentistry a specialty of medicine, but that does not make it so; and it is none the less valuable for that fact. I can see no reason why the degree, Doctor of Dental Surgery, honestly held and honorably upheld, should not in the future deserve equal respect and esteem from the public with the degree of Doctor of Medicine, provided it is held by a similar type of man. And whatever their future relationship may be, let medicine and dentistry now go forward *side by side as friendly collaborators* in the estimable undertaking of offering help to those who need it and adding to the happiness of life as much as to the length of its span."⁴ [Italic not in original.]

In considering trends in dental education all concerned will agree,

⁴Van Beuren: *J. Assoc. Am. Med. Col.*, 7, 106; 1932, Mar.; *J. Den. Res.*, 12, 249; 1932, April.

presumably, that every proposed change should be evaluated in terms of this double test:

- (a) Does the change promise to improve dental health-service for the public?
- (b) Does the change *also* assure betterment, or at least no impairment, of the welfare of the licensed dental practitioners?

There is no evidence anywhere that either dental health-service for the public, or the welfare of its practitioners, would be bettered by dismemberment of dentistry and conversion of a portion of it into a specialty of medical practice, with consequent discontinuance of the dental profession. Testimony of a competent observer, on related conditions in Europe, was given during the progress of the Dental Centenary Celebration in Baltimore, last March, by Dr. Eudore Dubeau, Dean of the Dental School of the University of Montreal and official representative of the Canadian Dental Association, who spoke in part as follows:

. . . "Personally, since 1900, as a member of the International Dental Federation, which was created in Paris in that year, I have attended dental meetings in many European countries and I have always found that the most successful dentists were Americans. This explains why so many young European dentists come to American schools to obtain a D.D.S. degree. In our school [Montreal], 65 European dentists, speaking French, but ignoring the English language, have taken their degrees with us in the past years, because we are affiliated with the American Dental Schools, and we follow as much as possible the same curriculum. . . . [The] work [of the International Dental Federation] has been *handicapped by the medical profession everywhere*. It would be more exact to say by a group of medical men who, having no knowledge of dentistry and being unsuccessful in their practice, have and are still hiring mechanical men to do the work and have spoiled it to such an extent as to retard its development. In some countries, as there are always more physicians than dentists, as Members of Parliament, they have succeeded in having laws passed requiring a diploma of Doctor of Medicine in order to practise dentistry."⁵ [*Italic not in original.*]

⁵Dubeau: *Proc. Den. Cent. Cel.*, 1940, pp. 875-76.

In general the validity of any educational plan or purpose that may be seriously projected, well financed, and responsibly conducted, deserves a test for at least two good reasons:

- (a) The plan might succeed, and thus by its revelations would show the way to progress.
- (b) The plan might fail, and thus the tested possibilities would be revealed as undesirable.

The outcome should be evaluated, reliably, by expert judgment. In the solution of problems in each field of professional education, in this democratic nation, there are two main sources of expert judgment:

(1) *Each university* is, and should continue to be, free to test every plan or purpose—whatever its source—that might conceivably promote any form of professional education in the interest of the public. A university should endeavor to advance what it regards as desirable.

(2) *For dentistry*, the dental profession is, and should continue to be, free to ascertain, in the public interest, all the effects on dental health-care of any plan affecting dental education that any university may test or advocate. The profession, as the statutory representative of the public in dental health-care, in each state, should dutifully oppose any program that in the profession's mature judgment would be more injurious than beneficial to the public welfare.

Unless these principles and conditions are invalid, there will be general agreement

(a) that Harvard University is free to endeavor to convert a preferred portion of dentistry into a medical specialty;

(b) also, that the dental profession should give each step, in that endeavor, close scrutiny, fair criticism, and frank appraisal;

(c) so that the results of the endeavor, as it proceeds at Harvard, may be competently published recurrently; that realistic judgments of the value of the results may be formulated; and that neither the

educational reputation of Harvard, nor the amounts and sources of financial support the new program receives, may prevent correct and prompt evaluations in the public interest.

The policy proposed in the foregoing statement of "principles and conditions" should be agreeable to Harvard University and to the dental profession, for each in this democracy exists by the will of the people for the intended promotion of the public welfare, and should seek to advance valid and just procedures. The large contributions of philanthropic funds in support of the new dental program—made on the same basis—emphasize the University's obligation to conduct that program under conditions that would be open continually to reasonable examination by, say, the American Dental Association's Council on Dental Education, so that these educational representatives of the dental profession could independently and appropriately obtain, from selected experts in medicine, dentistry, education, research, teaching, etc., advice as needed on the import of conditions and events as they occur.

II

In the proposed inquiry affecting the new dental program at Harvard, which the dental profession should conduct and presumably the University would welcome, many pertinent questions might arise, to which the University undoubtedly would give official answers. Questions like those that follow, which are based on statements by representatives of Harvard in support of the new program and which express a few of the present writer's many doubts, might suitably be presented in the early phases of the inquiry.⁶

(1) Outstanding assurances in behalf of the new dental program at Harvard are included in succeeding items (*a-h*), which appeal strongly to public-spirited philanthropists:

(a) Present dental health-service—which is chiefly reparative and

⁶The illustrative *questions* in each of sections 1 to 7, inclusive, are appended to selected statements by proponents of the new dental program.

is recurrently needed by practically everyone—cannot, owing to its *high cost*, be obtained by more than about 20 per cent of the population.

(b) The urgent need for universal dental health-care could be met *inexpensively* by discovery of the causes, and development of methods for the *prevention*, of dental diseases.

(c) Discovery of these causes, and development of related preventive methods, await successful application of *medical knowledge*, which existing dental faculties, being deficient in medical understanding, do not and cannot impart to their students—even in the courses given by cooperating medical faculties.

(d) The proposed new dental program at Harvard, by requiring the students to take three and one-half ($7/8$) of the four years of the regular undergraduate courses in the Medical School, would give the graduates the *wider and deeper knowledge of medicine* required for discovery by them of the causes, and development of means for the prevention, of dental diseases.

(e) The wider and deeper knowledge of medicine to be afforded by the new program at Harvard would enable these graduates to conduct *more effective dental research* than any done by graduates of any existing dental school.

(f) On this new program at Harvard, these graduates, by their more effective dental research, would *speedily discover* the causes of all dental diseases and also perfect adequate means to prevent them.

(g) The ensuing *preventive dental-service*, owing to its *low cost*—presumably advisory (and thus easily disseminated by radio)—would then be obtainable by everybody.

(h) In this line of reasoning in behalf of the new program, the basic conceptions are the *assurance* that courses leading to the M.D. ($7/8$) degree would *automatically* impart hitherto unattainable power *in research* speedily to discover the causes, and to perfect ways and

means for the prevention, of all dental diseases—at a cost that would be low enough to enable 100 per cent of the population to derive all the preventive benefits.

Questions: The complete prevention of all dental disorders, in everybody from infancy to senility at a negligible cost, is a moving ideal of human welfare. The many brilliant achievements in some phases of medical care seem to encourage hope that the added undergraduate medical information, on the new program, would assure similar preventive attainments in dental care. But, when realism is substituted for wishful thinking, questions arise. If courses that lead to the M.D.($\frac{7}{8}$) degree would assure universal prevention of dental diseases, one wonders why physicians who have taken the courses leading to the full M.D. degree are unable to prevent any of the many degenerative, metabolic, infectious, and other types of widely prevalent disorders that now baffle all understanding as to cause and elimination. Why would knowledge of additional routine medical details do automatically for the discovery of causes, and the development of means for prevention, of disorders of the teeth what it does not accomplish for, say—to select a simple example—disorders of the eyes? At present glasses are worn by a larger proportion of the population than ever. Ophthalmologists who have received the M.D. degree [not the M.D.($\frac{7}{8}$) degree], and also hold the specialist degree of Doctor of Ophthalmology, have not yet discovered how some very common ailments of the eyes may be prevented. Since the professional education that doctors of medicine currently receive gives them increasing understanding and efficiency in the alleviative treatment of many uncontrolled diseases, but regrettably leaves physicians powerless to prevent these disorders, what is the factual basis for the assurance at Harvard that, by including *more details of medical knowledge and less of dental knowledge* in undergraduate medico-dental education, discoveries of the causes and development of means of prevention of disorders of the teeth would soon automatically follow? Can anyone seriously believe that

the deficiencies of medicine give physicians particular competence to indicate how the delinquencies of dentistry may be corrected? Is not the failure of past dental research to establish causes, and to devise means for prevention, of say caries, analogous to the inability of medical research to ascertain causes, and to devise means for prevention, of say cancer? Are not the failures in each profession and in each field, to prevent diseases, due honorably to *inherent difficulty that the most competent, devoted, and ingenious efforts have not yet been able to surmount*? Is it not true that in most advances, in research, success has been achieved not by reliance upon superficial, conventional, elementary knowledge, but rather by applications of new procedures in unconventional ways in intensive study of particular problems? Pasteur, a chemist, founded bacteriology, and made some of the most fundamental medical discoveries, not by taking courses leading to an M.D. degree, but instead by attending to possibilities and probabilities that were not included in medical courses, yet which intensive and independent inquiry into unexplored regions along new avenues revealed to his perception.

(2) According to the expressed assumptions of the physicians at Harvard who devised the new program, dental research has been deficient *because* those who engage in it have not been taught the elementary medical details presented in three and one-half years ($\frac{7}{8}$) of the courses for the M.D. degree.

Questions: Has this basic assumption for the new program been examined in the light of pertinent current conditions? Although the M.D. degree is required for admission to dental practice in some parts of Europe, there is no evidence that dental research by physician-dentists is more advanced there than in this country. If knowledge of elementary undergraduate medical details would assure early discovery of causes of dental diseases and prompt development of methods for their prevention, why were not these very desirable discoveries made long ago by European physician-

dentists? The official program of the annual two-day meeting of the International Association for Dental Research in Philadelphia last March indicated, in accord with the Association's custom, the degrees held by the authors of the reports of research. Numerical data in this relation are summarized below:

Number of listed reports of research at five sessions.....	84
Number of times the following degrees appear after the names of workers scheduled to present these research reports:	
M.D.	20
Ph.D.	28
Both M.D. and Ph.D. (per author).....	2
Sc.D.	2
Total number of degrees in medicine or "medical sciences".....	52

Does this large proportion of *doctors of medicine* among the authors of these reports indicate that current dental research is deficient because those engaged in it have not acquired the elementary knowledge imparted by courses for the M.D. degree? Are the doctors of philosophy and doctors of science in the above summary—*nearly all of whom received these degrees as experts in "medical sciences"*—also medical illiterates? Does not this striking situation suggest that instruction in the details of conventional, elementary, undergraduate, medical knowledge—upon which the new program at Harvard is based—cannot be expected to furnish automatically the keys to the problems of prevention of dental disorders? Is it not probable that insight developed by intensive, advanced, special, *graduate* efforts in medico-dental understanding—rather than by extensive, elementary, general, superficial medical courses—would be more promising?

(3) The new program at Harvard contemplates more complete and formal integration of dental and medical education than has heretofore been attempted in this country. The new program will give the students three and one-half years of the medical courses the other students in the Harvard Medical School receive, and in addition one and one-half years of specific dental training, to include

a minimum of dental technology; the four-year dental curriculum will be discontinued; the Harvard Dental School will be replaced by the new Harvard School of Dental Medicine; the instruction will be under the direction of the Faculty of Medicine; the graduates will receive both the M.D. and D.M.D. degrees, to attract (so-called) superior men.

Questions: Would the Dental School and its four-year dental curriculum be discontinued—and a medical name and a five-year curriculum that will be primarily medical be substituted—if the new program were not designed as a pioneer effort to convert a portion of dentistry into a medical specialty? The present writer does not know that this design has been avowed in any public announcement. But would it be reasonable to assume that a committee of distinguished medical professors in the leading American university have not foreseen the obvious effects, on the status of dentistry and the dental profession, of this purposeful coordination of changes in a contemplated drastic reorganization of dental education, if the program were enacted?

(4) A majority of the Committee that recommended the new program at Harvard consisted of doctors of medicine. One is Director of a medical school in a leading university that has never had a dental school. All served under the chairmanship of the Dean of the Medical School at Harvard.

Questions: Consider a parallel and strictly analogous situation, presented in the form of a hypothetical set-up. Suppose a committee of the faculty of XYZ University's *Graduate School* should decide and announce that (a-e):

(a) The failures of *medicine* to discover the causes of, and to devise means to prevent, the many uncontrolled current maladies indicate that, despite many great achievements, medicine does not know enough about the *sciences relating to the human body* to enable physicians to meet public needs.

(b) The *medical* students should be taught more of these sci-

ences, to enable the graduates to discover these causes and to devise means for the prevention of the many uncontrolled maladies.

(c) A drastic reorganization of *medical* education is required to give the medical students the courses that would impart this needed knowledge.

(d) This objective would be attained by requiring the *medical* students to take three and one-half years in *Ph.D.* study in related sciences, and one and one-half years in specific *medical* subjects in a new School of Medical *Philosophy*, the Medical School and Medical Faculty to be discontinued, all instruction to be under the *Graduate* School Faculty—the graduates to receive the *Ph.D.* and *M.D.* degrees, to attract superior men.

(e) The XYZ University has obtained \$1,300,000, in special gifts, to enable the University to be the pioneer in this proposed drastic reorganization of *medical* education, to be initiated in September, 1941.

Would this hypothetical parallel situation be more arbitrary, or more supercilious, than that to be imposed upon dentistry by the prospective new program at Harvard? But if such a situation were created what, then, might “organized medicine” be expected to say—and do? The following quotation, from a recent official medical publication, seems to indicate the answer to the last question; and also bears directly on the intrusion, through the new dental program as devised by physicians at Harvard, of “the medical point of view” where *safeguarding of the dental point of view* would be just as desirable:

“Whatever the administrative organization might be in any particular [graduate] school [in any university], it would seem to be educationally and professionally unsound to entrust the responsibility for the development of students in medical fields to others than medically qualified teachers. The *safeguarding of the medical point of view* can be entrusted in the universities as they exist in this country only to those interested and competent in medical education. In view of these principles, sound programs for graduate medical education in universities can be developed only through

the employment of the experience and technical knowledge of medical school faculty members and administrators."⁷ [*Italic not in original.*]

(5) In 1930, with the support of the Carnegie Corporation, a committee of the American Association of Dental Schools, aided by Dr. L. E. Blauch as its Executive-Secretary and by eminent educational advisers, and assisted by many members of dental and medical faculties, began a five-year study of the dental curriculum. The extensive report of this Committee was published in 1935. Its recommendations are now in process of adaptation in the dental schools in Canada and the United States.

Questions: This Committee's report on the dental curriculum was only four years old when the new dental program at Harvard was formulated. Did the Committee of Harvard physicians ignore that report? If so, why? Has such significant comment in that report as the following been shown to lack competence or understanding? :

"In recent years the question has been sporadically raised whether dental education should not be placed under the control of medical education. The arguments favoring such a change are deduced from what are regarded as general principles; none of them are definitely based upon careful analyses of what constitutes an adequate training in dentistry and the problems involved in providing the training. The few advocates of the subordination of dental education to medical education have not demonstrated that dental education is unable or unwilling to cope with its problems, nor have they shown that dental service for the public would be benefited thereby or that dental education under the domination and control of medical education would result in a more resolute and effective attack upon the problems of dental health and the education of dentists than if it remains autonomous. Dental education has definite problems many of which are distinct from those of medical education. . . . There is a strong probability that if dental education were placed under medical education, the students would be inadequately trained to meet the dental needs of the public."⁸

⁷*Medical Education in the United States, 1934-39*, p. 36; Council on Medical Education and Hospitals of the American Medical Association, 1940.

⁸*Report of Curriculum Survey Committee, 1935*, p. 81; American Association of Dental Schools.

(6) The new program at Harvard is also intended to train highly qualified men for leadership in teaching, research, public-health work, and other phases and specialties of dentistry.

Questions: This special purpose is obviously very desirable. But does its attainment require discontinuance of the dental curriculum, and of the Dental School and Dental Faculty, and the award of cheapened professional degrees? Could not this worthy purpose be achieved more effectually on a program of cooperation between the Dental and Medical Schools with the Graduate School, for the relatively small number of students who would be qualified, in graduate work, to attain such leadership? Do not the rejection of this normal educational alternative, and the substitution of a combination of undergraduate medical education and undergraduate dental education—all of which will be elementary and none intensive—also indicate a design, in the new program, to convert a preferred part of dentistry into a medical specialty? One wonders why this intention is not frankly stated in Harvard's announcements.

(7) The foregoing suggestion of graduate work, in one question in section (6), implies a belief that the University might wish to continue and adequately support the Dental School. Official statements at Harvard intimate, however, that interest there in the Dental School has declined for more than one reason. Thus, the Annual Report of the President for 1935 called public attention to very urgent needs of the Dental School, including funds for enlargement of the dental building, for the payment of adequate salaries to the dental teachers, for dental research, and for endowment of the School. To meet these needs—then rated collectively as among the University's two greatest—the University initiated a campaign for a fund of \$3,400,000, which unfortunately did not attain the desired success. The Annual Report of the Dean of the Dental School for the same year, in commenting sympathetically on the dental aspirations expressed by the President and on the associated plans, included this statement: "If these plans can be brought to fruition, and if

adequate financing can be secured for the Dental School, *it will relieve the University of one of its biggest burdens at the present time.*"

Questions: Does the new dental program represent an alternative by which Harvard University will be relieved of one of its biggest burdens? Has this desired relief been one of the motivating factors in the development of the new dental program, and should the import of that program be evaluated accordingly?

The foregoing statements (I-7) and the related questions have been presented not only as illustrations, but also as a basis for an expression of hope that attention to such inquiries may induce reconsideration of the main purposes and procedures of the new dental program at Harvard.

III

A personal statement may be desirable in conclusion. Public discussion of the new dental program at Harvard—based chiefly on rumors—has been in progress for more than a year. Before the University's official news release on June 17, 1940, there seemed to be a possibility that a supplementary procedure rather than a substitutional program would be adopted. Page 19 of the present author's report to the Carnegie Foundation, in 1926, presents comment on the importance of optional, full-year, graduate curricula for systematic and intensive training in all types of oral specialization, including teaching and research. That comment was followed by these additional recommendations:

"(d) Development of combined dental and medical curricula, with adequate dispensary and hospital facilities, for united medical and dental training of specialists in maxillo-facial surgery, public-health administration, medico-dental research, and, in general, of practitioners of the types of oral health-service that embrace most intimately the joint responsibilities of medicine and dentistry; academic and professional degrees to be awarded in accord with the nature of the study concluded and the achievement therein."

This quoted part of the coordination of plans, proposed in 1926 for the advancement of dental education on all fronts, was intended to achieve all of the avowed constructive educational objectives in the new program at Harvard, by supplementing undergraduate dental education and without changing the status of dentistry as a separately organized profession. The combined-curricula plan was suggested as a means to attain the indicated objectives, in a supplementary way, through appropriate, individual, optional, graduate efforts, for various periods and under auspices adapted to particular purposes—just as is done, for example, by candidates for the M.A. or Ph.D. degree. This supplemental plan would prepare a relatively small number for leadership in teaching, research, public-health work, specialties of practice, etc., without disparagement of modern American dentistry; without disregard for the welfare of dentists as a group; and without impairment of public appreciation of dentistry, or diminution of support for the efforts of the dental profession to continue its development and to increase its usefulness in health service.

If Harvard University has concluded that it can no longer carry the "burden" of supporting an undergraduate Dental School, could not the University, through the agency of the "new School of Dental Medicine" (Dental Department of the Medical School), promote the highest possible quality of intensive graduate work in medico-dental relationships? This plan, unlike the new program as announced, would assure attainment of exceptional leadership in all advanced phases of dental health-care, with great gain to dental science, dental education and oral health-service, and without degradation of the dental profession. The present writer hopes that these considerations—which he regards as particularly conducive to promotion of the public welfare—will become paramount in the new program at Harvard, before that program attains a pattern that would exemplify medical imperialism rather than professional democracy.

VII. CONCLUDING REMARKS

Henry L. Banzhaf, B.S., D.D.S., LL.D., *Chairman*
Milwaukee, Wis.

In bringing this program to a conclusion first let me thank each one of the gentlemen who have addressed us for their respective contributions to the success of this afternoon's discussion. To you, President Bryan, and to the Fellows and guests of the College who are present here this afternoon, I wish to express my deep appreciation for the close attention you have given to this afternoon's educational program, including the report submitted by Doctor Hinds. Permit me also to express the hope that this meeting and these discussions to which we have listened will serve to re-energize us all to work for the promotion of those principles which we believe have sound value.

Speaking for myself, let me say that I particularly appreciate the statement made by Doctor Horner, in which he expressed his growing conviction "that dental education will be best advanced by hazarding its future upon an equal level with all other professional schools in a university circle and that progress will be made by meeting the tests squarely, and resolutely facing the demands which such company imposes." I interpret this to mean that at present he is inclined to favor the progressive continuance of the conventional dental curriculum as it is now conducted in our dental schools.

I also find myself in complete harmony with what Doctor Midgley and Doctor Gies said with respect to the announced Harvard Plan of dental education. Now, as to the remarks of Dean Miner, I am constrained to say that the argument he made in favor of the Harvard Plan, so far as I am concerned, was not convincing, and that I do not believe that the plan is for the best interests of progress in dental education or for dentistry.

Furthermore, it is my conviction that the great majority of those present here this afternoon who have had the advantage of

listening to these able speakers will, as a result, resolve to continue to work for the further development of a scientifically minded, independent dental profession that is constantly striving to improve and strengthen its system of education. In Germany, in Russia, in Italy, where combination medical-dental degrees are common and possessed by many physicians and dentists, the state of progress in both professions is at a low ebb. While I do not claim to be a prophet, I have, nevertheless, no hesitation in predicting that in the year 2040 when dentistry will be celebrating its second centennial the ideas of Herr Hitler, Comrade Stalin, and Il Duce as to health service education as well as to government will be completely discredited and forgotten, and that dentistry under our democratic system of life will still be conducted efficiently as an independent profession in close relationship and on a basis of equality with all of the other health-service professions.

AMERICAN COLLEGE OF DENTISTS
CLEVELAND CONVOCATION: SEPTEMBER 8, 1940
ABSTRACT OF MINUTES: CONVOCATION AND REGENTS

O. W. BRANDHORST, *Secretary*
St. Louis, Missouri

I. BOARD OF REGENTS: SEPTEMBER 5, 6 AND 10

Sep. 5 (10:00 - 12:00 a.m.); first session: present—eleven. (1) Minutes of session in Chicago, Feb. 11, 1940, read and approved. (2) Report of Secretary on ad-interim activities, as of May 6, 1940, May 25, 1940, July 16, 1940, July 17, 1940, and August 5, 1940, approved. *Reports of Officers:* (3) President; (4) President-elect; (5) Secretary; (6) Treasurer, (47); all accepted.

Sep. 5 (2:00 - 6:00 p.m.); second session: present—eleven. *Reports of officers (con.):* (7) Assistant Secretary; (8) Editor; all accepted. *Reports of special committees:* (9) Baltimore proceedings; (10) Wm. J. Gies Endowment Fund for Journal of Dental Research, (70); (11) Committee on A.A.A.S.; (12) Budget; (13) Publicity; (14) Membership; all accepted.

Sep. 5 (8:30 - 11:00 p.m.); third session: present—eleven. *Special committee reports (con.):* (15) Ceremonial Committee (27, 31); (16) Miscellaneous business; (17) Consideration of Report of Board of Censors; reports received.

Sep. 6 (9:00 - 12:10 p.m.); fourth session: Joint session of Regents and section representatives to hear *reports of standing committees:* (18) Centennial Celebration (71); accepted and committee discharged; (19) Dental Relations; (20) History; (21) Dental Prosthetic service; (22) Education (61); (23) Certification of Specialists; (24) Research (45); (25) Commission on Journalism (40); (26) Oral Surgery; reports received and chairmen commended.

Sep. 6 (2:30 - 6:00 p.m.); fifth session: present—eleven. (27) Report of Ceremonial Committee(15,31); (28) Accrediting of new sections; (29) Report of Committee on Socio-Economics; (30) Report of Committee on Hospital Dental Service; reports received.

Sep. 10 (9:00 - 12:00 m.); sixth session (first session of new administration): present—nine. Reports of committees: (31) Ceremonial (15,27); report received; Elections: (32) Editor; (33) Associate Editor; (34) Assistant Editor; (35) Contributing Editors; (36) Member of Board of Censors; (37) Appointment of Committee Chairmen; (38) Appointment of Committee members. Reports of committees (con.): (39) Socio-Economics(29); (40) Journalism (25); (41) W. J. Gies reappointed Assistant Secretary; (42) W. J. Gies appointed Chairman of Contributing Editors.

Sep. 10 (2:00 - 5:00 p.m.); seventh session: present—ten. New Business: (43) Voted to publish Symposium(63,64,65,66,67,68), "Trends in Dental Education"; (44) Standing Committee on Preventive Service voted; (45) Funds for Research voted(24).

II. CONVOCATION: SEPTEMBER 8, 1940

Morning (9:30 - 11:45); first session: President Bryan presiding; present, approximately 300. (46) Minutes of Milwaukee and Baltimore Convocations read and approved; (47) Treasurer's report(6), accepted; (48) General Theme of Program, "Dentistry's Centennial: Progress and Opportunities"; (49) The Need for an Organized Program of Publicity in National Magazines, J. Orton Goodsell, Chairman, Committee on Dental Relations; (50) Dental History as a Subject of Undergraduate Instruction, J. Ben Robinson, Member of History Committee; (51) Recent Developments in Hospital Dental Service, Howard C. Miller, Chairman, Committee on Hospital Dental Service; (52) Years of Achievement, J. Cannon Black, Chairman, Commission on Journalism; (53) Oral Surgery, Responsibilities and Opportunities, C. W. Freeman, Member, Com-

mittee on Oral Surgery; (54) Profession-Technician Cooperation, *Clarence A. Nelson*, Member, Committee on Dental Prosthetic Service; (55) Fellowships and Grants-in-Aid for Research, *Arno Luckhardt*, Member, Committee on Research; (56) Study of Dental Health Service, Inc., *Chas. E. Rudolph*, Chairman, Committee on Socio-Economics.

Luncheon (12:15 - 2:00 p.m.); second session: President-elect Wilson, presiding. Attendance, 301. (57) Address "United States in World Affairs," *Wilbur W. White*, Associate Professor of Political Science and Dean of Faculty, Adelbert College, Western Reserve University.

Afternoon (2:00 - 5:40 p.m.); third session: President Bryan in chair. (58) Procession of Officers, Regents and new Fellows; (59) Name of Jonathan Taft inscribed on Mace¹; (60) Fellowship conferred upon newly elected members (asterisks indicate election to membership prior to 1940):

**Anderson*, A. B., Knoxville, Tenn.; *Ashby*, J. L., Mount Airy, N. C.; *Atkins*, A. P., Des Moines, Ia.; *Banks*, E. L., Atlanta Ga.; *Beckman*, A. R., Dallas, Tex.; *Birenbach*, Samuel, New York, N. Y.; *Blutau*, T. C., New York, N. Y.; *Bossert*, W. A., New York, N. Y.; *Boyko*, G. V., Paterson, N. J.; *Brann*, C. T., Davenport, Ia.; **Browne*, W. F., Brunswick, Me.; *Burkhart*, R. H., New York, N. Y.; **Calmes*, F. M., Kansas City, Mo.; *Cannon*, C. R., Georgetown, Del.; *Carl*, C. E., Waterloo, Ia.; *Carnes*, H. A., Boston, Mass.; *Cleveland*, J. L., Buffalo, N. Y.; *Clotworthy*, W. B., Knoxville, Tenn.; *Cogan*, A. V., South Boston, Mass.; *Conley*, P. J., West Warwick, R. I.; *Conran*, W. R., Hartford, Conn.; *Cottrell*, I. R., Rochester, N. Y.; *Davis*, C. J., Omaha, Neb.; *Devitt*, O. H., Denver, Colo.; *Devlin*, G. A., Newark, N. J.; *Dobbs*, E. C., Baltimore, Md.; *Dorsey*, B. M., Baltimore, Md.; *Dunn*, L. J., Brooklyn, N. Y.; *Dunning*, J. M., New York, N. Y.; *Ellington*, E. O., Big Springs, Tex.; *Ernst*, H. H., New York, N. Y.; *Esterberg*, H. L., Newton, Mass.; **Estes*, G. D., Minneapolis, Minn.; *Feldman*, R. D., Ames, Ia.; *Ferguson*, R. A., Louisville, Ky.; *Freitag*, O. F., St. Louis, Mo.; *Garrison*, M. R., Wichita Falls, Tex.; *Ga Nun*, C. F., New York, N. Y.; *Gethro*, F. W., Chicago, Ill.; *Gibbons*, J. J., Boston, Mass.; *Gilchrist*, E. S., Indianapolis, Ind.; *Gilleen*, E. T., Dallas, Tex.; *Glexen*, R. J., Washington, D. C.; *Gregory*, W. A., Pittsburgh, Pa.; *Groh*, R. W., Buffalo, N. Y.; *Hemley*, Samuel, New York, N. Y.;

¹See Report of History Committee to be published later.

Hemphill, W. F., Blair, Neb.; *Hertz*, J. D., Stamford, Conn.; *Hicks*, C. J., McKinney, Tex.; *Hoffman*, O. E., Des Moines, Ia.; **Holbrook*, E. A., Brooklyn, N. Y.; *Holder*, B. C., Corpus Christi, Tex.; *Holliday*, P. B., Athens, Ga.; *Ivory*, J. T., Binghamton, N. Y.; **Johnson*, E. L., San Francisco, Calif.; *Jones*, E. M., Los Angeles, Calif.; **Kany*, A. W., New York, N. Y.; *Karn*, G. C., Baltimore, Md.; *Kelly*, A. G., Denver, Colo.; *Kelly*, W. N., Clinton, Ind.; **Knox*, A., Washington, D. C.; *Leavell*, F. W., New Castle, Ind.; *Levy*, W. R., Jackson, Tenn.; *Loop*, J. L., Alhambra, Calif.; *Loper*, W. R., Wheeling, W. Va.; *Lufkin*, A. W., Hollywood, Calif.; *Lynn*, C. B., Austin, Tex.; *Marks*, R. H., Chicago, Ill.; *Metz*, K. H., White Plains, N. Y.; *Meisburger*, L. H., Buffalo, N. Y.; **Mershon*, J. V., Philadelphia, Pa.; *Mills*, R. H., San Francisco, Calif.; *Mimmick*, E. F., Buffalo, N. Y.; *Moen*, O. H., Watertown, Wis.; *Nachazel*, D. P., Milwaukee, Wis.; **Nuckolls*, James, San Francisco, Calif.; *O'Farrell*, J. D., Houston, Tex.; *O'Hearn*, L. J., Pittsfield, Mass.; *O'Leary*, J. T., Girard, Pa.; *Oggesen*, W. L., Baltimore, Md.; *Outlaw*, J. W., Beaumont, Tex.; *Pankov*, C. A., Buffalo, N. Y.; *Peterson*, C. E., Rockville, Conn.; *Pfeiffer*, F. F., New York, N. Y.; *Platt*, G. M., Houston, Tex.; *Postle*, W. D., Columbus, Ohio; *Richards*, A. J., Detroit, Mich.; *Roberts*, Z. T., Denver, Colo.; *Robertson*, G. P., San Antonio, Tex.; *Rohde*, F. G., Columbus, Neb.; *Sammuel*, J. H., Morristown, N. J.; *Sand*, R. A., Fargo, N. D.; *Sargeant*, W. S., Toledo, Ohio; *Sawyer*, C. W., Kansas City, Mo.; *Schaefer*, F. W., Omaha, Neb.; *Schultz*, L. C., Ann Arbor, Mich.; *Shaw*, J. H., St. Petersburg, Fla.; *Sheffield*, L. L., Toledo, Ohio; *Smith*, W. W., Baltimore, Md.; **Snapp*, R. B., Winchester, Va.; *Starr*, E. E., Portland, Ore.; *Starr*, F. C., Columbus, Ohio; *Swanson*, E. W., Chicago, Ill.; *Tartre*, J. A., Great Lakes, Ill.; *Tauscher*, G. W., Chicago, Ill.; *Thorn*, D. S., Washington, D. C.; *Tiblier*, S. L., New Orleans, La.; *Todd*, R. I., Richmond, Ky.; *Turnquist*, H. E., Minneapolis, Minn.; *Underwood*, H. M., Knoxville, Tenn.; *Van Huysen*, Grant, Louisville, Ky.; *Van Natta*, Howard, Baltimore, Md.; *Varnado*, M. B., New Orleans, La.; *Wainwright*, W. W., San Francisco, Calif.; *Wakefield*, B. G., Buffalo, N. Y.; *Waltmon*, W. K., Hearne, Tex.; *Warburton*, W. L., Salt Lake City, Utah; **Wekenman*, C. W., Kirkwood, Mo.; *Welch*, H. W., Chicago, Ill.; *West*, C. C., Chicago, Ill.; *Westfall*, B. K., Indianapolis, Ind.; **Whinery*, F. B., Iowa City, Ia.; *Williams*, A. T., Salem, Mass.; **Winter*, Leo, New York, N. Y.; *Yando*, A. H., Washington, D. C.

(61) President's Address, *A. W. Bryan*; ² (62) Report of Committee on Dental Education (22); Symposium, ³ "Trends in Dental Education (43); (63) *H. L. Banzhaf*, Milwaukee, Wis.; (64) *L. M. S. Miner*, Boston, Mass.; (65) *Harlan H. Horner*, Chicago, Ill.; (66) *A. L. Midgley*, Providence, R. I.; (67) *W. J. Gies*, New York, N. Y.;

²See page 297, this issue.

³See page 320, this issue.

(68) *W. H. Wright*, Pittsburgh, Pa.⁴ (69) In Memoriam, *J. V. Conzett*, Chairman, Committee on Necrology; (70) Report of Committee on Wm. J. Gies Endowment Fund for the Journal of Dental Research(10); (71) Report of Committee on Centennial Celebration, *J. H. Ferguson*, Member of Committee(18); (72) Nominations—following for officers presented: *President-elect*, E. G. Meisel; *Vice-President*, W. H. Scherer; *Secretary*, O. W. Brandhorst; *Treasurer*, H. S. Smith; *Regent*(5 yr.), W. N. Hodgkin, (3 yr.) E. G. Sloman; (73) President asked for nominations from floor; none presented; (74) Nominations for offices presented by Committee(72) unanimously elected.

Evening (6:30 - 11:00 p.m.); *fourth (dinner) session*: Attendance, 320. (75) Reception of new Fellows; (76) Evening program; (77) Surgery of the Heart, *Claude S. Beck*, Cleveland, Ohio, Associate Professor of Surgery, School of Medicine, Western Reserve University; (78) The Cyclotron and Its Relationship to Biology and Medicine, *Sherwood Moore*, Professor of Radiology, Washington University, School of Medicine and Director of the Edward Mallinkrodt Institute of Radiology, St. Louis, Mo.; (79) Installation of officers(72,74); (80) Presidential Inaugural Address, *Geo. W. Wilson*, Milwaukee, Wis.⁵

[*Next Convocation: Houston, Tex., October 26, 1941*]

⁴Read by Title in absence of author and due to pressure of time.

⁵See page 300, this issue.

EDITORIALS

THE SUMMUM BONUM

The year 1940 will end on December 31, as told by the calendar. That, too, will be the official ending of one hundred years of the life of dentistry. During the year the profession has been busy in various ways, observing this centennial. The Eighty-second Annual Meeting of the American Dental Association has just been concluded. This also includes other organizations meeting at or about the same time. Starting at zero, one hundred years ago, to what height has the mercury risen in our hypothetical thermometer? One hundred years ago, and of course, prior to that time too, men were working individually and as individuals. Each was striving to gain a little more knowledge and understanding and each was striving to improve his technique. But each one kept his improvements as "secrets of his trade" and others, including the public, were not benefited, save only the few to whom that one ministered. But there were among them men of broader vision and of higher purpose, to whom this method did not appeal. It was these men who in 1840 laid the foundation on which dentistry and the dental profession were to be built. The names of Hayden and Harris will forever live in the annals of dentistry; yet others who labored with them and made possible the fruition of their ideas must not be overlooked, although their names may not appear in written history.

As "all Gaul is divided into three parts," so is the foundation upon which dentistry is built, divided into three parts: the school, the society, the literature. To these might well be added dental law. These four may in turn be designated in three parts or, as is so frequently indicated, the tripod on which dentistry is built, consisting of education, including literature, organization and law. These are directed by teachers, both in and out of the schools, administrators of our organizations, elected by us, and by Boards

of Examiners. Thus, we have developed from none in the beginning to well-established institutions of today.

The schools have developed through the years from simple training in the "practical," with a little teaching in the "theoretical," through mechanics and art to a well-rounded scientific curriculum. We have witnessed and resisted many attempts to thwart us from our course, and to make us subservient to another. In some instances "Fifth Columns" within our own ranks have been the leaders, but in each case they have been crushed—they have been wrong. At the present moment an effort is being made to change our direction against our will. We should and will rise against it. It is wrong. Dentistry has proved itself not only "not to be found wanting," but, on the contrary, to be a source of great help in the people's health. It is ours and ours only, to direct it into fields of greater usefulness.

Along with the development of the schools and the improvement in curriculum has come naturally, improvement in our literature. One has but to compare that of a quarter of a century ago with that of today and note the difference. With these educational changes our concept of our literature has changed. Whereas we formerly allowed it to be published under commercial control, we have now assumed that responsibility. Formerly, with but one or two exceptions, all publications were owned by commercial institutions. In 1931, there were 95 professionally owned and 11 commercially owned periodicals—the change was great. But of these, in 1939, there were 111 professionally owned and still 11 commercially owned. Of these eleven commercially owned periodicals, less than one-half have much professional value.

Dental law has likewise improved and always with the aim of protecting the public against the irresponsible, the quack and the charlatan. Improvement has been made, though there is yet much to be done. It requires a fine line of distinction between benefit to the public and benefit to the profession and it is often difficult to prove our aims to lawmakers. But we have hung on tenaciously over the years and we do know.

Organizations have grown tremendously. The American Dental Association stands at the head today with all of its constituent and component societies. There are many of the "specialists" type, study clubs, fraternities, and so on almost *ad infinitum*. These all serve a useful purpose in developing the educational and professional aspects of the profession, the A. D. A. representing all of us in our cooperative efforts.

There is in the lives of men a "natural flow of events." This fact is easily observed in the inanimate world or even in those forms of life below that of man. Man is often inclined to believe that he is the "master of his own destiny." To no small degree he does give direction and this should not be forgotten. But there is, down deep beneath, a general direction even of the affairs of man and to which man may add some force, either accelerating or deterring. In 1920 there was organized, by a group of interested men, the American College of Dentists, through which the effects of their combined influence might become available. Looking at conditions today, one may be inclined to admit that they have accomplished much. The College was not organized to investigate the cause of caries, to develop the science of pathology or any other science. It was designed to be a bulwark of investigation and of promotion of all phases of dentistry and to bring matters to that point at which the profession, through its own organization, the A. D. A., National Association of Examiners, or other suitable body, might take it over. The first study undertaken was that of journalism, the final report of a five-year study being published in 1932. The report of the Commission for 1939-40,¹ shows the present status. There are yet a few of the proprietary group, but with a possibility of further refinement in the near future. The two groups, proprietary and non-proprietary, are now coordinated in a plan of advertising, which in itself will spell professional advancement. The College undertook a study of Prosthetic Service a few years ago, placing

¹J. Am. Col. Den., 7, 188; 1940 (Sept.).

very clearly before us, among other matters, that of laboratory relationships. At the meeting of the A. D. A., just closed, a special committee from that body was appointed to make such a study and which is the desire of the College. The proper body with proper authority now has it in hand. Similarly with other studies, to mention only one, that of Health Practice. Many dollars have been spent in the study of this question. The College made an intensive study and supplied much informative material. The A. D. A. is the authoritative body and has acted. Parenthetically, it was surprising to note the lack of noise about this in Cleveland. What has happened?

The Commission on Journalism, although not having completed its work in whole, yet for the present, at least, is standing by to watch for further immediate developments. The American Association of Dental Editors is assuming that responsibility as originally intended. Similarly, the Committee on Prosthetic Service has brought to light many wrongs which may require correction. It is likewise theirs to stand by for a time. The Committee on Certification of Specialists has made studies and reports, so that now the profession is giving attention to that. The Committee on Hospital Service has seen extensive gains—internships have increased, so that their work for the future will be more or less routine. This includes to a large extent the interest at least, of the Oral Surgery Committee. The Oral Surgery Society has taken a forward step toward the establishment of a journal. The Committee on Research is seeing the fruits of its labors, in the establishment of Fellowships and Grants-in-aid. Through the Committee on Dental Relations we have a better comprehension of our relations, both public and professional. This will go on further. The Committee on Education touches upon all of these but in addition has and perhaps ever will have much to do; their time is fully occupied. We must continue our efforts for endowments, so this committee has a job yet to do. But with all of these carrying on as they are, the College is now open to new undertakings. This they have begun by creating a Committee on Preven-

tive Service. The personnel will be announced shortly² and it is the plan that all branches of dentistry shall be included, beginning with Children's Dentistry. The American Society for the Promotion of Dentistry for Children has done a great work. They will do more. It will be ours to help these and others in fields of greater usefulness.

Now the College has before it this so-called "Harvard Plan," the first step in that study having been taken at Cleveland. This study will continue, the findings of which will be made public for all concerned—The American Association of Dental Schools, National Board of Dental Examiners, the American Dental Association, and any others interested or affected. Thus will dentistry speak out for itself and in so doing will clearly indicate its opposition to those who, under the guise of promoting its welfare, would on the contrary bring about degeneration.

DENTAL EDUCATION

John Stuart Mill has defined education as "the culture which each generation purposely gives to those who are to be its successors, in order to qualify them for at least keeping up, and, if possible, for raising, the level of improvement which has been attained."³

This is a period when, within our own profession, the truth of the above statement appears to have been demonstrated. Within the time of many of us great change has taken place. We can realize the level at which we started, the height which has been attained, and the struggle the on-coming generation is making to take over the reins of leadership. It will be theirs to carry on to new heights.

The world in all its phases, from the highest to the lowest, is in a "jittery" condition, not excepting the dental profession, either in its social, economic, professional or educational aspects. Many different plans of as many different activities are being proposed. They

²See Standing Committees, inside cover p. 3.

³Horne, H. H.: *Idealism in Education*; The Macmillan Company, New York, 1916, p. 63.

are at the same time being opposed. It is important that any plan be interesting, perhaps more so, than that it be rational or true, notwithstanding the fact that if it be rational or true, it is more likely to be interesting. It is our business then, to attack these with a view to determining their rationality. This must be done philosophically. This philosophy or knowledge can only indicate the possibilities of development. The materials and forces to be employed in their pursuit must be critically and scientifically analyzed. We can advance only as we have confidence in our creative ability, our physical strength, and the definiteness of our vision. It is an adventure, and the spirit of adventure is required.

A clear perspective of the vision may be had and a definite line of procedure may be determined by giving thought to three commonplace factors of human experience—the same three that are so thoroughly impressed upon our minds in this centennial year—the past, the present, and the future. Out of the past, we absorb energy. In this we recall what was, the fundamentals upon which we built, and the methods used in building. In the present, we have our accomplishments in data and in results. Both of these, then, make for creative intent for the future and our direction is laid.

Three terms are found in current literature and which terms appear to be essential that we may rise up and select the best of whatever may be proffered. These three terms are romanticism, idealism and realism. We must have an ideal, a goal toward which to strive, either singly or as a group. We must have a spirit of romance or adventure in approaching that ideal, and withal, we must be realistic, that we may be able to recognize its value, both cultural and utilitarian.

We can recall our status a quarter of a century ago. We can picture the road over which we have come and we do realize the level which we have attained. Men were romantic, adventuresome and daring at that time. Are we less so today? They had to find a course to follow and they did. The inanimate sciences, physics and chemis-

try with their concomitants, brought us where we are today. The romance, the daring adventure of men of that period resulted in great accomplishments for dentistry, for dentists, and for the public. They had an ideal to be realized through the development of these sciences and it has been realized. Their idealism became a realism in all the things at our command for the better serving of the public. Let the x-ray serve as illustration.

Perhaps another side should be considered briefly. Deans and Professors in the College of Letters and Science felt that we would not be true to the educational theory if Greek and Latin were dropped and chemistry and physics were substituted. But we needed knowledge of a different nature. We have it now, and who would say that we may not still possess something, a modicum at least, of culture? Or to state the case more tersely, we were placing ourselves in a position to be held outside the confines of so-called cultural education. But perish the thought!

We are in a similar relation now to the field of medical science. We show some signs of allowing ourselves to be swallowed up. We have new sciences, the animate sciences, biology and sociology opening up before us, as the road over which we shall travel in the attainment of a new and a higher level. Shall we proceed in our own strength as did our predecessors or shall we let ourselves be engulfed within another? Have we less romanticism, with a lowered idealism, and a fainter vision of the reality ahead?

We have been laboring for years toward a closer relationship with medicine. This is proper and highly necessary. We need a better understanding of constitutional ailments and the physician needs to know more about dental conditions. With increased understanding of each other's problems, this closer relationship can be successfully carried on without subordinating one to the other. Or should the physician be the General in the army of health workers, parceling out different tasks to different ones prepared only to do a certain part? Our answer must be an emphatic "no."

The dentist must know enough of etiology of disease to have a clear conception of infections and of the relations of dental ills to systemic disease, that he may conduct his practice with complete respect for illness or health—a curative or a preventive practice. He cannot otherwise do his full duty. He must have a knowledge of the basic sciences, then dentist and physician can cure and prevent. With this biological knowledge the dentist will have a better concept of his technical appliances and a better comprehension in their preparation, adjustment and use. He will come to look upon them as therapeutic aids, which, in truth, they are. Such are far more than mechanical pieces or even art—for art means application of knowledge, and knowledge with yet more knowledge is essential to the full fruition of dentistry's possibilities.

The practice of dentistry requires a peculiar sense of observation and of looking in other directions. Continuing our labors under the guidance of one not so trained will not suffice.

It was Charles W. Eliot, President Emeritus of Harvard University, who said: "I want to congratulate you on the greatly improved standing of the dental profession among the professions. That is one of the most striking changes in public opinion that I have witnessed during my seventy years of observation of educational progress. . . . I do not think I have seen during my seventy years of observation of the professions and the means of training them any change so great as that which has taken place in regard to the dental profession, and to the means of training dentists".⁴

Two requirements in all fields of education stand out pre-eminently: the student must be educated, that he may do or be that which he professes; he must be so equipped that he may understand and enjoy a useful and a good life. Dental Education must provide these to dental students and to dentists. The University dares not shunt the dental student into a lower status, but must give him every opportunity. Dental Education must be recognized as a field of education, to be provided by the University.

⁴Eliot: "The Progress of Dentistry and of the Dental Profession," pp. 14 and 19; Booklet, Harvard University, Dental School, 1925.

NEWS AND NOTES

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

PAUL C. KITCHIN

Secretary, Subsection on Dentistry, A. A. A. S.

The next annual meeting of the Subsection on Dentistry of the American Association for the Advancement of Science will be held in Philadelphia on Saturday, December 28, 1940. The four dental groups that are recognized by the A. A. A. S., as furnishing membership and program material for this meeting are (1) the International Association for Dental Research (American Division), (2) the American College of Dentists, (3) the American Dental Association and (4) the American Association of Dental Schools.

NEW BOOKS

ACCEPTED DENTAL REMEDIES (A. D. R.), Sixth Edition, arranged by the Council on Dental Therapeutics and published by the American Dental Association, has just come from the press. After six years of use by the profession, this book should require no more than an announcement, a statement to the effect that it has been thoroughly revised and extended, and that the price is \$1.00. American Dental Association, 212 East Superior St., Chicago, Ill.

* * *

THE SCIENCE OF DENTAL MATERIALS (Second Edition): By Eugene W. Skinner, Ph.D., Associate Professor of Physics, Northwestern University Dental School. Second Edition, Revised. 421 pages with 138 illustrations. Philadelphia and London: W. B. Saunders Company, 1940. Cloth, \$4.75.

PROCEEDINGS OF THE DENTAL CENTENARY—Published by the Dental Centenary Committee, Dr. George M. Anderson, Editor, 831 Park Avenue, Baltimore, Md. This is a volume of over 1,000 pages, being a complete presentation of the Centenary celebration held in Baltimore in March, 1940. This is the 100th anniversary of the establishment of dentistry as an organized arm of health service. The volume contains both by picture and by word the story of the 100 years of advancement. The scientific program was divided into 18 sections, there being three speakers in each section, each speaker bringing the history of his phase of dental practice down to date. This book should be in the hands of every practicing dentist not only from the standpoint of information but further because of what it is. Order yours today. Price is \$5.00 per volume, post paid.

* * *

TEXTBOOK OF DENTAL ANATOMY AND PHYSIOLOGY: By Russell C. Wheeler, D.D.S., F.A.C.D., Associate Professor of Dental Anatomy, Human and Comparative, St. Louis University School of Dentistry, Chairman of the Department. 415 pages with 394 illustrations. Philadelphia and London: W. B. Saunders Company, 1940. Cloth, \$6.50.

* * *

OPERATIVE DENTISTRY (American Text Book of). In contributions by eminent authorities. Edited by Marcus L. Ward, D.D.Sc., Jonathan Taft Professor of Dentistry, School of Dentistry, University of Michigan. Seventh Edition. Octavo, 925 pages, illustrated with 587 engravings. Published by Lea & Febiger, Philadelphia, 1940. Price, \$11.00.

SUPPLEMENT

It is our custom to reprint, in a Supplement in the terminal issue of each volume, various matters of permanent interest, which might otherwise not be included in the bound volumes.

NOTES AND COMMENTS

"The door of opportunity stands wide open, but as always, only those will be permitted to enter who are willing to pay the price of admission in toil, sacrifice and service."—*Merritt, A. H.*, page 22.

The greatest single factor in its (dental education) professional development was the provision for autonomous formal education. In writing of the founding of the first dental school, the Baltimore College of Dental Surgery, in 1840, Chapin A. Harris recorded in his *Dictionary of Dental Science* (1849) that "... the legislature of Maryland chartered a college with four professorships, for the purpose of affording more ample facilities of instruction in the branches of knowledge necessary to the education of an accomplished dentist, than could be furnished by any private teacher, and thus securing to the public a sure guaranty against the imposition of empiricism."—*Bear, Harry*, page 160.

An insidious negative influence upon students in developing their attitudes toward literature is the distribution to them of the throw-away type of publication and magazines purportedly designed for the students' exclusive use. These magazines have no professional sponsorship and obviously are published for one purpose only—the income from commercial sources.—*Bryan, A. W.*, page 166.

* * *

THE JOURNAL OF DENTAL RESEARCH— WILLIAM J. GIES ENDOWMENT FUND

This fund is making real progress—less than two years ago a campaign was initiated to raise a fund of \$50,000—the response has been gratifying, so that today we have less than \$20,000 yet to go.

Returns come in steadily and with the increased momentum to be given immediately after January 1, surely the elimination of this balance will be accomplished. This constitutes a splendid ending of dentistry's first one hundred years and the beginning of the second.

* * *

AMERICAN COLLEGE OF DENTISTS

(A) Sections

Dates of meetings in College year of 1939-40 (between convocations):—(1) *Kentucky*: Sep. 25, '39; June 5, '40. (2) *North-eastern California*: (3) *Maryland*: June 25, '40. (4) *New York City*: Oct. 27, Dec. 3, '39; May 24, '40. (5) *Minnesota*: Feb. 29, June 5, '40. (6) *New England*: April 23, '40. (7) *Wisconsin*: Nov. 12, '39; Apr. 22, '40. (8) *Colorado*: Mar. 19, June 21, '40. (9) *Pittsburgh*: Nov. 29, '39; May 22, '40. (10) *Iowa*: May 6, '40. (11) *Illinois*: Dec. 11, '39; Feb. 11, May 23, '40. (12) *St. Louis*: Oct. 23, '39. (13) *Oregon*: Nov. 24, '39; Mar. 9, '40. (14) *Texas*: Apr. 9, '40. (15) *Florida*: Oct. 12, '39. (16) *Indiana*: Jan. 8, '40. (17) *Southwestern*: Jan. 18, '40. (18) *Washington, D. C.*: Oct. 30, '39.

(B) Standing Committees (1939-40)

Centennial Celebration (establishment of dentistry as a separately organized profession—1939-40)—Harold S. Smith, *chairman*; Harry Bear, J. H. Ferguson, D. F. Lynch, Waldo Mork.

Certification of Specialists—H. C. Fixott (44), *chairman*; Max Ernst (42), C. O. Flagstad (41), J. O. McCall (43), E. W. Swinehart (40).

Dental Relations—J. O. Goodsell (43), *chairman*; L. E. Kurth (41), T. E. Purcell (44), Nathan Sinai (40), Wilmer Souder (42).

Education—F. W. Hinds (42), *chairman*; A. W. Bryan (43), W. C. Fleming (44), Harry Lyons (40), J. T. O'Rourke (43), R. S. Vinsant (41), L. M. Waugh (42).

Endowments—Emory W. Morris (43), *chairman*; Dan U. Cameron (41), Oscar J. Chase (44), Abram Hoffman (40), A. H. Merritt (42).

History—W. N. Hodgkin (44), *chairman*; E. E. Haverstick (42), J. B. Robinson (43), Henry L. Banzhaf (41), Robert P. Thomas (40).

Hospital Dental Service—Howard C. Miller (43), *chairman*; R. W. Bunting (44), E. A. Charbonnel (40), Leo Stern (42), C. W. Stuart (41).

Journalism—J. Cannon Black (40), *chairman*; G. M. Anderson (40), W. B. Dunning (41), Walter Hyde (44), T. F. McBride (41), E. G. Meisel (42), H. J. Noyes (43), E. B. Spalding (44), R. C. Willett (42).

Necrology—J. V. Conzett (41), *chairman*; R. R. Byrnes (40), F. H. Cushman (42), B. E. Lischer (43), W. L. Shearer (44).

Nominations—P. V. McParland (40), *chairman*; E. N. Bach (41), G. M. Damon (44), H. O. Lineberger (43), H. W. Titus (42).

Oral Surgery—M. W. Carr (41), *chairman*; E. R. Bryant (42), J. R. Cameron (40), C. W. Freeman (44), W. I. Macfarlane (43).

Prosthetic Service—W. H. Wright (43), *chairman*; W. H. Grant (41), Clarence A. Nelson (40), A. P. O'Hare (42), A. H. Paterson (44).

Research—A. L. Midgley (42), *chairman*; L. E. Blauch (44), W. D. Cutter (43), J. E. Gurley (42), P. J. Hanzlik (40), P. C. Kitchin (43), A. B. Luckhardt (41), L. R. Main (44), L. M. S. Miner (41), Irvine McQuarrie (40), A. M. Schwitalla, S. J. (44).

Socio-economics—C. E. Rudolph (43), *chairman*; E. H. Bruening (44), Wm. R. Davis (41), B. B. Palmer (40), M. W. Prince (40), Maurice William (44), Geo. W. Wilson (42).

(C) *Officers, Regents, and Editors*

Listed on the title pages (two) of this volume.

INDEX

Volume 7: 1940

Special abbreviations; besides those of self-evident import.—*A. A. A. S.*: American Association for the Advancement of Science. *A. A. D. E.*: American Association of Dental Editors. *A. A. D. S.*: American Association of Dental Schools. *A. C. D.*: American College of Dentists. *A. D. A.*: American Dental Association. *A. M. A.*: American Medical Association. *A. P. H. A.*: American Public Health Association. *D. or d.*: dental or dentistry. *I. A. D. R.*: International Association for Dental Research. *J. A. C. D.*: *Journal of the American College of Dentists*. *J. D. R.*: *Journal of Dental Research*.

ACID: effect of fluorine on formation by mouth bacteria, 78

—: iodoacetic; in diet, 82

Act: Ill. d. law, 231

Activities: organizational, 4

Addresses, *See also* A. C. D.

Dental Education, 311

Dental Education: Milestones of Progress, 13

Dentistry and Science, 12

Dentistry Through the Century, 2

Dentistry's New Horizon, 300

Development and Progress of O. K. U., 8

Influence of Dental Laws, 9

Influence of Organization on Development of Dentistry, in U. S., 4

International Relationships, 5

Opportunities Ahead in Light of Our Experiences, 22

Our Literature Through the Century, 6

Presidential, 297

Research, an Important Factor in Dental Progress, 10

Trends in D. Education, *See* Symposium on, 320-370

Alkyl-benzyl ammonium chloride: determinant on metabolism of dental plaque material, 80

American: dentistry; position in the world, 340

American Association for the Advancement of Science: Columbus meeting (1939); abstracts of addresses, committee of arrangements, personnel, presiding officers, secretary, sub-section on dentistry, 74-77

American Association for the Advancement of Science (*con.*): proceedings in abstract, 77-87

American Association of Dental Schools, 163

American College of Dentists: Milwaukee Convocation (1939); Board of Regents, reports of committees; endowments, 44

—:—; hospital d. service, 45

—:—; journalism, 188

—:—; prosthetic service, 208

—:—; public relations, 57

American College of Dentists: Baltimore Convocation (March, 1940);

—:—; Addresses (In abstract)

Dental Education: Milestones of Progress, 13

Dentistry and Science, 12

Dentistry Through the Century, 2

Development and Progress of O. K. U., 8

Influence of Dental Laws, 9

Influence of Organization on Development of Dentistry, in U. S., 4

International Relationships, 5

Opportunities Ahead in Light of Our Experiences, 22

Our Literature Through the Century, 6

Research, an Important Factor in Dental Progress, 10

—:—; bestowal of Gies Award, 20

—:—; greetings and responses, 18, 19

—:—; honorary fellowships conferred, 16

American College of Dentists (*con.*): Baltimore Convocation; hosts to kindred organizations, 72-73

—:—; names inscribed on mace, 17

—:—; pilgrimage to tombs of Hayden and Harris, 15

—:—; reception and dinner, 16

—: Cleveland Convocation; addresses

Dental Education, 311

Dentistry's New Horizon, 300

Presidential, 297

Trends in D. Education: *See* Symposium on, 320-370

—:—; abstract of minutes, 371

—: Chicago meeting; Board of Regents, 69

—: constitution and by-laws, 88

—: future roll of, 298

—: membership roster, 102

—: past Presidents, 141

—: Regents, 141

—: Sections; and chief officers, 140

American Dental Association; student membership, 166

American Hospital Association, 46

American Journal of Dental Science, 6, 160

American Society of Dental Surgeons, 160, 379

Award(s): Wm. J. Gies; bestowed on P. J. Brekhuis, 20

BACTERIA(L): acidogenic, 82

—: flora; in experimental d. caries, 82

—: mouth; effect of fluorine on formation of acid by, 78

Baltimore: College d. Surgery, 14, 160

—: convocation, A. C. D.; editorial, 70

BANZHAF, H. L.: chm., symposium; trends in d. education and concluding remarks, 320 and 369

BEAR, H.: President, A. A. D. S., 13

—: d. education in America, 160

—: d. education: milestones of progress, 13

BECK, D. F.: quoted, 72

BIBBY, B. G.: and VANKESTEREN, MARY; effect of fluorine on formation of acid by mouth bacteria, 78

—: progress report, U. of Rochester, 145

BLACK, J. C.: report of journalism committee, 188

BLAYNEY, J. R.: oral manifestations in systemic disease, 85

Board: d. examiners, 14

Books: new; announcement, 144, 384

BOYLE, P. E.: WEISBERGER, D. and NELSON, C. T., 82, *See* Weisberger, D.

BRADDEL, S.: MILLER, B. F., and MUNTZ, J., 80, *See* Miller, B. F.

BRANDHORST, O. W.: abstract of minutes, Cleveland Convocation and Regents, 371, Chicago Meeting, Board of Regents, 69

BREKHUS, P. J.: first recipient, Wm. J. Gies Award, 21

BRIGGS, L. J.: honorary fellowship, 16

BROWN, S.: name inscribed on mace, 17

BRUN, B. LUCIEN: general chairman, centennial celebration, 7

BRYAN, A. W.: president, A. C. D., 2, 165, 297

—: d. student and his literature, 165

—: greetings, 18

—: president's address, 297

CAHN, L. R.: oral manifestations of endocrine disorders, 84

CAMALIER, C. W.: Chm. Maj. Rodriguez Memorial Com., 27

Canada (ian): d. schools, 5

Carnegie Corporation: gift to U. of Rochester, 146

CARR, M. W.: report of sub-committee of hospital d. service, 48

Centennial Celebration; reference to, 297

Certification: specialists, 306

CHEYNE, V. G.: inhibition of experimental caries by fluorine, 79

College: d. surgery, Baltimore, 14, 160
 CONZETT, J. V.: founder, A. C. D., 22
 —: report of necrology com., 285
 COOK, T. J.: oral manifestation of blood dyscrasias, 84
 Council: d. educational, 336
 Curriculum: d.; changes, 331
 —: d.; studies concerning, 365

DEGREES: held by contributors to I. A. D. R. program, 362

Dental: Canadian schools, 5
 —: caries; following extirpation of salivary glands, 83
 —: —; in diabetic children, 86
 —: —; inhibition of experimental caries, by fluorine, 79, 82
 —: —; possible reduction by fluorine, 77, 81
 —: —; report of researches, 322
 —: Centennial, 143
 —: education(al), 302, 311
 —: —; A. D. A. assumes responsibility, 14
 —: —; autonomy recommended by A. C. D. committee, 319
 —: —; Council of America, 162, 336
 —: —; control of by medical educators, 344
 —: —; Harvard Plan, 276, 314, 327, 344, *See also* Symposium on Trends in Dental Education, 320-370
 —: —; in America, 160
 —: —; in U. S. and Canada, 162
 —: —; milestones of progress, 13
 —: —; reference to experiments at Rochester and Yale Universities, 316
 —: —; reference to plan of U. of California, 317
 —: —; reference to recommendations of Gies, Wm. J., and Blauch, L. E., 313
 —: —; Symposium, trends in, 320-370
 —: —; trends in (editorial), 273
 —: examiners, Board of, 14

Dental (*con.*): health-care; requirements, 355

—: history, 307
 —: hospital service, 305, *See also* Hospital d. Service. *See also* appendix, 48
 —: —; report of com., 45
 —: hygienists, 54
 —: law, influence of, 9
 —: literature, 307, *See also* Journalism
 —: Medical relations, 305
 —: research, 306
 —: schools; American Association of, 163
 —: service, extension of, 333
 —: student, selection of, 328
 —: technician, *See* Prosthetic Service, Report of Com.

Dentin: and enamel; possible reduction of solubility by fluorine, 77

Dentistry('s): American, 340
 —: and medicine; fellowship program, U. of Rochester, 145
 —: and science, 12
 —: celebration; reference to, 297
 —: centennial celebration; program, 1-22
 —: defined, 169
 —: early history, 171
 —: endowments for, 304
 —: in a scientific era, 169
 —: introduction of science, 171
 —: new horizon, 300
 —: period of development, 175-178
 —: phases of practice, 3

Dentists: number in U. S., 163

Detergent(s): synthetic alkyl benzyl ammonium chloride on metabolism of dental plaque, 80

Disease(s): endocrine disorders; oral manifestation in, 84

—: oral manifestation of, 83
 —: syphilis, of the mouth, 86
 —: systemic; oral manifestations in, 85

Dyscrasia(s): blood; oral manifestation of, 84

ECONOMICS: socio, 309

Editorial(s): Baltimore Convocation, 70

—: The Harvard Plan, 276

—: Summum Bonum (The Cleveland Convocation), 376

—: D. Education, 380

—: Trends in d. education, 273

Education(al): dental, 302, 311

—: —, A. D. A. assumes responsibility, 14

—: —; control of by medical educators, 344

—: —; council, 336

—: —; future trends, 312

—: —; Harvard Plan, 276, 314, *See also* Symposium on Trends in Dental Education, 320-370

—: —; in U. S. and Canada, 162

—: —; in America, 160

—: —; milestones of progress, 13

—: —; trends in (editorial), 273, Symposium, 320-370

Enamel: and dentin; reduction of solubility by fluorine, 77

Endocrine glands: disturbance; effect on mucous membrane, 86

—: oral manifestation of disorders, 84

Endowment(s): for dentistry, 304

—: report of com., 44

—: Wm. J. Gies fund, J. D. R., 143

Examiners: Board of d., 14

FELLOWSHIP(S): change in program at U. of Rochester, 147

—: conferring of, 373

—: honorary, conferred, 16-17

—: lecture established at Med. Coll. of Virginia, Psi Omega Fraternity, 169

—: reference to, 298

—: report on training for, U. of Rochester, 145.

FINN, S. B.: possibility of fluorine as caries reducing agent, 77

FIXOTT, H. C.: presiding officer at session at Baltimore, 8

FLEMING, W. C.: trends in d. education (editorial), 273

Fluorine: effect of, on formation of acid by mouth bacteria, 78

—: inhibition of experimental caries, 79

—: possible reduction of solubility of enamel and dentin, 77

—: possibility in caries reduction, 77, 81, 82

Founders; A. C. D., 22

FRASER, H. F.: and TOPPING, N. H., 86, *See* Topping, N. H.

FRIESELL, H. E.: founder, A. C. D., 22

GIES, WM. J.: President, I. A. D. R., 10

—: address; research as an important factor in d. progress, 10

—: award, bestowed on P. J. Brekhus, 20

—: import of prospective new d. program at Harvard University, 350, *See also* Symposium, Trends in Dental Education, 320-370

Gland(s): Salivary; d. caries following extirpation, 83

GOODSELL, J. O.: public relations; report of com., 57

GURLEY, J. E.: d. in a scientific era, 169

—: editorials, 70, 376, 380

—: Harvard Plan, 276

HARRIS, C. A.: and d. progress, 13

—: pilgrimage to tomb, 15

—: reference to, 160

HARRISON, R. W.: bacterial flora in experimental d. caries, effect of fluoride and iodoacetic acid in diet, 82

Harvard: plan for d. education (editorial), 276, 278, *See also* Symposium on Trends in Dental Education, 320-370

—: —; import of, 350

—: —; medically dominated, 349

—: possible graduate education, 368

HATTON, E. H.: oral manifestations of systemic disease, 83

HAYDEN, H. H.: and d. progress, 13

—: pilgrimage to tomb, 15

Health-care: d., requirements, 355

HEATWOLE, T. O.: receives honorary fellowship, 16

HINDS, F. W.: d. education, 311

Historical: data, 23

History: d., 307

HODGKIN, W. N.: President, N. A. D. E., 9

—: address; influence of d. laws on dental progress, 9

HOFFMAN, ABRAM: President, O. K. U., 7

—: address; development and progress of O. K. U., (abstract), 8

HORNER, H. H.: trends in d. education, 328, *See* Symposium, 320-70

Hospital(s): American Association, 46, *See also* Internships

—: d. service, 305, *See also* Appendix, 48

—: —: changes in rules, 45

—: —: classes of, 50

—: —: equipment, 54

—: —: minimum standards, 46

—: —: plan of management, 50

—: —: request for Class A rating, 49

—: —: staff, 52

—: —: title, 52

—: —: ward rounds, 55

—: —: internships, 311

Hygienists, d., 54

I. A. D. R., 13

—: importance of, 337

Index: literature, 4

Interne(ship)s; 46

—: increase in, 311

JOURNAL(ISM): *American; d. science*, 6, 160

—: *D. Research*, 3

—: —: endowment fund, 143

—: proprietary, 7

—: report of com., 188, *See also* d. literature

KITCHIN, PAUL C.: sec't'y, sub-section on dentistry, A. A. A. S., 12, 74

—: address; dentistry and science (abstract), 12

—: report of Columbus meeting, 74-87

KRONFELD, R.: physiology of ovarian dermoid containing tooth, 80

LABORATORIES: d.; *See* Prosthetic Service

Law: d.; influence of, 9, *See also* Act

—: Ill. d. practice, 231, *See also* 220

Licensure: d. technicians; *See* Prosthetic Service, *See also* 241

Literature: and d. student, 165

—: d., 307, *See also* Journal(ism)

MACE: names inscribed, 17

MANN, J. B.: report on Maj. Rodriguez' researches, 29

March of Time, 23

MCCOLLOUGH, A. J.: and PIPPIN, B. H., 80

Medical: commission on education; report, (1932), 352

—: dental relations, 305

—: educators and d. education, 344

—: excess training for dentists, 346

Medicine: and dentistry; fellowship program, U. of Rochester, 145

Memorial: plaque, Major F. E. Rodriguez, 27

MERRITT, A. H.: President, A. D. A., 7

—: address; opportunities in light of experience, 22

MIDGLEY, A. L.: presentation of Gies' Award, 20

—: trends in dental education; symposium, 334

MILLER, B. F.: MUNTZ, J. and BRADEL, S.; inhibiting action of alkyl benzyl ammonium chloride, on dental plaque material, 80

MILLER, H. C.: hospital d. service; report of com. 45

MILLER, S. R.: honorary fellowship, 17

MINER, L. R. S.: trends in dental education; symposium, 323

MORRIS, E.: endowments; report of com., 44

MUNTZ, J.: MILLER, B. F., and BRADEL, S., 80, *See* Miller, B. F.

NECROLOGY: com. report, 285

NELSON, C. T.: WEISBERGER, D., and BOYLE, P. E., 83, *See* Weisberger, D.

Notes and comments: 143, 278, 384

—: GIES, WM. J. Endowment Fund, J. D. R., 143

—: new books, 144, 384

Nutrition(al): oral lesions of soft tissue in deficiency, 86

—: oral manifestation of experimental dietary deficiency, 86

OBITUARIES, *See* Necrology, report of com.

Omicron Kappa Upsilon, 8

Opportunities in light of our experiences, 22

Organization(s): activities, 4

—: value of, 4, 307

PAIN: conquest of, 12

PARMLY, E.: name inscribed on mace, 18

PARRAN, T.: honorary fellowship conferred, 17

PASTEUR, LOUIS; founder of bacteriology, 361

PIPPIN, B. H.: and MCCOLLOUGH, A. J.; method of treatment of joint lesions, 80

Plaque: memorial, MAJ. F. E. RODRIGUEZ, 27

Profession: defined, 70, 169

Proprietary journals, 7, *See also* Literature and Journalism, Report of com.

Prosthetic service: reference to, 308

—: report of com., 208

Prosthodontia: implied separation from dentistry, 347

Psychology: place of, 183

Public Relations: activities of com., 61

—: addendum, 67

—: central office proposed, 59

—: conclusion, 67

—: object of, 57

—: plan of organization, 59

—: press com., 58

—: pressure groups, 58

—: recommendations, 65

—: relation to other groups named, 61-65

—: report of com., 57

RELATION(S) (SHIPS): medico-dental, 305

—: public; report of com., 57

—: university, 330

Research: definition, 147

—: dental, 306

—: —; journal, 3

—: development, 15

—: important factor in d. progress, 10

—: International Association for D.; importance of, 337

—: reference to sums allocated, 299

—: support for, 12

Rockefeller Foundation: gift to U. of Rochester, 146

RODRIGUEZ, MAJ. F. E.: Indian service, 30

—: memorial plaque, 27, 29

—: researches, 29

—: sprue, oral manifestations of, 31

ROWLETT, A. E.: guest, Baltimore Convention, 19

—: greetings from Europe, 19

SCHOOL(S): Canadian dental, 5

—: d., admission to, 162

—: d. technology, 245, *See also* Prosthetic Service

Science(s): founders in, in relation to medicine, 361

—: social, 3

—: and dentistry, 12

Service: d., extension of, 333
 —:—; hospital, 305
 —: Prosthetic, *See* Prosthetic Service
 Social Sciences, 3
 Society: American D. Surgeons, 160
 Socio-economics, 309
 Specialists: certification of, 306
 Sprue: oral manifestation, 30
 Standards: minor in hospital d. service, 46
 STEIN, G.: d. conditions in diabetic children, 86
 Student: d., selection of, 328
 Symposium: trends in d. education, 320-370
 Syphilis; of the mouth, 86

TAYLOR, W N.: syphilis of the mouth, 86
 Teachers: d., American Institute of, 161
 Technicians: d., *See* Prosthetic Service
 Teeth (tooth): physiology of, in ovarian dermoid cyst, 80
 Temporo-mandibular joint: method of treatment of lesions, 80
 TOPPING, N. H.: and FRASER, H. F.; oral manifestations of dietary deficiency, 86
 Trends in d. education: Symposium, 320-370
 —: curriculum changes, 331
 —: extension of d. service, 333
 —: selection of students, 328
 —: university relationships, 330

UNIVERSITY: relationship, 330
 —: Rochester; fellowship program for dental and medical graduates, 145
 —:—; fellows and graduate degrees, importance of research, development of research, 152
 —:—; distribution of fellows, 154-159

VOLKER, J. F.: possible reduction of solubility of enamel and dentin by fluoride, 77
VANKESTEREN, MARY: and BIBBY, B. G., 78

WEISBERGER, D.: NELSON, C. T. and BOYLE, P. E.; caries following extirpation of salivary glands, 83
 —: effect of endocrine disturbance on mucuous membrane, 86
WILSON, G. W.: dentistry's new horizon, 300
 —: presiding officer at session at Baltimore, 7
WISEMAN, B. K.: oral lesions of soft tissue in nutritional deficiency, 85
WRIGHT, W. H.: hidden dangers in the new Harvard Plan of d. education, 343, *See also* Symposium, Trends in Dental Education, 320
 —: report of Prosthetic Service com., 208

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

BOARD OF EDITORS (1939-40)
(Nos. 1-3: 1940)

OFFICERS OF THE COLLEGE AND REGENTS EX-OFFICIO

President: A. W. BRYAN, Iowa City *President-elect:* GEO. W. WILSON, Milwaukee
Vice-President: HENRY C. FIXOTT, Portland (Ore.) *Secretary:* OTTO W. BRANDHORST, St. Louis
Treasurer: HAROLD S. SMITH, Chicago *Assistant Secretary:* WILLIAM J. GIES, New York

ELECTIVE REGENTS OF THE COLLEGE

WM. F. LASBY (44), Minneapolis ALBERT L. MIDGLEY (42), Providence
E. G. MEISEL (43), Pittsburgh J. CANNON BLACK (41), Chicago
E. W. SWINEHART (40), Baltimore

Editor: JOHN E. GURLEY, San Francisco

Associate Editor: Secretary of the College

Assistant Editor: Assistant Secretary of the College

Contributing Editors

GEORGE C. PAFFENBARGER (44), CHARLES F. HARPER (44),
Washington, D. C. Jersey City (N. J.)
THOMAS F. MCBRIDE (43), Pittsburgh WALTER HYDE (43), Minneapolis
WILLARD C. FLEMING (42), Oakland (Calif.) CLARENCE W. KOCH (42), Little Rock
PAUL R. STILLMAN (41), Longwood (Fla.) WILLIAM R. DAVIS (41), Lansing
WALTER H. WRIGHT (40), Pittsburgh MAURICE WILLIAM (40), New York

VOLUME SEVEN
SAN FRANCISCO

1940

JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

BOARD OF EDITORS (1940-41)

(No. 4: 1940)

OFFICERS OF THE COLLEGE AND REGENTS EX-OFFICIO

President: GEO. W. WILSON, Milwaukee *President-elect:* E. G. MEISEL, Pittsburgh
Vice-President: W. H. SCHERER, Houston *Secretary:* OTTO W. BRANDHORST, St. Louis
Treasurer: HAROLD S. SMITH, Chicago *Assistant Secretary:* WILLIAM J. GIES, New York

ELECTIVE REGENTS OF THE COLLEGE

W. N. HODGKIN (45), Warrenton (Va.) E. G. SLOMAN (43), San Francisco
WM. F. LASBY (44), Minneapolis ALBERT L. MIDGLEY (42), Providence
J. CANNON BLACK (41), Chicago

Editor: JOHN E. GURLEY, San Francisco

Associate Editor: Secretary of the College

Assistant Editor: PAUL C. KITCHIN, Columbus

Contributing Editors

WILLIAM J. GIES (45), New York, *Chm.* L. E. BLAUCH (45), Washington, D. C.
GEORGE C. PAFFENBARGER (44), CHARLES F. HARPER (44),
Washington, D. C. Jersey City (N. J.)
THOMAS F. MCBRIDE (43), Pittsburgh WALTER HYDE (43), Minneapolis
WILLARD C. FLEMING (42), Oakland (Calif.) CLARENCE W. KOCH (42), Little Rock
PAUL R. STILLMAN (41), Longwood (Fla.) WILLIAM R. DAVIS (41), Lansing

COPYRIGHT, 1940

BY THE AMERICAN COLLEGE OF DENTISTS

RECORDER PRESS
SAN FRANCISCO, CALIFORNIA

CONTENTS

NOS. 1-2, MARCH-JUNE

American College of Dentists:

Hosts, Centennial Celebration Program, Baltimore, March 17, 1940:

Addresses (Abstracts):

Dentistry Through the Century. <i>J. Ben Robinson, D.D.S.</i>	2
The Influence of Organization on the Development of Dentistry in the United States. <i>L. Pierce Anthony, D.D.S.</i>	4
International Relationships. <i>Eudore Dubeau, D.D.S.</i>	5
Our Literature Through the Century. <i>Harold J. Noyes, B.S., D.D.S., M.D.</i>	6
The Development and Progress of Omicron Kappa Upsilon. <i>Abram Hoffman, D.D.S.</i>	8
The Influence of Dental Laws. <i>W. N. Hodgkin, D.D.S.</i>	9
Research as an Important Factor in Dental Progress. <i>William J. Gies, Ph.D., Sc.D., LL.D.</i>	10
Dentistry and Science. <i>Paul C. Kitchin, M.S., D.D.S.</i>	12
Dental Education: Milestones of Progress. <i>Harry Bear, D.D.S.</i>	13
Pilgrimage to the Tombs of Hayden and Harris.....	15
Baltimore Convocation, Sunday Evening, March 17, 1940:	
Reception and Dinner.....	16
Conferring of Honorary Fellowships.....	16
Inscription of Names Upon the Mace of the College.....	17
Greetings and Responses.....	18
Presentation of the Initial William John Gies Award to Dr. Peter J. Brekhus. <i>Albert L. Midgley, D.M.D., Sc.D.</i>	20
Address: Opportunities Ahead in the Light of Our Experiences. <i>Arthur H. Merritt, D.D.S., M.S.</i>	22
March of Time.....	23
Dedication of Plaque to the Memory of Major Fernandez Rodriguez, Dental Corps, at Washington, D. C., March 16, 1940.....	26
Major Rodriguez Memorial Plaque. <i>C. Willard Camalier, D.D.S.</i>	27
Fernandez E. Rodriguez, Major, Dental Corps, U. S. Army. <i>James B. Mann, D.D.S., M.D., Lt. Col., D. C., U. S. Army</i>	29
Proceedings of the Milwaukee Convocation, July 16, 1939 (Cont'd):	
Reports of Committees to the Board of Regents:	
VII. Endowments. <i>Emory W. Morris, D.D.S., Chairman</i>	44
VIII. Hospital Dental Service. <i>Howard C. Miller, D.D.S., Chairman</i>	45
IX. Public Relations. <i>J. O. Goodsell, D.D.S., Chairman</i>	57
Ad Interim Meeting of the Board of Regents, held in Chicago, Feb. 11, 1940. <i>Otto W. Brandhorst, D.D.S., Secretary</i>	69
Editorial.....	70
American Association for the Advancement of Science: Proceedings of the Subsection on Dentistry: Fifth Annual Meeting, Columbus, Ohio, Dec. 30, 1939. <i>Paul C. Kitchin, M.S., D.D.S., Secretary of the Subsection</i>	74
American College of Dentists, General Statement, Constitution and By-Laws, and Register of Membership as of April 30, 1940. <i>Otto W. Brandhorst, D.D.S., Secretary</i>	88
Notes and Comments.....	143
New Books.....	144

No. 3, SEPTEMBER

A Report of Progress at the University of Rochester. <i>Basil G. Bibby, Ph.D., D.M.D.</i>	145
Dental Education in America: An Historical Sketch. <i>Harry Bear, D.D.S.</i>	160
The Dental Student and His Literature. <i>Alvin W. Bryan, D.D.S.</i>	165
Dentistry in a Scientific Era. <i>John E. Gurley, D.D.S.</i>	169
American College of Dentists:	
Proceedings of the Milwaukee Convocation, July 16, 1939 (Concluded):	
Reports of Committees to the Board of Regents:	
X. Journalism. <i>J. Cannon Black, D.D.S., Chairman</i>	188
XI. Prosthetic Service. <i>Walter H. Wright, D.D.S., Ph.D., Chairman</i>	208
Editorials:	
Trends in Dental Education: <i>W. C. F.</i>	273
The Harvard Plan	276
News, Notes and Comments	278

No. 4, DECEMBER

American College of Dentists:	
Cleveland Convocation, September 8, 1940:	
Necrology: Report of the Committee on Necrology. <i>John V. Conzett, D.D.S., Chairman</i>	285
Addresses:	
Presidential: <i>Alvin W. Bryan, D.D.S., President</i>	297
Inaugural: Dentistry's New Horizon. <i>George W. Wilson, B.S., D.D.S., President-elect</i>	300
Dental Education: Report of the Committee on Dental Education. <i>F. W. Hinds, D.D.S.</i>	311
Trends in Dental Education: A Symposium. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D., Presiding</i>	320
Trends in Dental Education: Chairman's Introductory Remarks. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D.</i>	320
Trends in Dental Education. <i>L. M. S. Miner, D.M.D., M.D.</i>	323
Trends in Dental Education. <i>H. H. Horner, A.B., A.M., Pd.D., LL.D.</i>	328
Trends in Dental Education. <i>A. L. Midgley, D.M.D., Sc.D.</i>	334
Hidden Dangers in the New "Harvard Plan" of Dental Education. <i>W. H. Wright, D.D.S., B.S., M.S., Ph.D.</i>	343
The Import of the Prospective New Dental Program at Harvard University. <i>Wm. J. Gies, Ph.D., Sc.D., LL.D.</i>	350
Chairman's Concluding Remarks. <i>Henry L. Banzhaf, B.S., D.D.S., LL.D.</i>	369
Proceedings of the Cleveland Convocation, Sep. 8, 1940: Abstract of Minutes; Convocation and Regents. <i>Otto W. Brandhorst, D.D.S., Secretary</i>	371
Editorials	376
News and Notes	384
New Books	384
Supplement	386
Index	389
Title pages and contents: Volume 7	i-iv

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*

ADVERTISEMENTS

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:

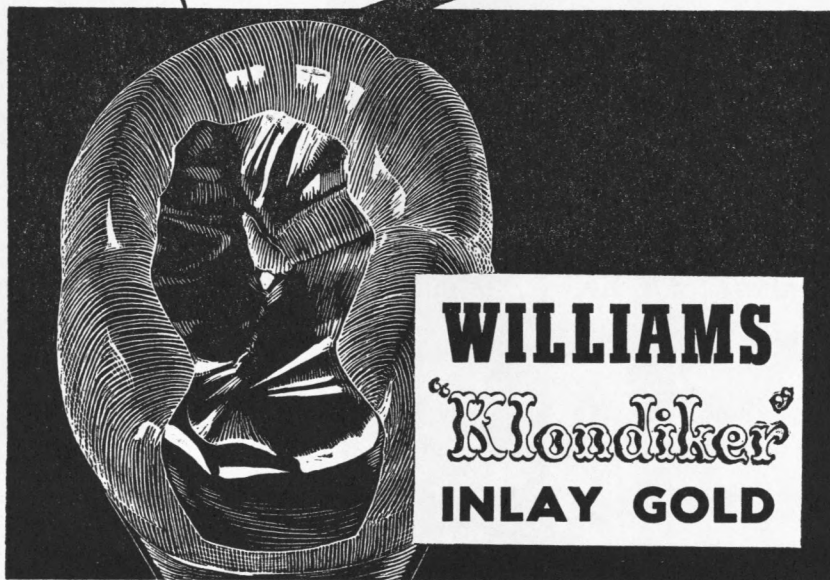
Questionnaire for referees on acceptance of advertisements.—(1) Has _____ (person, company, service, etc.) always been honorable and fair in (his, their) dealing with you personally? (2) If not, indicate confidentially your experience to the contrary. (3) Has _____ (commodity, service, etc.) always been, 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.

ADVERTISEMENTS

...with pardonable PRIDE

Inlays cast of Williams Klondiker are so clean, smooth and dense, possess such precise, marginal details, we feel sure you will look with pardonable pride on your achievements with this high quality inlay gold. Strong and enduring, Williams Klondiker is excellent for $\frac{3}{4}$ crowns, bridge abutments, posterior pontics and similar restorations. Rich gold color. Slightly burnishable. Exceptionally high in precious metal content, Williams Klondiker is a favored gold among those who seek the best. Complies with A. D. A. Specification No. 5, Type C... Ask your dealer, or write: Williams Gold Refining Company, Buffalo, N. Y. (In Canada: Fort Erie, N., Ontario).



STRONG . . . DENSE . . . ENDURING

AMERICAN COLLEGE OF DENTISTS

STANDING COMMITTEES (1940-1941)

Certification of Specialists—E. W. Swinehart (45), *chairman*; Max Ernst (42), H. C. Fixott (44), W. E. Flesher (41), C. O. Flagstad (41), J. O. McCall (43).

Education—W. C. Fleming (44), *chairman*; A. W. Bryan (43), Harry Lyons (45), J. T. O'Rourke (43), R. S. Vinsant (41), L. M. Waugh (42), F. W. Hinds (42).

Endowments—A. H. Merritt (42), *chairman*; H. J. Burkhart (45), Dan U. Cameron (41), Oscar J. Chase (44), Wm. J. Gies (45), E. W. Morris (43).

History—W. N. Hodgkin (44), *chairman*; W. H. Archer (45), H. L. Banzhaf (41), E. E. Haverstick (42), J. B. Robinson (43).

Hospital Dental Service—Howard C. Miller (43), *chairman*; R. W. Bunting (44), E. A. Charbonnel (45), L. M. Fitz-Gerald (41), Leo Stern (42).

Journalism—J. Cannon Black (45), *chairman*; J. M. Donovan (45), W. B. Dunning (44), Walter Hyde (44), B. E. Lischer (43), T. F. McBride (41), E. G. Meisel (42), E. B. Spalding (44), R. C. Willett (42).

Necrology—J. V. Conzett (41), *chairman*; F. H. Cushman (42), P. V. McParland (45), R. H. Vollard (43), M. L. Ward (44).

Nominations—H. E. Friesell (45), *chairman*; E. N. Bach (41), G. M. Damon (44), H. O. Lineberger (43), H. W. Titus (42).

Oral Surgery—M. W. Carr (41), *chairman*; E. R. Bryant (42), C. W. Freeman (44), W. I. Macfarlane (43), W. H. Scherer (45).

Preventive Service—L. A. Cadarette (45), *chairman*; Hermann Becks (44), C. S. Foster (43), E. M. Jones (42), E. W. Swanson (41).

Prosthetic Service—W. H. Wright (43), *chairman*; W. H. Grant (41), C. A. Nelson (45), A. P. O'Hare (42), A. H. Paterson (44).

Relations—J. O. Goodsell (43), *chairman*; H. F. Hoffman (45), L. E. Kurth (41), T. E. Purcell (44), Nathan Sinai (45), Wilmer Souder (42), E. G. Van Valey (45).

Research—A. L. Midgley (42), *chairman*; L. E. Blauch (44), W. D. Cutter (43), J. E. Gurley (42), P. J. Hanzlik (45), P. C. Kitchin (43), A. B. Luckhardt (41), L. R. Main (44), L. M. S. Miner (41), Irvine McQuarrie (45), Fr. A. M. Schwitalla (44).

Socio-Economics—C. E. Rudolph (43), *chairman*; E. H. Bruening (44), W. R. Davis (41), Waldo H. Mork (43), B. B. Palmer (45), M. W. Prince (45), Maurice William (44), G. W. Wilson (42).

Announcements

Next Annual Convocation: Houston, Texas, Sunday, October 26, 1941.

Next meeting Board of Regents: Chicago, Illinois, February 16, 1941.

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.

THE RECORDER PRESS

SAN FRANCISCO, U. S. A.