WINTER • 1985

JOURNAL

AMERICAN COLLEGE OF DENTISTS

Female Dentists

Faculty Mobility In Academic Dentistry

New Fellowships Conferred

The Objectives of the American College of Dentists

The American College of Dentists in order to promote the highest ideals in health care, advance the standards and efficiency of dentistry, develop good human relations and understanding and extend the benefits of dental health to the greatest number, declares and adopts the following principles and ideals as ways and means for the attainment of these goals.

(a) To urge the extension and improvement of measures for the control and prevention of oral disorders;

(b) To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels;

(c) To encourage, stimulate and promote research;

(d) Through sound public health education, to improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;

(e) To encourage the free exchange of ideas and experiences in the interest of better service to the patient;

(f) To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public; and

(g) To make visible to the professional man the extent of his responsibilities to the community as well as to the field of health service and to urge his acceptance of them;

(h) In order to give encouragement to individuals to further these objectives, and to recognize meritorious achievements and potentials for contributions in dental science, art, education, literature, human relations and other areas that contribute to the human welfare and the promotion of these objectives — by conferring Fellowship in the College on such persons properly selected to receive such honor.

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Reprint requests should be directed to the author.

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FROM THE EDITOR'S DESK

A LOOK AT DENTISTRY IN 1986

It is clear that dentistry is currently going through a transformation. Opinions vary greatly among dentists on what is happening and where the profession is going. The future seems ripe with opportunity, yet fraught with many problems. Will coming changes produce more and better dental services for the American public or will the quality of dental care be downgraded? Let us briefly take stock of where we are.

There are many dentists who are wringing their hands over changes that have taken place. They decry the decline in professionalism and ethical standards, the increasing number of individual dentists who advertise and the oversupply of dentists with the resulting busyness problem. They worry about how the profession is splintering into groups who go their separate ways and how the ADA membership is declining. The cost and availability of professional liability insurance is becoming a prime concern in all of the health professions.

We have been so successful with our prevention programs that we have literally put some dentists out of business. The state and federal governments and the business world are clamoring for containment of health care costs. People with MBA degrees are replacing physicians as directors of health service organizations. Corporate medicine is a reality. These are all

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factors that are greatly affecting the dental profession at this time.

One of our main problems is that nearly 50% of the dentists in the country are under age 45 and many of them apparently have little interest in belonging to organized dentistry. It is not known whether this has occurred because they have no desire to be professional colleagues or whether the activities and services of the ADA are deemed to be not of sufficient value to them. Perhaps they haven't been invited to membership. Whatever is the case, dentistry needs to involve these dentists into the affairs of the profession and somehow they need to perceive that it is *their* profession, too. At this time the ADA is in the midst of a reorganization to better serve the changing needs of the profession.

On the positive side, there is an increasing demand for dental services. The public has become much more conscious of good dental health and appearance, as witnessed by the sudden tremendous interest in bonding procedures. Dentistry is a highly respected profession that has earned the trust and confidence of the public. The edentulous rate has been significantly reduced as older people enjoy better dental care. The wide availability of dental insurance benefits has made it possible to greatly increase the amount of dental services provided to the public.

There is no doubt that dentistry is evolving in many ways. New alternate delivery systems are being created and only time can tell as to whether this will benefit the public. Female dentists will soon number over 20% of the total number of dentists in the country. The pendulum of too-many-dentists will swing back and may produce a shortage of dentists by the year 2000, as fewer dentists are graduated.

It seems that the future of the dental profession is secure and its opportunities are great, but there are significant changes going on now and many more to come. The profession must find new ways to work with these changes. We must adapt.

This is the challenge in 1986.

Keith P. Blair

GEORGE C. PAFFENBARGER'S NAME INSCRIBED ON THE MACE

Citation presented by Gordon H. Rovelstad

Special Recognition is given by the American College of Dentists to Dr. George C. Paffenbarger. At this time, it is officially recognized that the name of George Corbly Paffenbarger be inscribed on the Mace of the College thereby joining 19 distinguished men who have been previously honored by the College for their noble and constructive deeds and merit the distinction of being listed among the immortals of dentistry, such as Pierre Fauchard, Horace Hayden, Chapin Harris, and G. V. Black.

Dr. Paffenbarger has been named to this honor by the College in recognition of his more than 50 years of service and dedication to the improvement of dental care through materials research, education and the Dental Specification and Certification Program.

Since 1929, Dr. Paffenbarger served at the National Bureau of Standards where, under his guidance, numerous advancements in dentistry were made. He was given a leave of absence from 1942 to 1946 to serve in the Dental Corps of the United States Navy at the Naval Medical Supply Depot in Brooklyn, New York. Dr. Paffenbarger has since advanced to the rank of Rear Admiral in the U. S. Naval Reserve.

Most meaningful to the delivery of quality dental care has been Dr. Paffenbarger's dedication to developing both nationally and internationally an effective Specification and Certification Program. More than any material or equipment, this program has been responsible for improved dental treatment because it assures both the dentist and patient that items used are both serviceable and safe. Without this certification each patient would in reality be subject to clinical experimentation as dentists try various materials.

Dr. Paffenbarger graduated from The College of Dentistry, Ohio State University in 1924 with honors. After graduation, Dr. Paffenbarger was associated with his father in the practice of dentistry in McArthur, Ohio.

Following this, he was an extern at the Palama Settlement Clinic in Honolulu, Hawaii and then instructor in the College of Dentistry, Ohio State University. He became a Research Associate at the American Dental Association in 1929. In 1957, Dr. Paffenbarger was Prelector in Dentistry on the Faculty of Medicine from St. Andrews University in Scotland. He holds an honorary Doctor of Science degree from Ohio State University and in 1961 was awarded an Honorary Masters of Dental Science degree at the time he was a visiting professor in dentistry at Nihon University in Tokyo. In 1972, the President of Mexico presented him with the International Miller Prize, which is awarded every five years and was established in 1908 by the Federation Dentaire Internationale. In the science of dental materials, Dr. Paffenbarger is considered a world authority as his published reports have been quoted in practically every foreign dental journal.

He is co-author of a book with Wilmer Souder entitled "The Physical Properties of Dental Materials." He is or has been consultant in dental research to the United States Public Health Service, the Navy and the Army Dental Services. He is a member of the American Dental Association, the Federation Dentaire Internationale, the Japan Dental Association, various German, French, Argentine, British and domestic dental societies, and a Fellow of the Washington Academy of Sciences, the American College of Dentists, the New York Academy

George C. Paffenbarger

of Dentistry, and the American Association for the Advancement of Science. In 1954, he was President of the International Association for Dental Research. He is also a member of Sigma Xi, Omicron Kappa Upsilon, and Xi Psi Phi.

Dr. Paffenbarger is a member of the William J. Gies Foundation for the Advancement of Dentistry and served as its president from 1967 to 1984.

Dr. Paffenbarger was honored with the Distinguished Service Award of the American Dental Association in 1982. It is for outstanding service, worldwide recognition, and his outstanding scientific contributions, which are noble and constructive for the health of mankind, that Dr. Paffenbarger is being honored by the American College of Dentists.

Dr. Paffenbarger, it is an honor for the College to be identified with the names of the 19 men of high and noble deed inscribed on the Mace. Your name is now among those 20. Your deeds shall continue to inspire and benefit mankind. You have left indestructable footprints on the sands of time. △

GIES AWARD TO ALLEN ANTHONY COPPING

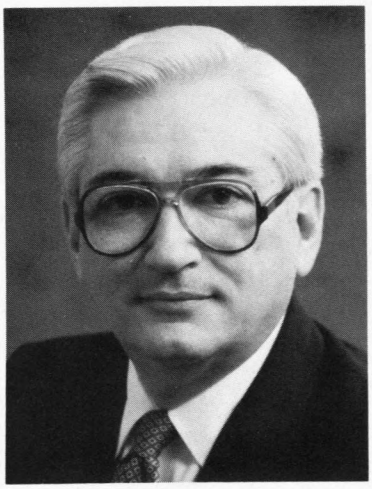
Citation Presented by Regent Robert C. Coker

The William John Gies Award was established by the American College of Dentists in 1939 in order to recognize Fellows of the College for outstanding service in dentistry and its allied fields. This award honors Dr. Gies not only for his outstanding contributions to all facets of the profession of dentistry, but it also serves as an index of appreciation and esteem for those Fellows of the College whose works have merited exceptional recognition. There have been 60 distinguished Fellows of the College honored by this Award. These 60 Fellows represent the most noble and dedicated among us and personify professionalism in the finest form.

The William John Gies Award for 1985 is presented to Dr. Allen Anthony Copping, President, Louisiana State University System.

Dr. Copping completed his predental education at Loyola University of the South, New Orleans, and then went on to graduate from The Loyola University of the South with a Doctor of Dental Surgery in 1949. He completed an internship at the National Naval Medical Center, Bethesda, 1950, and served with the Navy as a dental officer until 1954. He then returned to New Orleans where he entered into private practice.

Dr. Copping joined the faculty at Loyola University Dental School in 1956, where he participated part-time in the Department of Dental Anatomy. Having become involved as visiting dental surgeon, lecturer, course director and coordinator of dental education at the Charity Hospital in New Orleans, he became senior visiting dentist of the medical staff there in 1973, and Professor of the Department of Fixed Prosthodontics at Louisiana State University School of Dentistry in 1971, positions which he still holds. He was appointed Chancellor of Louisiana State University in June 1974, President-Elect of the Louisiana State University system in 1984, and President of Louisiana State University system in March of 1985.



Allen A. Copping

Dr. Copping has been recognized with numerous honors. He was elected to the Omicron Delta Kappa, National Leadership Fraternity of 1983, Louisiana State University System faculty and administration inductee in 1983; Al Borish Distinguished Service Award of the Academy of General Dentistry in 1977. He is a Fellow of the International College of Dentists, Fellow of the American College of Dentists, Fellow of the Academy of General Dentistry, member of the Blue Key National Honor Society, and the Omicron Kappa Upsilon Honorary Scholastic Society. He is a member of the C. Victor Vignes Odontological Honorary Dental Society.

Dr. Copping has held positions as President of the Advisory Board of the Louisiana State Health and Human Resources Administration from 1973–1980, Chairman of the Governor's Ad Hoc Committee on Medical Education in Louisiana from 1973–1977, Dean of the Louisiana State University School of Dentistry from 1973–74, Associate Dean of the Louisiana State University School of Dentistry from 1971–73, and Director of Continuing Education at LSU from 1968–75. He was National Chairman of the Council on Continuing Education of the Academy of General Dentistry from 1971–76, and Chairman of the Board of Administrators, Charity Hospital from 1972–73, a board which he served from 1964. He also was Chairman of the Long Range Planning Committee for Charity Hospital of New Orleans in 1969.

Community activities that have been identified with Dr. Copping includes Chairman of the United Way for Greater New Orleans University and College's Division, Chairman of the Louisiana Heart Association, Chairman of the Committee on Dental Education for the Louisiana Dental Association and Delegate from Louisiana for the American Dental Association. He was an NCAA faculty representative for the Sugar Bowl Executive Committee in 1979. Dr. Copping was the founder and first editor of the official New Orleans Dental Association newpaper, NODA.

Dr. Copping has published a number of articles in the professional literature addressing the subject of dental education and continuing education as well as a program for training of dental educators.

Mr. President, it is with great honor and pleasure that I present to you Dr. Allen A. Copping for the William John Gies Award of the American College of Dentists. △

AWARD OF MERIT TO DELMAR J. STAUFFER

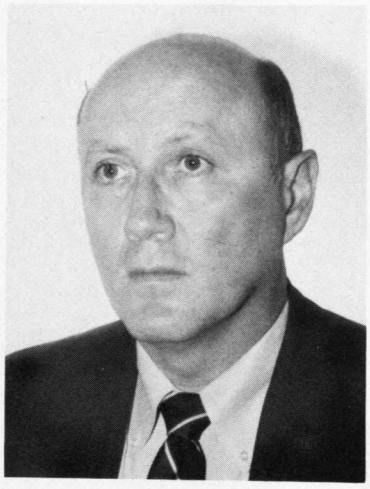
Citation Presented by Regent Robert F. Doerr

The supporting services of dentistry are universally recognized as being very important to the mission of the professional. From these derive many of the elements which enhance the effectiveness of dentistry for the delivery of care and the management of its own affairs. The Award of Merit of the American College of Dentists was established by the Board of Regents on February 8, 1959 in order to recognize unusual contributions made toward the advancement of the profession of dentistry and its service to humanity by persons who work with the profession in common purpose but are not Fellows of the College.

Mr. Delmar J. Stauffer has been selected for the Award of Merit for 1985. Mr. Stauffer is Assistant Executive Director of the American Dental Association, Division of Health Affairs.

Mr. Stauffer joined the staff of the American Dental Association in 1971 as Director of the Bureau of Dental Health Education and as Director of the Association's Anti-Smoking Education Campaign. Since then, he has distinguished himself as a professional health educator and skilled administrator on behalf of the dental profession. He brought to the Association a background in health education beginning with the Bachelor of Science Degree in Health Education from the University of Illinois and later a Master of Science Degree in Health Education from the University of Illinois.

Mr. Stauffer had three years of classroom experience at the elementary and secondary school



Delmar J. Stauffer

levels before joining the staff of the American Medical Association in 1970 as the school health education consultant with the AMA's Bureau of Health Education. He was responsible for developing materials for use with school health programs; writing and producing the slide presentation and script for in-service teacher workshops; developing and implementing a school-health education workshop in conjunction with the Cook County (Illinois) Board of Health, and a continuing education program designed for suburban Cook County secondary health and science teachers. During that time, he was also assistant secretary to the AMA/ACHA Liaison Committee on College Health until joining the ADA staff in 1971.

From 1971 to 1977, Mr. Stauffer was director of health education for the ADA. He became the Association's primary liaison contact with a number of national public health and voluntary and professional health organizations. He supervised the Bureau's sponsorship of a national health education conference in conjunction with the Association's 1975 annual session.

Under his guidance, the Bureau of Dental Health Education became widely recognized for production of award-winning health education materials. Mr. Stauffer was promoted to Assistant Executive Director, Division of Health Affairs of the ADA in 1978.

Mr. Stauffer has published a number of papers addressing school health programs as well as dental health education materials development. He is a member of the American College Health Association, American Public Health Association, American School Health Association, Society for Public Health Education, and the Illinois Society for Public Health Education. He has served in the capacity as Chairman, Section on School Health Programs, the American College Health Association, as well as the Section on Dental Health for the American School Health Association.

Mr. Stauffer's numerous contributions to the profession of dentistry and his extensive responsibilities have reflected his competence and dedication to the dental profession and its goals. He is highly respected by his peers, both inside and outside the profession.

Mr. President, it is a pleasure and an honor for me to present Mr. Delmar J. Stauffer to you for the Award of Merit. △

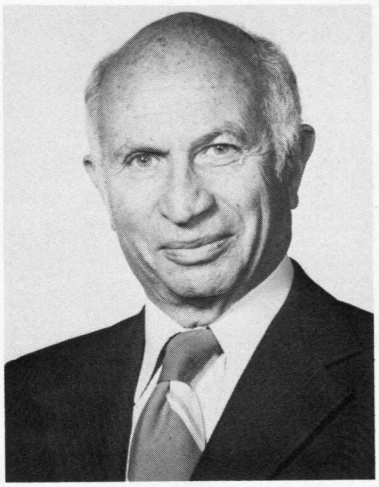
HONORARY FELLOWSHIP FOR GERHARD M. BRAUER

Citation Presented by Regent Albert Wasserman

The College from time to time considers it a privilege to confer Honorary Fellowship on persons who, though not holding a dental degree, have contributed to the advancement of dentistry and to its service to the public. These contributions may have been made in many areas—education, research, administration, public service, public health, medicine and many others. To acknowledge such leadership and contributions, the College confers Honorary Fellowship upon those selected.

Honorary Fellowship in the American College of Dentists this year is conferred upon Gerhard M. Brauer, Ph.D., Research Chemist, Dental and Medical Materials Section of the National Bureau of Standards, Department of Commerce, where he has served since 1950.

Dr. Brauer is a past president of the Washington Section and the Dental Materials Group of the International Association for Dental Research, the Chemical Society of Washington, and the Washington Professional Chapter of Alpha Chi Sigma. He is a past member of the Biomaterials Advisory Committee of the National Institutes of Health. He is currently a Councilor of the American Chemical Society, member of the Specifications Committee on Dental Materials and Devices of the American National Standards Institute, and a member of ASTM committees.



Gerhard M. Brauer

Dr. Brauer is author of over 110 scientific publications and has written eight chapters for advanced treatises on dental materials. He is the recipient of the Souder Award of the International Association for Dental Research, the U.S. Department of Commerce Gold and Silver Medals, and was the U. S. Senior Scientist Awardee of the Humboldt Foundation. He also received the Charles Gordon Award of the Chemical Society of Washington and the "Most Honored Scientist" award of ASTM Committee F-4.

Dr. Brauer graduated from the University of Minnesota in 1941; he completed a Master's Degree at the University of North Carolina in 1948; and, a Doctor of Science Degree at the University of North Carolina with his degree in polymer chemistry. Having lost his mother and father in a German concentration camp, Dr. Brauer was rescued by two uncles. He was taken to the United States. One of the two uncles was a professor of mathematics at Harvard and was one of the country's most distinguished mathematicians and was the recipient of the President's Medal. The other was a professor of mathematics at the University of Minnesota. Jerry lived with him during his high school days and when he achieved his degree at the University of Minnesota. Then he moved to North Carolina, where he became a professor of mathematics. It was while he was at the University of North Carolina that he completed his advanced studies in polymer chemistry.

Dr. Brauer's numerous publications have been accepted worldwide as the standards in polymer chemistry affecting those areas of materials that are widely used in both medicine and dentistry. He has held numerous positions in professional societies. Most recently, he served as Chairman of the Meeting Arrangements and Special Events Committee for the Chemical Society of Washington in 1984. Dr. Brauer has made many contributions to the profession and is highly regarded worldwide for his expertise in Polymer Chemistry.

Mr. President, it is an honor for me to present Dr. Gerhard M. Brauer to you for Honorary Membership in the American College of Dentists. △

FELLOWSHIPS CONFERRED

Fellowships in the American College of Dentists were conferred upon the following at the Annual Convocation in San Francisco, California on November 2, 1985

NEW FELLOWS

J. DAVID ALLEN
Decatur, Georgia

BRIAN ALPERT
Louisville, Kentucky

JAMES AMPHLETT
Seattle, Washington

ALLEN W. ANDERSON
Chicago, Illinois

JAMES G. ANDERSON, JR.
Beckley, West Virginia

MARC B. APPELBAUM
Morristown, New Jersey

JOSEPH P. ARISCO
Port Arthur, Texas

STERGEOS G. ARVANTIDES
Baldwinsville, New York

M. BASHAR BAKDASH
Minneapolis, Minnesota

FRANK E. BARBEE
Pasadena, California

CHARLES E. BARR
New York, New York

HOWARD A. BATES
Augusta, Maine

RICHARD F. BAUERFEIND
El Cajon, California

WILLIAM A. BEALL
Luverne, Alabama

JOSEPH R. BEARD
Anderson, South Carolina

JOSEPH W. BERNIER
Washington, D.C.

CLARENCE F. BIDDIX
Charlotte, North Carolina

EUGENE S. BLAIR
Elgin, Illinois

LAWRENCE W. BLANK
New York, New York

JAMES S. BLEECKER
San Marino, California

MARVIN J. BLOCK
Chapel Hill, North Carolina

CLARENCE WILLIAM BLOSSER
Boca Raton, Florida

LESTER M. BREEN
Atlanta, Georgia

JAMES E. BREWSTER
San Francisco, California

JOHN C. BROWN
Claremont, California

W. DAVID BRUNSON, JR.
Chapel Hill, North Carolina

RONALD P. BURAKOFF
Brooklyn, New York

NORBERT J. BURZYNSKI
Louisville, Kentucky

WILLIAM F. CAGE
Phoenix, Arizona

JAMES M. CAHILL
Coronado, California

WILLIAM R. CAMPBELL
Stockton, California

JOHN F. CARABELLO
Abington, Pennsylvania

GERALD R. CARRIER
New Bedford, Massachusetts

JOHN S. CAVALLARO
Brooklyn, New York

PETER C. CHIARAVALLI
Lansing, Michigan

ANTHONY J. CHIBBARO
Fort Lee, New Jersey

JOE W. CHRISTINA
Corpus Christi, Texas

VICKYANN CHROBAK
Elmwood Park, Illinois

CONRAD L. CLOETTA
Dallas, Texas

JOHN D. COCHRAN
San Antonio, Texas

DANIEL D. COHEN
Harrisburg, Pennsylvania

STANLEY R. COHEN
Revere, Massachusetts

DONALD E. COMPAAN
Seattle, Washington

JAMES C. CONWAY
Pittsburgh, Pennsylvania

NOBLE P. COOPER
Columbia, South Carolina

ALEXANDER J. CORSAIR
Rockville Center, New York

LLOYD L. COTTINGHAM
San Diego, California

JAMES A. COTTONE
San Antonio, Texas

FELIX C. CRAWFORD
Plainview, Texas

MICHAEL J. CRIPTON
Moncton, Canada

F. BLAISE CURCIO
Hackensack, New Jersey

THOMAS M. A. CURRY
Edmonton, Canada

ROGER T. CZARNECKI
Williamsville, New York

JACK G. DALE
Toronto, Canada

WILBUR M. DAVIS, JR.
Orlando, Florida

CARLOS E. DEL RIO
San Antonio, Texas

MERVYN DIXON
Ft. Lauderdale, Florida

HAROLD F. DOENCH
Dayton, Ohio

ROBERT N. DOW
Springfield, Oregon

CECELIA L. DOWS
Short Hills, New Jersey

HUGH N. DUHANEY
Washington, D.C.

MICHAEL W. EASLEY
Columbus, Ohio

MOHAMED EL DEEB
Minneapolis, Minnesota

PAUL D. ELEAZER
Albany, Georgia

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Denver, Colorado

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Brooklyn, New York

EDWARD P. EPSTEIN
Rego Park, New York

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Minneapolis, Minnesota

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Binghamton, New York

WILLIAM M. FEAGANS
Buffalo, New York

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Vienna, Virginia

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Denver, Colorado

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Reno, Nevada

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Milwaukee, Wisconsin

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Philadelphia, Pennsylvania

WESLEY HALPERT
New York, New York

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DAVID JAMES HARRIS
South Bend, Indiana

RONALD K. HARRIS
Indianapolis, Indiana

GARY ROTHLAND HARTWELL
Ft. Gordon, Georgia

DARRELL V. HAWKINS
Houston, Texas

ALVIN W. HELLER
Lake Grove, New York

JOHN P. HELLWEGE
Philadelphia, Pennsylvania

GLENN A. HEMINGWAY
Santa Barbara, California

H. GARLAND HERSHEY, JR.
Chapel Hill, North Carolina

RICHARD A. HESBY
Chicago, Illinois

FRENCH E. HICKMAN
Midwest City, Oklahoma

M. LAMAR HICKS
Bethesda, Maryland

WILLIAM E. HIRSCHFELD
Arlington, Virginia

HERBERT HOFFSTEIN
New York, New York

WILLIAM F. HOHLT
Indianapolis, Indiana

FLOYD A. HOLSTEIN
Pittsburgh, Pennsylvania

ROBERT R. HOOPES
Wilmington, Delaware

GLENN L. HOUGH
Pittsburg, Kansas

CHARLES S. HUTTULA
Camp Lejeune, North Carolina

IRVING JACKS
Huntington Park, California

CHARLES W. JENSEN, JR.
Greenwich, Connecticut

MARK E. JENSEN
Iowa City, Iowa

BILLY JOHNSON
Fort Sam Houston, Texas

DANA J. JOHNSON
Boulder, Colorado

JOSEPH O. JOHNSON
Philadelphia, Pennsylvania

JERRY E. JOHNSON
Edina, Minnesota

LYMAN W. JOHNSON
Rutland, Vermont

JAMES M. JONES
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ROSS E. LONG, JR.
Lancaster, Pennsylvania

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ARTHUR MARKS
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BURTON C. ZWIBEL
Falls Church, Virginia

POSTHUMOUSLY:
SAVINO F. SARACINO
New York, New York

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October 1984–November 1985

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Cheyenne, Wyoming

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Mt. Airy, North Carolina

*JOHN G. BALL
Eldorado, Arkansas

SHERWOOD F. BENHART
Montgomery, Alabama

*EUGENE BODMER
Hinsdale, Illinois

*HARRY G. BOLKS
Sioux City, Iowa

*ARNO M. BOMMER
Revere, Massachusetts

*JAMES L. BRADLEY
Springfield, Illinois

ANGELO C. CACCIATORE
Northport, New York

*VINCENT D. CALLAHAN
Brooklyn, New York

VELMA CHILD
Crowne Pt., Indiana

*AUSTIN J. CLARY
Sun City Center, Florida

*W. BUCKEY CLEMSON
Gibson Island, Maryland

*HENRY D. COSSITT
Sylvania, Ohio

*RUDOLPH DELTON
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Southgate, California

ARTHUR DUNN
Wilmette, Illinois

*HANS H. FREIHOFER
Zurich, Switzerland

*ROBERT GLUCK
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Delanco, New Jersey

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Goteborg, Sweden

LYONEL S. HILDES
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THE HONORABLE LISTER HILL
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*WILLIAM DOUGLAS JAMES
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Memphis, Tennessee

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Shreveport, Louisiana

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West Palm Beach, Florida

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*A. HARRY OSTROW
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FACULTY MOBILITY IN ACADEMIC DENTISTRY

Robert N. Moore*

Faculty employment and mobility in higher education, to a large extent, are dependent upon the economic factors and university enrollment trends prevailing at the time. In contrast to other health science professions where there have been no national surveys of the academic marketplace, dentistry has had some investigations of full-time academicians.[1-8] These studies have, however, been conducted before the large expansion of dental education in the 1970s and are not germane to the contemporary climate of economic uncertainty and retrenchment in dental education.[9] It will be the purpose of this article to present recent data on faculty mobility and factors affecting it as derived from a national survey of full- and part-time dental educators.

Methods

The data presented in this article is taken from a 174 item questionnaire mailed in 1982 to one-fourth (3,142) of the individuals listed in the Directory of Dental and Allied Dental Educators published by the American Association of Dental Schools. The questionnaire dealt with the issues of the 1980s, the academic marketplace, and part-time faculty. The questionnaire, the details of its return, and analysis of a demographic profile of those responding has been published previously.[10]

In any study, the percentage of questionnaires which is completed and returned is a critical factor in establishing the validity of the data base from which statistical profiles are made. The acceptable percentage of response for a specific research project with a specific group depends on the differences between responders and nonresponders and on the subject matter of the study. If there is little difference between these two groups, a smaller percentage of responses is more acceptable than if the difference is large. The nonresponse bias of dentists has been investigated by Hovland *et al.*[11] and their results indicate that dentists may be considered to have sufficiently similar educations, incomes, and interests to be considered a homogeneous group.

In the present study a return of 30.5% was achieved. Of the 3,142 initial questionnaires, 55 were returned as undeliverable, 11 were returned by the addressees who stated that they were no longer in dental education, and 12 were returned after the cut-off date. As the data was being processed, it was noticed that there were no responses from one private and three public schools. Two of the schools were in the South and two were in the West. Three individuals in each school who were sent questionnaires were contacted, and none of them had ever received a questionnaire. Therefore, it was assumed that the 166 questionnaires were lost in the mail. Thus the actual number of questionnaires assumed to have been received by the current dental faculty was reduced to 2,910. Of these, 887 were completed and returned, giving a response of 30.5%. Since not all people answered all questions, the "N" values as reported in the tables vary. Where appropriate, Student's t-test and chi square were used for all statistical evaluations.

In view of the size of the sample, its homogeneity, and the lack of any statistical bias as to geographic, institutional, or departmental factors, this response was deemed to be of sufficient magnitude to allow valid statistical analysis and projection of the results to the total population of dental educators. Most likely a greater percentage response could have been achieved by using a much shorter questionnaire, but the homogeneity of the sample facilitated obtaining as much information as possible on these complex issues.

Classification of dental schools as public or private was based on the type of institutional financial support as published in the Annual Report of Dental Education of the

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American Dental Association.[12] Those schools which are traditionally considered to be private, but currently are receiving some public funding, were included in the list of private schools. Classification of dental schools by geographic area and the definition of full-time faculty were based on information provided by the American Association of Dental Schools.[10]

Results

Within the Past Two Years, Have You: (Table 1)

Considered Resigning Your Position? Nearly half of the dental educators had at least considered resignation. There were no statistically significant differences between public and private schools in general or by type of faculty appointment. Basic scientists in private schools least frequently considered resignation, a difference which was significant ($p<0.01$) when compared with the clinical faculty.

Received an Offer for Another Position? Fewer faculty members (40%) had actually received an offer for another position. Faculty in public schools had more frequently received offers. As would be expected, part-time clinical faculty had received the fewest ($p<0.001$) number of offers when compared to their full-time colleagues. Faculty members who held joint appointments in both basic science and clinical departments most frequently received offers for another position. In the public schools, this increase was statistically significant ($p<0.01$) when they were compared to the basic scientists.

Sought Another Position? Less than half of those who reported having received an offer for another position had actually sought one. Faculty at public schools had sought another position almost twice as frequently as their private school colleagues. This was especially true of those faculty members with joint appointments at public schools.

In Finding Your Present Position, Which Method(s) Did You Use? (Table 2)

Contacted Directly by Potential Employer: By far the most frequently used method (68%) of obtaining a position was to be contacted directly by the employer. Very little difference between the various types of appointment was evident.

Letter Directly to Administrators: The direct approach was used by approximately 20% of the faculty and no statistically significant differences were observed between the various types of faculty appointments.

Responded to Journal Advertisement: Five percent of all the dental educators answering the question found their present position by using this method. Because many of the faculty were appointed before Affirmative Action required that positions be advertised, it is not possible to quantitate the true effects of journal advertisements. The faculty members with joint appointments most frequently reported obtaining their positions in this manner, while part-time clinical faculty and basic scientists used it the least.

Advertised in Journal: Approximately 3% of the sample indicated that they had advertised their services in a journal. This method was least commonly used by the part-time clinical faculty and by those full-time faculty with joint appointments. This method was used by 12.5% of the basic science faculty in private schools compared to only 2.6% in public schools ($p<0.05$).

Placement Service at Meeting: This method of seeking employment is used in the basic sciences, but is very uncommon in clinical disciplines. The data reflect this situation in that a small percentage of the basic science faculty obtained their positions this way while almost no clinicians or faculty with joint appointments had used this approach.

Consulted Private Placement Service: Of all the methods of obtaining employment which were listed, this was the most infrequently used.

Table 1. Within the Past Two Years Have You

	Considered Resigning?			Had An Offer?			Sought Another Position?		
	N	Yes	No	N	Yes	No	N	Yes	No
Total Sample	858	45.3%	54.7%	785	39.5%	60.5%	778	17.1%	82.9%
Public Schools	550	44.7	55.3	511	42.2	57.7	503	20.3	79.3
Clinical, F-T	260	43.8	56.2	249	51.8	48.2	242	22.7	77.3
Clinical, P-T	149	46.3	53.7	133	21.8	78.2	132	6.1	93.9
Science	74	43.2	56.8	72	37.5	62.5	73	24.7	75.3
Joint	42	45.2	54.8	38	63.2	36.8	36	36.1	63.9
Private Schools	307	46.3	53.7	273	34.1	65.9	274	11.3	88.7
Clinical, F-T	102	46.1	53.9	89	49.4	50.6	88	18.1	81.8
Clinical, P-T	116	51.7	41.3	101	12.9	87.1	103	5.8	94.2
Science	48	37.5	62.5	44	38.6	61.4	45	17.8	82.2
Joint	25	40.0	60.0	24	54.2	45.8	24	4.2	95.8

If You Were to Seek Another Position in Academic Dentistry, What Importance Would You Give to the Following? (Table 3)

Financial Firmness of Position: The majority (53%) of dental educators considered the security of their salaries to be essential. Faculty in public schools were significantly more concerned with the financial security of their position than were the faculty in private schools. This was especially true of the full-time clinical faculty. As would be expected the part-time clinical faculty in both public and private schools were significantly ($p<0.001$) less concerned with the financial firmness of the position than were the full-time faculty. The part-time clinical faculty in private schools were the least concerned of any group.

Geographic Area: On the average, location was important or essential to 85.9% of dental educators. In the public schools it was significantly ($p<0.001$) more important to the full-time clinical faculty than to those with a part-time appointment.

Tenure: To be granted tenure was less important than the financial considerations. Faculty in public schools, with the exception of the part-time clinical faculty, considered tenure to be significantly more important than did faculty in private schools. Part-time clinical faculty members in public schools were similar to their private school colleagues and thus were significantly ($p<0.01$) less concerned with tenure than were the full-time clinical faculty.

Better Support from Chairperson/Dean: Most faculty members indicated that better administrative support would be at least important and often essential if they were to seek another position. In the public schools, basic scientists and those with joint appointments most often considered it essential, while in the private schools, the clinicians were the most frequently concerned.

25% Higher Salary: A large in-

Table 2. In Finding Your Present Position Which Methods Did You Use?

	N	Contacted Directly		Letter To Administrator		Responded to Advertisement	
		Yes	No	Yes	No	Yes	No
Total Sample	858	67.7%	32.3%	19.6%	80.4%	5.0%	95.0%
Public Schools	549	68.1	31.9	19.6	80.4	5.8	94.2
Clinical, F-T	260	67.7	32.3	22.6	77.4	7.3	92.7
Clinical, P-T	146	67.8	32.2	17.1	82.9	2.7	97.3
Science	76	72.4	27.6	17.1	82.9	1.3	98.7
Joint	42	71.4	28.6	16.7	83.3	14.3	85.7
Private Schools	308	66.9	33.1	19.5	80.5	3.6	96.4
Clinical, F-T	105	61.9	38.1	23.8	76.2	4.8	95.2
Clinical, P-T	115	68.7	31.3	20.9	79.1	0.9	99.1
Science	48	70.8	29.2	10.4	89.6	4.2	95.8
Joint	24	70.8	29.2	16.7	83.3	8.3	91.7

	Advertised in Journal		Placement Service At Meeting		Private Placement Service	
Total Sample	2.9%	97.1%	0.7%	99.3%	0.4%	99.6%
Public Schools	2.9	97.1	0.9	99.1	0.4	99.6
Clinical, F-T	4.2	95.8	0.4	99.6	0	100
Clinical, P-T	1.4	98.6	0.7	99.3	0.7	99.3
Science	2.6	97.4	2.6	97.4	0	100
Joint	2.4	97.6	0	100	2.4	97.6
Private Schools	2.9	97.1	0.3	99.7	0.3	99.7
Clinical, F-T	2.9	97.1	0	100	0	100
Clinical, P-T	0	100	0	100	0	100
Science	12.5	87.5	2.1	97.9	2.1	97.9
Joint	0	100	0	100	0	100

Table 3. If You Were to Seek Another Position in Academic Dentistry, What Importance Would You Give to the Following?

		Financial Firmness of Position				Geographic Area			
	N	Essential	Important	Not Important	No Opinion	Essential	Important	Not Important	No Opinion
Total Sample	845	53.3%	37.6%	5.1%	4.0%	39.1%	47.2%	9.9%	3.8%
Public Schools	545	57.9	36.3	2.9	2.9	39.2	48.5	9.0	3.3
Clinical, F-T	263	61.6	34.6	2.3	1.5	45.6	44.5	8.7	1.1
Clinical, P-T	143	44.8	43.4	4.9	7.0	30.3	51.4	9.2	9.2
Science	73	67.1	28.8	2.7	1.4	42.5	45.2	9.6	2.7
Joint	42	61.9	33.3	2.4	2.4	28.6	64.3	7.1	0
Private Schools	299	45.2	39.8	9.0	6.1	39.2	44.5	11.6	4.7
Clinical, F-T	102	48.0	42.2	8.8	1.0	44.9	43.9	9.3	1.9
Clinical, P-T	112	31.3	43.8	12.5	12.5	40.4	40.4	9.2	10.1
Science	47	66.0	31.9	0	2.1	25.5	55.3	17.0	2.1
Joint	25	56.0	32.0	8.0	4.0	32.0	52.0	16.0	0
		Tenure				Better Support From Chairperson or Dean			
Total Sample		42.0%	36.7%	16.8%	4.5%	37.1%	44.2%	11.3%	7.4%
Public Schools		46.8	37.1	13.0	3.1	37.1	45.8	9.6	7.6
Clinical, F-T		49.0	34.5	14.6	1.9	39.2	41.9	12.3	6.5
Clinical, P-T		33.1	45.5	15.2	6.2	28.5	55.6	4.2	11.8
Science		58.9	31.5	6.8	2.7	42.5	43.8	9.6	4.1
Joint		59.5	31.0	7.1	2.4	41.5	41.5	12.2	4.9
Private Schools		33.2	35.9	23.7	7.1	37.0	41.4	14.5	7.1
Clinical, F-T		32.7	33.7	28.7	5.0	44.1	33.3	18.6	3.9
Clinical, P-T		27.5	39.4	22.0	11.0	38.2	41.8	8.2	11.8
Science		44.7	31.9	17.0	6.4	27.7	46.8	23.4	2.1
Joint		32.0	36.0	28.0	4.0	28.0	52.0	12.0	8.0
		25% Higher Salary				Better Interdepartmental Relationships			
		Essential	Important	Not Important	No Opinion	Essential	Important	Not Important	No Opinion
Total Sample		30.7%	49.9%	15.2%	4.2%	29.5%	57.6%	8.3%	4.6%
Public Schools		31.2	50.3	15.2	3.3	29.7	59.1	6.8	4.1
Clinical, F-T		30.8	55.9	12.2	1.1	26.7	63.4	6.9	3.1
Clinical, P-T		35.8	40.5	15.5	8.1	29.6	52.8	7.7	9.9
Science		27.0	51.4	18.9	2.7	32.9	61.6	5.4	0
Joint		28.6	45.2	23.8	2.4	35.7	54.8	4.8	4.8
Private Schools		29.8	49.0	15.2	6.0	29.3	54.5	11.1	5.1
Clinical, F-T		30.5	55.2	12.4	1.9	37.9	50.5	11.7	0
Clinical, P-T		30.4	44.6	13.4	11.6	28.2	50.9	8.2	12.7
Science		21.3	53.2	25.5	0	19.6	65.2	15.2	0
Joint		33.3	41.7	20.8	4.2	28.0	60.0	8.0	4.0

crease in their salary was important to one-half of the dental educators in the sample, but was essential to less than one third of them. Faculty at public and private dental schools had almost identical responses with the full-time clinical faculty most frequently indicating its importance.

Interdepartmental Relationships: Although considered less essential than better administrative support, good relationships between departments were important to the majority of dental faculty. Basic science faculty members in public schools, on the average, considered better relationships to be more important than did their private school colleagues. Part-time clinical faculty were less concerned about the issue than were full-time clinical faculty, the difference being statistically significant ($p<0.01$) in the private schools.

Other Factors: The following items were judged to be of moderate importance by the total sample and are listed in decreasing order:

Better Physical Facilities
Better Advancement Potential
Availability of Cultural Opportunities
Higher Rank (if applicable)
Better Community
Status in Department
Better Colleagues
Better Housing
Better Students
More Time for Research
Better School for Children
Better Research Facilities
Less Pressure to Publish

The following items were judged to be not important by the total sample and are listed in decreasing order:

More Teaching Opportunity
Better Faculty Practice Plan
Availability of Religious Opportunity
More Prestigious School
Less Administrative Responsibility
Nearness to Relatives
More Administrative Responsibility
Dental School Program to Acquaint Family with Community
Less Class Room Teaching
Better Job for Spouse
Less Clinical Teaching

Discussion

Even in today's unstable economy nearly half of the dental educators had at least considered resigning their positions and 40% had actually received an offer for another position (Table 1). Less than half of those who had received an offer had actively sought one. This data supports the findings of Till,[4-7] Posnick,[8] and Casamassimo.[13]

Underlying this potential mobility is the apparent dissatisfaction of the dental educator with his or her present position. In an attempt to identify some of these problems and aid administrators in recruiting qualified faculty members, the dental educators in the sample were asked to indicate the importance of thirty financial, institutional, teaching, research, administrative, and personal factors if they were to seek another position in academic dentistry. While some of these factors are out of the control of the dean, others are negotiable and may make the difference between attracting or losing a good faculty member.

It is important to recognize that this survey was conducted in 1982. This was a time of national economic difficulty which was particularly acute in higher education. In these economic times it is not surprising that the financial firmness of the position would be, on the average, the most important consideration in seeking another position (Table 3). Geographic area was second and covered the gamut from the sun belt to returning home. These two items as well as a desire for a 25% higher salary are generally out of the dean's control. However, tenure, better support from administrators, interdepartmental relationships, and many of the moderately important items listed are definitely able to be positively influenced by the dean and chairpersons, and should be regarded as potent tools for recruiting and retaining quality dental educators. △

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FEMALE DENTISTS

A Factor in Determining the Available Future Dental Work Force

H. Barry Waldman*

The dental profession is undergoing any number of significant changes as it attempts to come to terms with the increasing numbers of practitioners and evolving forms of practice in an ever changing health service environment. While the rapid increase in the numbers and percent of women entering dental schools since the mid 1970's could be a significant component of this change, limited attention has been directed to female dentist work patterns and the impact on projections for the dental work force.

Yet, any effort to determine the availability of the female "dental work force" could be suspect. (Now that women increasingly are entering the dental profession in the United States, the term "manpower" would seem to be inappropriate and is viewed by some as being sexist). It is not that long ago, when the reaction to a discussion of female dentist work patterns could range from the decided negative view of wasted places in entering classes, to the positive prospect of decreasing competition and a counterbalance to an oversupply of dentists.

However, I have been "assured" by both female students and practitioners that they (and the profession) have matured sufficiently to discuss objectively what once were sensitive issues to women as they attempted to make the first inroads into the dental profession. As one female student at Stony Brook commented, "females shouldn't be expected to be carbon copies of their male counterparts. In fact, maybe male dentists can learn something from a woman's different perspective to help them adapt to *our* changing profession."

Numbers of dentists and practitioner activity

General overall national data on the number of available dentists, practitioner busyness or even number of patient visits per dentist per week provide only limited descriptions of developments within the profession—particularly for those local areas which are experiencing difficult economic and social changes. Nevertheless, the use of such data does permit a general review of evolving national patterns over long periods of time. For example:

1. nationally, since 1950, there has been more than a 40% increase in the number of active practitioners. The decrease in the dentist to population ratio between 1950 and 1970 has been reversed significantly since the mid 1970's. (Table I)
2. between 1967 and 1981 there has been a general progressive increase in the percent of practicing dentists who perceive that their offices are "not busy enough." (Table II)
3. between 1967 and 1983 the number of patient visits per week reported by dentists have remained relatively constant. (Table III)

Number of female dental students and practitioners

Between 1970 and 1984 the number of women in first year dental

Table I. Number of active dentists and number of active dentists per 100,000 population: 1950–1980. (1,2)

	Number of active dentists	Dentists per 100,000 population
1950	79,190	51.5
1965	95,990	49.0
1970	102,220	49.6
1975	112,020	52.2
1980	126,240	56.3
1982	132,010	56.6

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Table II. The percent of independent dental practitioners* who perceive their practice activity as "not busy" or "not busy enough": 1967-1981 (3)

	Percent
1967	13.8%
1970	18.9
1975	22.3
1977	21.3
1979	25.1
1981	34.8

*An independent dentist is an owner or partial owner of a private practice

school classes in the United States has increased from 94 to 1,369 (or a 1456% increase). During the same period, the percent of women in first year classes increased from 2.1% to 27.1%. (5,6) It is estimated that women will constitute 30% of entering dental school classes in the 1987-88 academic year. (7) In 1984, 1,063 women graduated from schools of dentistry—*which was equal to two-thirds of the total number of professionally active female dentists in the United States in 1976.* (8) By the year 2000, it is projected by the U.S. Department of Health and Human Services (HHS) that female practitioners will constitute 14.9% of the total dentist work force (24,440 practitioners). (Table IV) Because of the rapidly changing picture of dental admissions, it is possible that the 14.9% projection is conservative. For example,

1. projections by HHS of entering class sizes through the 1980's and 1990's may be too high.
2. projections by HHS of numbers of female students may be too low. (Table V)

Dental activities of female dentists

Estimates by the Health Resources and Services Administration of HHS (based on data from the American Dental Association) indicate different primary professional activity patterns for female and male dentists. As of December 1982:

1. approximately one half of female dentists were in clinical practice 30 or more hours per week—compared to approximately three quarters of male dentists.
2. 17.8% of female dentists were in clinical practice less than 30 hours per week—compared to 9.5% of male dentists.
3. 5.1% of female dentists were on the faculty or staff of dental schools—compared to 2.6% of male dentists.
4. 14.0% of female dentists were interns, residents or students—compared to 2.4% of male dentists. (The high percent of women in graduate training programs would reflect the recent high influx of female

Table III. Patients visits per week reported by solo practitioners (including visits to employed dental hygienists): 1967-1983 (3,4)

	All dentists	General Practitioners	Specialists
1967	75.1*		
1970	75.7*		
1974	74.5**		
1976	78.7	76.1	104.5
1979	79.7	75.9	110.3
1981	76.1	73.4	96.9
1983	76.5	72.4	102.1

* Represents the mean number of annual visits to all dentists divided by the mean number of weeks worked per year by all dentists—treated by dentist and all employees.

** Represents the mean number of patient visits per week for independent practitioners—treated by the dentist.

Table IV. Number of active dentists by gender, estimated 1982 and projected for selected years, 1985-2000 (7)

Year	Number of active dentists	Male dentists	Female dentists	Percent female of all dentists
1982	132,010	126,960	5,050	3.8%
1985	140,920	132,840	8,080	5.7
1990	151,320	137,810	13,510	8.9
1995	158,420	139,300	19,120	12.1
2000	164,180	139,740	24,440	14.9

students into dental schools compared to the limited number of current female practitioners.)

5. 25.1% of female dentists in clinical practice worked in practice less than 30 hours per week—compared to 10.9% of male dentists. (Table VI)

Practice and employment expectations of recent male and female dental graduates are not only different from one another, but they evolve from the expectations of students who graduated only a few years ago. For example, comparing the graduates from 1980 and 1984, there has been:

1. an increase in the number of female graduates and a decrease in number of male graduates who anticipate solo practice.
2. an increase in female and male graduates expecting partnership arrangements.
3. an increase in female graduates and a decrease in male graduates who anticipate employed arrangements.
4. a decrease in female and male graduates who anticipate teaching, research and administrative positions. (10,11)

In addition, there have been reports of some regional studies on the dental activities of female dentists. In 1984, Tillman and Horowitz (12), reported on the activities of female dentists who graduated between the years 1975 and 1981. Of the 73 respondents who completed school between 1977 and 1980, 23% were involved in dental activities less than 30 hours per week. In addition, one woman, who was on maternity leave at the time of the survey, was omitted from the study results.

Rosner (13), in a review of the career patterns of female and male dental graduates between 1966 and 1977 noted that, 37% of the female respondents and 5% of the male respondents reported that they worked between one and 3½ days a week.

The 1980 U.S. census (14) provides information on dentist earnings by gender for the year 1979. Female dentists reported earning 48.1% of the income of male dentists. (Female dentists between 25

Table V. Number of first year and graduating dental student by gender: projected and actual for academic years 1982-83 through 1999-2000 (7,9)

	(Report to the President and Congress) Projected number of first year students			Actual number of first year students		
	Total	Male	Female	Total	Male	Female
1982-83				5,667	4,677	990
1983-84	5,331	4,068	1,263	5,274	3,961	1,313
1984-85	5,171	3,868	1,303	5,047	3,678	1,369
1985-86	5,016	3,677	1,339			
1986-87	4,865	3,493	1,372			
				(Projection by AADS)*		
1987-88	4,719	3,317	1,402	4,300		
1988-89 through 1999-2000	4,719	3,317	1,402			
	Projected number of graduates			Actual number of graduates		
	Total	Male	Female	Total	Male	Female
1982-83				5,667	4,677	990
1983-84	5,571	4,473	1,098	5,337	4,274	1,063

*American Association of Dental Schools

Table VI. Primary dentist activity by gender: December 31, 1982 (7)

	Male		Female	
	Number	Percent	Number	Percent
Practicing dentist 30 + hrs/week	98,830	77.8%	2,690	53.3%
Practicing dentist >30 hrs/week	12,110	9.5	900	17.8
Dental school faculty	3,260	2.6	260	5.1
Government & armed services	8,340	6.6	390	7.8
Intern, resident, or student	3,050	2.4	710	14.0
Other (e.g. hospital or health organization)	1,370	1.1	100	2.0
Total	126,960	100.0%	5,050	100.0%

and 34 years of age reported earning 53.9% of the income of their male counterparts.)

Finally, a report by Ashford and Cole (15) on the services activities provided by virtually all dentists within the British National Health Service during the mid 1970 period, offers some quantitative data for a system which has the approximate male to female ratio of students and practitioners that is projected for the United States in the year 2000. During the mid 1970's, women constituted almost 20% of the dental profession in Great Britain and approximately 30% of the entering dental school classes. (16) (*Recognizing the limitations of any comparison between two different countries*) the authors reported that, a female dentist carried out about three-fifths of the number of courses of treatment, fills about three-fifths of the number of permanent teeth, and extracts about two-fifths of the number of permanent teeth as does her male colleague of the same age. "Whatever the underlying explanation, it is clear that what may be termed the 'output' of female practitioners is on the average substantially lower than that of males. The relative magnitude of the difference between the sexes shows little variation with age and on this basis seems likely to remain at a similar level in the future." (15)

Estimating the available future female dental work force

A series of calculations were carried out using the results from the available United States national and regional studies, and the British National Health Service, to determine 1. the range of change in dentist equivalents that could be anticipated and 2. the impact on the dentist to population ratio, *IF* current work patterns by female dentists were comparable to the work patterns of the 24,440 female dentists projected by HHS for the year 2000. (See Appendix for procedures)

Based upon the four studies, the decrease in dentist equivalents (i.e. if the 24,440 female dentists worked at the male dentist rate) would range from 1,049 to 11,267 dentists.

Example	Decrease in dentist equivalents
I. Health Resources and Services Administration using ADA data 25% of female dentists and 10.9% of male dentists spend less than 30 hours per week in dental activities.	1,351
II. Tillman and Horowitz 23% of female dentists spend less than 30 hours per week in dental activities. According to ADA data, 12% of males spend less than 30 hours per week in dental activities.	1,049
III. Rosner 37% of female dentists and 5% of males dentists spend 1 to 3.5 days per week in dental activities.	3,044
IV. U.S. Census A female dentist between age 25 and 34 earns 53.9% of the income as her male counterpart.	11,267
V. British National Health Service A female dentist provides 60% of the amount of treatment that is provided by a male dentist.	9,776

Based upon the national and regional U.S. dentist practice activities, dentist income data and results from the British National Health Service study, the effective dentist to population ratio for the year 2000 could range from minimal change to an approximation of the 1982 ratio—despite a national increase of approximately 30,000 active dentists. (Table VII)

Commentary

"Why all the attention to female students? . . . you seem to compare us to some male standard. It's not

Table VII. Number of active dentists and number of active dentists per 100,000 population: Estimated 1982 and 2000 (7,12-15)

Year	Number of active dentists	Number of active dentists/100,000*
1982	132,010	56.6
2000 - Estimate in the Report to the President	164,180	61.3
Dentist equivalents as a reflection of the work activities of female dentists		
- Example I (Report to the President)	162,829	60.7
- Example II (Tillman and Horowitz)	163,131	60.8
- Example III (Rosner)	161,136	60.1
- Example IV (U.S. Census)	152,913	57.1
- Example V (British National Health Service)	154,404	57.6

*Population estimate for the year 2000 = 268 million (17)

women that are different. It's this whole generation that's different!" The thoughts of this particular female dental student at Stony Brook tend to summarize the difficulty in reviewing the evolving affects of increasing numbers of women in the dentist work force. Any effort to plan for the future must consider the changes that women will bring to the profession and the delivery of dental service—yet, the problem exists in trying to extrapolate future performance from the activities of past and present female practitioners.

Most middle-age and older dentists can remember the one or possibly two female classmates during their years in dental school. It required a particular type of women with a special determination and fortitude to enter the "all" male dental world.

The approximately 1,000 women per year who enter the schools of dentistry in our current era face a greatly altered environment. The new "category" of female students is still considered somewhat of an oddity and faces traditional antagonism from the "wasted place" attitudes to pressure to seek a career in pedodontics—"a good career for a woman." However, the students are the product of the post-1970's feminist movement and enjoy the mutual support of their sister students and increasing numbers of female faculty members.

A third and potentially different "category" of female students will seek entrance to the profession in a future time, when possibly 50 percent of the students and faculties of schools of dentistry will be female. (19)

It would seem all but impossible to plan for work force requirements into the 21st century. Uncertainties exist in the need and demand for services. Government and other third party payment systems seem to change as frequently as tomorrow's morning newspaper. New modalities for the delivery of dentistry seem to sprout like the daffodils in spring. Is it even practical to consider, in the mid 1980's, the availability of female dentists in the dental work force in the year 2000? Indeed, can we afford not to consider their impact?

Appendix

Example I.

The 1984 Report to the President and the Congress on the Status of the Health Professions (7) estimated that in December 1982, 25.1% of female dentists and 10.9% of male dentists in private practice were active for less than 30 hours per week.

Available data:

Female dentists constituted 2.6% of all dentists in the ADA report. In 1981, the average dentist spent 39.3 hours per week in practice related activity. (18)

Assumptions:

1. The average male dentist spent 39.3 hours per week in practice related activities—or approximately 8 hours per day for a five day week.
2. An average male and female dentist, who spent less than 30 hours per week in dental activities, spent 24 hours or 3 days per week in dental activities.
3. In the year 2000, there will be 24,440 female dentists.

Procedure:

To determine the difference in the number of dentist equivalents between the work experience of male and female dentists—

If 24,440 female dentists worked at the male dentist rate

24,440 × 89.1% = 21,776 × 39.3 hrs/wk = 855,798 hrs/wk

plus

24,440 × 10.9% = 2,664 × 24.0 hrs/wk = 63,936 hrs/wk

equals

919,734 hrs/wk

If 24,440 female dentists worked at the female rate

24,440 × 74.9% = 18,305 × 39.3 hrs/wk = 719,386 hrs/wk

plus

24,440 × 25.1% = 6,135 × 24.0 hrs/wk = 147,240 hrs/wk

equals

866,626 hrs/wk — or a difference of 53,108 hrs/wk

Difference: $\frac{53{,}108 \text{ hrs/wk}}{39.3 \text{ hrs/wk per av. dentist}}$ = **1,351 dentist equivalents**

Example II.

Tillman and Horowitz reported that 77% of the female respondents, who graduated between 1977 and 1980, spent 30 or more hours per week in dental activities. In 1982, the ADA reported that 88% of all private practicing dentists spent 30 or more hours per week in comparable activities. (18)

Procedure:

Same as in Example 1.

Difference: **1,049 dentist equivalents**

Example III.

Rosner reported that, 37% of female respondents and 5% of male respondents, who graduated between 1966 and 1977, worked 1 to 3.5 days per week.

Assumptions:

1. All practitioners who worked 1 to 3.5 days per week, worked 3 days or 24 hours per week.
2. All other practitioners worked 39.3 hours per week.

Procedure:

Same as in Example I.

Difference:

3,044 dentist equivalents

Example IV.

U.S. 1980 Census reported that female dentists earned 48.1% of the income of male dentists. Female dentists between age 25 and 34 earned 53.9% of the income of their male counterparts. Female dentists between age 35 and 44 earned 48.9% of the income of their male counterparts.

Available data:

There were 1,897 female dentists between 25 and 34 years of age reported in the 1980 census: 646 between 35 and 44 years, 441 between 45 and 54 years and progressively fewer in older age categories.

Assumptions:

1. Income reflects work patterns.
2. Work patterns of female dentists between age 25 and 34 (with higher incomes than female dentists in older age groups) are representative of anticipated work patterns of future female practitioners.

Procedure:

$24{,}440 \times 53.9\% = 13{,}173$ full time dentist equivalents

$24{,}440 - 13{,}173 = 11{,}267$

Difference:

11,167 dentist equivalents

Example V.

Ashford and Cole reported in the British National Health Service study that a female dentist carries out about three-fifths of the number of courses of treatment, fills about three fifths of the number of permanent teeth, and extracts about two-fifths of the number of permanent teeth as does her male colleague of the same age.

Assumption:

The performance activities of United States female dentists are comparable to female dentists in Great Britain.

Procedure:

$24{,}440 \times 60\% = 14{,}664$ full time dentist equivalents

$24{,}440 - 14{,}664 = 9{,}776$

Difference:

9,776 dentist equivalents △

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OPINION

PROFESSIONALISM

For nearly 120 years advertising by professionals was considered unethical. During this period, the public was protected from the misleading enticements of advertising by statutes in all fifty states. Dentists were imbued with the principles of professionalism. Acceptance of restrictions on advertising was second only to scholarship if one were to attain true professional status. Our individual aspirations in this regard were sustained by the profession's code of ethics, and our esteem and respect in the eyes of the public was of the highest order. We ranked comfortably with the other *learned* professions. Individual dentists were accorded the honor and respect of the public which they earned through scholarship and professional conduct. This was the golden age of professionals. Dentists of that time were consulted in matters of health and science. Their opinions were sought and respected. They were community leaders. Their judgment in professional matters was rarely questioned. They were seldom sued, and only occasionally convicted of professional misconduct.

Who were these men who developed the profession to this lofty state—these Saints of Dentistry? How did they earn such respect and honor? How did they sustain their professional polish? They were ordinary dentists. They came from the farms and the ghettos, the small towns and the factory cities, the docks and the packing plants. Their education was from the "Dark Ages" as compared to current scientific and technical knowledge. Their equipment was "Stone Age." They dealt with people in pain and their procedures were oftentimes more painful. It seems inconceivable that under these circumstances an honorable profession could develop and flourish. But it did! And we are the heirs to this amazing turn of events. How did it happen?

In my judgment, it occurred through "professionalism"—*putting the well-being of the patient ahead of the doctor.* This is the key attitude that must be developed and kept constantly in mind by every true professional. This trait will encourage scholarship and promote humility. . . . both highly desirable characteristics of a professional. A reputation built on this foundation will ensure a dentist a challenging and a rewarding practice without the need to concentrate on the commercial practices of "production," "efficiency," "time and motion" and "quest." It will shorten the course of confidence building for the young man, and it will provide the old with satisfaction and peace of mind in the knowledge that he has done his job well and has served his fellow man.

The decision of the United States Supreme Court to do away with the ban on advertising by the professions has undercut the entire structure of professionalism. By its very nature advertising promotes the one who places the ad. It reverses the principle of placing the patient ahead of the dentist, and thus relegates the dentist who advertises to the roll of commercial entrepreneur. By abdicating his professional status, he also forgoes his priviledge of trust and honor and respect by the public. He is a commercial operator. He is in the dental business, not the profession. Unfortunately the actions of one such individual reflect unfavorably on all, and we all must work harder to polish our tarnished reputation.

The ruling by the Supreme Court was not an overwhelming defeat of professionalism. It was a five to four decision and conceivably could be reversed. But for now it is the law of the land and the Court has left us with little more than scholarship as the basis for our professional status. In an age when scholarship in other scientific and technical fields is exploding, it is difficult to instill and maintain professional attitudes on that basis alone. So we must look for ways to promote professionalism. In years past little attention was needed in this area. In my own experience as a dental student 35 years ago, we were immersed in a disciplined professional atmosphere and by a process of osmosis were filled with ideal attitudes at graduation. It was easy to develop a degree of purity because the atmosphere of professionalism was not contaminated by commercialism. After graduation our attitudes were filtered through our rigid code of ethics and enforced by state law. Professionalism was popular.

In our present status, it is difficult to demonstrate and maintain professional attitudes. Much more work and study needs to be done in this area. Courses on professionalism need to be developed and taught. Students need to be shown how to look and act like a professional. How to *be* professional. Practitioners need to be supervised and reinforced in their actions and their attitudes. Professionalism must be studied in depth and taught with fervor and confidence. I suggest that organized dentistry should be leading the way.

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TAKING ISSUE WITH BURT PRESS

I am very interested in some of the observations made by Dr. Burton Press in the course of your recent interview with him. (The Candid Views of Burt Press—ACD Journal, Fall 1985)

The first is, "The great majority of dentists in the United States are not sure what the American College of Dentists is or what it does, or why its actions are relevant to their goals for the future. The College will continue to be less than effective in this particular direction by decrying the loss of professionalism and by failing to be a leader in the structure of the changes that are taking place . . ."

If I interpret him correctly, the 'changes' to which Dr. Press refers are reflected in another of his observations with which I am concerned. That observation: ". . . . the Supreme Court of the United States has decided that advertising by professionals is not unethical unless it is false or misleading in a material respect."

What gives me cause for concern here is the apparent reasoning that, because the Supreme Court has created these 'changes', the ACD should be a leader in them even if the concept of ethics which they espouse is in direct conflict with ACD objectives. Such 'changes' are creating a situation wherein commercialism takes precedence over all else in dentistry.

Dr. Press further observes, ". . . all professionals need to generate a fair return for their efforts in order to sustain a high degree of professionalism . . ." Unfortunately, however, a fair return sometimes becomes an obsession, and a high degree of professionalism becomes its victim.

I know that Dr. Press is sincere in his views on dental marketing, but I cannot agree with his observation that ACD should become involved in such activities. He, the American Dental Association, and all of its components are doing an excellent job in creating more markets for dentistry, but that is their mission, not ACD's.

The ACD mission is an idealistic one. It is designed to promote professionalism. If we accept the suggestion that we stop "decrying the loss of professionalism" and " and be a leader in the structure of the changes that are taking place", we really have no reason for continuing to exist.

Instead of being leaders in these changes' we must reaffirm our commitment to our profession by reading and dedicating ourselves to the "Objectives of the American College of Dentists"

William A. Elsasser

MORE SECTIONS ACTIVITIES NEEDED

Section activities can strengthen the meaning of the ACD by many means. Some that are being used presently are described:

1. Student awards—given to senior students who most represent principles of the College.
2. Overseeing distribution of booklet "Dentistry—A Health Service" to senior dental students.
3. Sponsoring post-graduate education days. This would be particularly valuable in sections which do not have a dental school nearby.
4. Promotion of new nominations by its members.
5. Recognition of active members or non-members by presentations at meetings.

One complaint I have heard in talking to members throughout the country is that non-members believe that the American College of Dentists is a group of self-admiring nominees who do little more than stand around and pat each other on the back. This is far from the truth. The trouble is that we lack an understanding of public relations and what it can do for our society.

Each new member should receive a questionnaire given by the sections which can be used as a description of the new inductees' accomplishments to show why he was nominated for the ACD. This same information should be forwarded to the local state dental society's journal for publication as well.

Our national organization must help to strengthen the Sections and stimulate their activities. More participation should be forthcoming by the Sections themselves.

The Board of Regents and the national office should realize that much of the future strength of our organization lies with the Sections. We must promote Section activities particularly by those Sections which are inactive.

Sumner H. Willens, Regent

A TREASURY OF DENTISTRY

Gardner P. H. Foley

WHAT OF DENTISTRY AND LITERATURE?

Many years ago I began a collection that I referred to as "Dentistry and Literature." I gradually gathered under that classification a large file of passages from plays, poems, novels, essays, letters, diaries, journals, autobiographies, short stories, and non-fiction. Many of these selections appeared in the long series of "Foley's Footnotes" and have continued to be published in the Journal of the American College of Dentist's "A Treasury of Dentistry." In 1972 *Foley's Footnotes*, the first book of its kind, included a large number of items concerning dentistry and literature. The reception of that book (still in print) indicates that another volume would be acceptable; however, it would be very difficult to find a publisher for it.

To accompany my introductory remarks I have chosen "The Rustic and the Lackies," from *The Table-Book and Traveller's Joy* by Juan de Timoneda, an early writer of Spanish tales who flourished in 1590.

A rustic desirous to see the King, thinking that the King was more than man, put his wages in his pocket and took leave of his master. But the pennies soon melted away on the long journey to the capital. Having arrived and seen the King, whom he found to be a man like himself, he was so disgusted at having spent upon this all his money excepting half a real, that a tooth began to ache, and what with hunger tormenting him too he did not know what to do, for he said to himself, "If I have the tooth drawn, and give my half real for that, I shall die of hunger; while, if I eat the half real, my tooth will go on aching." As he was thus debating, he approached a pastrycook's stall, and gazed with longing eyes at the tarts displayed. By chance two lackeys were passing by, who, seeing him so taken up with the pastry, cried out, to make sport—

> "Hola, rustic, how many tarts would you venture to make a meal of?"
> "By heavens! I could swallow fifty."
> "Go to the devil!" said they.
> "Gentlemen," he replied, "you are easily frightened."
> Upon which they offered to lay a wager.
> "Done," said the rustic. "If I don't eat fifty, you can draw this tooth," and he pointed to the one that ached.

All parties pleased, the countryman, very much to his taste, began whetting his teeth upon the tarts. When his hunger was satisfied he stopped, saying, "Gentlemen, I have lost." The others making very merry, indulged in much laughter, bade a barber draw the tooth—though at this our friend feigned great grief—and the more to jeer him cried out to the bystanders—

"Did you ever see such a fool of a clown as to lose ivory to satiate himself with tarts?"

"Yours is the greater folly," retorted he; "you have satisfied my hunger and drawn a grinder which has been aching all the morning."

The crowd burst out laughing at the trick the rustic had played upon the lackeys, who, paying the pastrycook and barber, turned their backs and went away.

WITCHES AND DENTISTRY

In my many years of studying the dental literature, I have wondered why I have never found an answer to one of my persevering queries: Why is it that no dental writer, even Guerini and Weinberger, the noted dental historians, has endeavored to establish an historic relationship between witches and dentistry? Although witches (or by many other names) have been identified for centuries, usually as old women of ugly appearance, it has not occurred to dental or lay writers (with one exception known to me) to realize the importance of the teeth among the physical features that would cause their fellow citizens to designate them as witches.

There were many stereotyped descriptive elements used popu-

larly to portray the unfortunate "witches": such as "showed her toothless gums in a grin," "hatchet-faced." and "toothless old hag." Consider the testimony of Ludivico Domenichi, an Italian writer of the sixteenth century: "A scrawny, toothless, withered old crow whose incredible ugliness made her more like a witch than a woman." Even though witchcraft ceased to be an offense punishable by death in England in 1736 and in Ireland in 1821, writers have continued to describe ugly women as they had been described when judged to be likely candidates for elimination.

During the times when large numbers of old women were the victims of public accusation for the practice of witchcraft they suffered from dental conditions that they could or did not check or correct. Often the services of a dentist or a substitute practitioner were not available in areas of small population or the "witch" could not afford to procure them. Also one must consider particularly the presence of elongated teeth caused by the absence of the opposing teeth.

Now, I present the remarkably cognizant opinion of Harriet C. Brown who, in 1929, wrote a fascinating book titled *Grandmother Brown's Hundred Years, 1827-1927.*

> One day we drove through Salem Mass.; drove to Witch Hill, where they hung the witches. Just think of that awful time and the terrible things our ancestors did! The poor old women of that day! I tell you what—it is modern dentistry, perhaps, that saves old women now from being considered witches. Without our false teeth we look like witches, sure enough. In those days old women would have, maybe, a few old snags saved to scrape an apple with, and the rest of the face fallen in so that nose and chin would almost meet.
>
> Well, the poor old Salem women were probably toothless, and that's how their trouble began.

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The Journal of the American College of Dentists is published quarterly in order to promote the highest ideals in health care, advance the standards and efficiency of dentistry, develop good human relations and understanding, and extend the benefits of dental health to the greatest number. It is the official publication of the American College of Dentists which invites submission of essays, editorials, reports of original research, new ideas, and statements of opinion pertinent to dentistry. Papers do not necessarily represent the views of the Editor or the American College of Dentists.

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