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Contents for December, 1960

Editorial

THIS ISSUE

This last issue of 1960 presents much vital information for dentists in the United States, and offers stimulating reading for reflective thought, careful study, and subsequent action.

In one form or another, this issue contains the proceedings of the Los Angeles Convocation of the American College of Dentists. A reading of these papers, reports, and minutes will point up the noteworthy aims of the College more than any printed general statement of objectives. You will note here the College in action: the presentation of worthwhile ideas and data, the directing of attention to current and pressing trends in dental practice, and the call for leadership and initiative on the part of dentists and dental organizations.

Dr. Gullett's paper, "The Meaning of the Present"—his presidential address—should be read several times. We should take a good hard look at what he is telling us about government supported health treatment schemes in operation in other countries. When he quotes John Donne it seems he may be urging us to read along the lines of that quotation a little farther: ". . . never send to know for whom the bell tolls: It tolls for thee."

There is a demanding opportunity, here and now, to read Dr. Gullett's address and heed his challenge that the dental profession provide leadership. You will read where he says that we are on the threshold of alterations in the practice of dentistry, and that these changes can be drastic. And further, "Experience in many countries shows plainly that the leadership can pass into other hands."

It is with editorial pride that the JOURNAL publishes the studies and recommendations of the Commission on the Survey of Dentistry in the United States. There have been studies before this one—all worthy and of value: by Gies in 1926; Blauch in 1935; O'Rourke and Miner in 1941; and Horner in 1947, as well as others by the American Dental Association and the Public Health Service of the U.S. Department of Health, Education, and Welfare. This Survey of 1960 by the American Council on Education treats comprehensively the chief aspects of American dentistry *as of now*.

To quote the Chairman of the Commission, John A. Perkins, President, University of Delaware: "I think all of us on the Commission have at times felt overwhelmed by the task of making a survey as comprehensive as this of a profession so important as dentistry. Yet, in our kind of democracy, where there is no central authority to regulate national life, there must be representative boards, committees, and commissions to raise questions about all aspects of our society, with the idea of making suggestions or recommendations about changes which will provide greater service to the public." This the Commission on the Survey of Dentistry has done. Arthur S. Adams, President, American Council on Education, has stated: "This willingness of dentistry to expose itself to inspection indicates a maturity and conscientiousness deserving high praise."

A Summary Report of the Commission was published last month by the American Council on Education. It is planned that the Final Report will appear in February, 1961. Your appetite for this final report, with all the sustaining arguments and the supporting data, will be whetted by a reading of the Survey Reports in this issue.

The Meaning of the Present

DONALD W. GULLETT, D.D.S.

A text for these remarks is to be found in the address of Arthur S. Flemming, Secretary of Health, Education, and Welfare at last year's Convocation: "One thing is sure and that is that if the government, the dental and medical professions, and private groups cannot agree on a program that will meet the need, compulsory health insurance for the aged will win out; and if such provision is made for the aged, we will start on the road then for provision being made for compulsory health insurance for all age groups." If the experience of other countries is studied it will be found quickly that this statement is absolutely true and applies in every case. Further, Mr. Flemming said: "We need to tackle this problem together." He could have added that the health professions in all countries held back from tackling the real problem until too late and obtained compulsory health insurance.

The Problem

In order to understand the present situation it is necessary to review briefly the development of government in health affairs. Like the constitutions of other countries no reference to health of the public was made in the Constitution of the United States. The pattern of development surprisingly is similar in all developed countries. The first need appeared in providing a health service for seamen. This resulted in the establishment of the U. S. Public Health Service in 1798. Action following this initial move was exceedingly slow in that it was almost a century later before quarantine laws were passed. A few purely public health laws were adopted up to the end of World War I at which time medical and dental services were provided for veterans, and for the first time dentists were employed to provide dental care for merchant seamen. The Social Security Act of 1935 provided money specifically for health and welfare purposes. From this point onwards the interest and activity of government accelerated year by year. Health legislation has assumed greatly increased importance in recent years.

President's Address, Los Angeles Convocation, October 16, 1960. Dr. Gullett is Secretary, Canadian Dental Association.

The first point to be noted is this accelerated action by government in the health field. Every session of government, federal or state, has health legislation in the hopper these days. This was not the case but a few years ago. The second point to emphasize is that whereas this legislation two or three decades ago had to do with public health exclusively, it is now concerned with treatment care. It is progressive in nature. Today it may be the provision of dental care for the aged, but tomorrow the care will be demanded for another group said to be equally deserving and perhaps more so.

Two courses of procedure are adopted in bringing legislation for the provision and control of health care. In some countries massive legislation has been adopted converting private practice into a state scheme overnight. Of later years the method has been to introduce the plan piecemeal, group by group. The latter method is accomplished with greater ease.

Canada is a rather typical example of the adoption of security legislation piece by piece. By the early forties legislation had been adopted for old age pensions, mothers' allowances, unemployment insurance and the other usual social security measures. As a continuation of the security movement the national health plan came into being. This plan was divided into several phases with intervals of five years, more or less, between the introduction of each phase. The first phase consisted of several federal grants in aid to the provinces chiefly for hospital construction, research projects, surveys in preparation for health insurance, and training of pertinent personnel. The next phase enlarged the grants to expand diagnostic facilities. In 1957, compulsory hospital insurance was implemented as the third phase, and at the present time all Canadian hospitals are in the plan, save one province which is now preparing to enter the scheme. During this whole period discussions have been taking place respecting the inclusion of medical and dental treatment services, which as stated in the original planning are to follow. Already in one province the subject of medical services became an election issue last June, and as has occurred in other countries the electors gave support. During the election campaign it was stated frequently that dental services would follow as soon as medical services were in operation. The Canadian experience illustrates the progressive nature of the movement. Furthermore, it will be observed that health services, as in other countries, is simply a continuation of the social security

movement and not something separate and apart as so often contended.

Study of the movement in the various countries promptly shows the progressive nature of the movement. It may be blocked or delayed by political action but this proves in the end to be only a matter of time. It would be exceedingly difficult for anyone to point out actual retrogression.

During recent years alterations in health services have been occurring at a very rapid rate on a world-wide basis. The scientific advancement of the last two or three decades has been remarkable. At the same time great changes have taken place in the methodology of rendering health services. In some countries the position of the practitioner has been entirely altered from that established by tradition. In some, the dentist has become a servant of the state. In other countries the dentist may appear to be operating his practice freely, but what he actually is doing is carrying out the regulations as laid down by the state. Much of this is a far cry from the practice of dentistry under the individual responsibility of the dentist.

Characteristically the dental profession has concentrated on the scientific advancement and actual practice of dentistry. In the meantime a whole new social environment has developed. This development has occurred in all countries. The differences from country to country are only ones of intensity or degree. The titles or names given the movement vary. However, it matters little whether the movement is called social security, national health plan, or "cradle to the grave" security; the objective is the same. The point attempted here is not to argue for or against, but to acknowledge its existence. Undoubtedly the vast majority of dentists recognize this rapid change in society, but do they think of it in terms of affecting themselves in the practice of dentistry.

Lest some misjudge, this speaker is by no means a radical nor does he think that some great colossal and compulsory health service is inevitable. On the other hand a crisis in health services has been building up on a world-wide basis, particularly during the last two decades, and the climax has been reached in every developed country save two or three. If action from outside the professions is to be avoided it will be necessary for constructive efforts to be made within the profession. In the light of experience elsewhere, acceleration of all activities in solving exisiting problems is essential. In doing so

the interests of both those who receive the services and those who provide the services must be understood and protected. The great difference between now and a few years ago is that decisions related to the methodology of health services have become two-party agreements whereas formerly alteration was determined by the profession alone. This is the problem to be met.

College Action

The American College of Dentists has endeavoured over the years to secure factual information on this important matter. Over 20 years ago as a part in the work of the Committee on the Costs of Medical Care (it is worth noting that from the beginning the emphasis has been on economics) the College sponsored an investigation of health insurance in European countries. This study resulted in the publication of a book entitled *The Way of Health Insurance* by Simons and Sinai. Some of the conclusions in this report make interesting reading today. A few are well worth quoting:

> "There is practically no important opposition to the principle of health insurance in any country where it now exists."
>
> "It is a question whether any of the systems called by that name are really insurance."
>
> "Every attempt to apply the principles of voluntary insurance on a large scale basis has proved to be only a longer or shorter bridge on the way to a compulsory system."
>
> "Wherever dentistry was not included from the beginning in an insurance scheme, the demand for its extention to dentistry has come from dental associations."

These conclusions were set down over twenty years ago. A considerable number of countries have introduced compulsory health insurance since, but there is no reason to alter the conclusions.

Following World War II and with the implementation of the British "crade to the grave" security scheme, the College sent an investigator, Dr. Raymond Meyers, to make a detailed study of the scheme. This study was published in the Journal of the American College of Dentists in 1949. One of the most important statements in this report has to do with the insecurity of the dentist and this in a scheme called security.

During the intervening years the College has endeavoured to gather factual information for utilization in solving the problem confronting us. Emphasis has been laid on the relationships between

the profession and the other components of society. One great obstacle presents itself in all this effort. Frankly stated, the obstacle is that too many dentists do not want to admit that a problem exists. Consequently these dentists do not want to even discuss it let alone make constructive effort toward solution. The same attitude of professional men was exhibited in countries which now have compulsory health insurance.

The most important thing in the whole matter lies in the system of administration. Studies in all countries point up this fact. We know that under voluntary systems administration becomes the important thing. Without proper administration, proper services cannot be rendered and this is illustrated abundantly in studies of the numerous schemes. If the administration is right the scheme can work, but if the administration is wrong the scheme fails to give the dentist an opportunity to perform his services. The administrative system is vital to the practitioner. To achieve proper administration of any plan, voluntary or compulsory, negotiation must occur. Negotiation is not a one-sided affair and to be successful requires not only the aims and objectives of the dental profession but also a thorough recognition of the endeavours and intentions of the other party. In turn this involves a familiarity with the environment of society today. On many occasions throughout the world the dental profession has lost out through unwillingness to face the issue, lack of recognition of the other party's problem, or by simply taking a laissez faire attitude.

This brings us to the crux of a present day situation. Until recent years, without question the dental profession administered all that was related to the practice of dentistry including the type of service to be rendered and the ethical atmosphere under which the services were rendered. Gradually today incipient arrangements are occurring wherein the profession does not exercise the control of yesterday. What of the future? Will these developments, now incipient, eventually control a major part of the practice of dentistry? Largely the answer lies in the dental profession providing an administrative system in keeping with the economic and social trends of the day.

Objective Comment

Up to this point endeavour has been made to establish that a problem does exist. There would appear to be difficulty in establish-

ing this fact in the minds of many. We live in a critical age when the professions, like every other group, are subject to severe criticism. In order to make progress we should be critical of ourselves. The question arises naturally what should we as individuals and as organized groups be doing?

First, there is in reality only one basic reason for the existence of the dental profession and that is to render a service. Need exists for strong re-emphasis on this most important premise. Service must occupy first place in the practitioner's mind. Just as soon as anything else is permitted to take this first position disaster follows as sure as night follows day. On this point rests the strongest argument that a profession possesses in any process of negotiation. It is the basis on which a profession has the right to expect different treatment than any other vocation. This principle is a protective one and requires constant guarding. Just as soon as the guard is lowered the profession is open to accusations, true or false as they may be. Individually and collectively every dentist has a contribution to make in this respect which is insurance for the future.

Second, ways and means must be found to widen the horizon of the dentist to new and unexplored social responsibilities. Recommendations will be made for revision of the dental curriculum to this effect but this will be exceedingly slow in action. The need is with us now. No one can criticize the scientific development of dentistry, which has been phenomenal, but it is quite possible to criticize what might be called the development of the philosophical side of the profession. In order to accomplish this objective the time has arrived to take a good hard look at the type of program presented at conventions and meetings. The technics of dentistry are overwhelmingly important but there are other exceedingly important matters before the profession which require the attention of all, and these are being neglected. Real need exists for a better understanding of our social environment by the profession. It is not a question of what we may like or dislike but of understanding. John Donne, a brilliant writer of three centuries ago, said, "A man cannot be an island unto himself." Today a profession cannot afford to be an island unto itself. Most leaders in the profession realize this point but find the means of implementation difficult. This cannot be accomplished by tacking a few lectures on the undergraduate course. The social responsibility of the dental profession has widened consider-

ably and is dual in nature. Any decision on the methods in rendering services is becoming one of negotiation between the profession and a second party.

Third, statements made in opposition to state control of health services are repetitious, hackneyed, easily depleted, and non-effective. For the most part they are so frayed that the politician easily converts them to his own advantage. What is meant by saying—"only the best dentistry"? The social scientist replies that evidently the dental profession is only interested in serving the best people, and the politician even more forcibly says that dentists are only interested in serving people with money. Of course it is not true but it is the interpretation that counts. Again a great issue is made of bureaucratic control in statements made by the health professions. This is a most suitable statement in the hands of the astute politician for his own purposes. Those making such statements would do well to look more closely at some of the schemes being established. More realism is necessary in dealing with the subject.

Fourth, these are stirring days of changing concepts. Apparently few lay organized groups exist which do not have ideas how health services should be operated. No door should be left closed, and the profession in full realization of current social trends should act quickly in providing solution to existing problems. Timed appropriately, the Commission on the Survey of Dentistry in the United States was established. The report, to be issued shortly, will contain a considerable number of pertinent recommendations. For example, strong recommendation will be made in respect to the use of auxiliary personnel. An old economic rule states that when something can be done more cheaply and as efficiently it will be done eventually that way. The critics point out that commerce, industry, and other professions have made adjustment, but dentistry is still carried on by the most expensively trained individual—the dentist himself—attempting to do everything. Evidence exists that much less training is necessary in order to perform much of what the dentist now does himself and do it efficiently. The profession is bound by its obligation to provide services, to investigate thoroughly and apply wherever possible means that will increase the amount and the availability of services.

Fifth, a great deal appears in general literature today in respect to loss of individual leadership. Bigness has become an obsession. In the

minds of increasing numbers it is only the large group, association, or organization, including government, that can do anything. As a result the individual person counts himself as less and less. Such an attitude did not build the nation or create the civilization we now enjoy. Nor did this way of thinking bring the dental profession to its present important place in society. The constructive and critical contribution of the informed individual dentist is an urgent need in the solution of the problems facing dentistry. The best leadership comes when individual members of any group make contribution, and this is particularly true within a profession. One thing is certain, the resulting solution will have its effect on every dentist.

Conclusion

No attempt is made to prophesy what is going to happen. This would be rash indeed. Effort has been made to show that a problem does exist which demands solution.

In some form, all developed countries have government supported health treatment schemes in operation. These vary from plans for veterans and less fortunate citizens to full comprehensive schemes for the whole population, including dental care. Emphasis is laid upon the point that in all countries the movement is progressive and never retrogressive. First one group of the population and/or one service is added and then another. The nature of the movement sharpens the need for constructive actions by the profession in finding solution to the problems of making dental care available on an acceptable basis to all who demand it. Generally speaking, it can be said that in countries with comprehensive compulsory health insurance the health professions concentrated on opposition to the proposals and failed to take constructive action until too late. The best possible protection in time of stress is adequate defence. Such periods of adjustment are not only dangerous times but also bring opportunities. The aim in these remarks is to establish the present position and indicate the need for constructive action by the profession.

The meaning of the present is that were are on the threshold of alterations in the practice of dentistry. These changes can be drastic. Opportunity is offered for the dental profession to provide leadership. Experience in many countries shows plainly that the leadership can pass into other hands. The history of the College is replete with examples of strong leadership. To meet the present challenge it

is necessary that the American College of Dentists take up its responsibility in an ardent manner.

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Toronto, Canada

No man is an *Iland,* intire of it selfe; every man is a peece of the *Continent,* a part of the *maine:* if a *Clod* bee washed away by the *Sea, Europe* is the lesse, as well as if a *Promontorie* were, as well as if a *Mannor* of thy *friends* or of *thine owne* were; any mans *death* diminishes *me,* because I am involved in *Mankinde:* And therefore never send to know for whom the *bell* tolls; It tolls for *thee.*—JOHN DONNE (1573-1631)

Dentistry in the United States

STATUS, NEEDS, AND RECOMMENDATIONS

COMMISSION ON THE SURVEY OF DENTISTRY IN THE UNITED STATES

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Arthur S. Adams, President, American Council on Education, *ex officio*

Appointed by American Council on Education

The Purpose of the Survey

DONALD W. GULLETT, D.D.S.

Early in 1950 the American Dental Association established a committee to investigate the justification for a survey of the dental profession. After confirming the need for such a survey this committee prepared a comprehensive and detailed prospectus.

Unanimously, it was decided that the survey should be an objective one. As a consequence, the American Council on Education undertook the responsibility for the survey and appointed 15 members to the Commission. The Commission appointed was made up of representatives of many sectors of our society, four of whom were members of the dental profession. Actually the Commission was organized and began its work in the late Spring of 1958.

Staff became the first important problem and fortunately the American Council on Education was able to secure as Director Dr. Byron S. Hollinshead, who in turn was able to find capable staff members. These staff members interrupted their normal pursuits to serve the Commission. We are fortunate that these men will make what constitutes the first report on the survey here this morning.

As stated in the original prospectus the Survey was organized into four divisions, namely: *Dental Practice* under Dr. Robert G. Kesel; *Dental Education* under Dr. William R. Mann; *Dental Research* under Dr. Robert G. Kesel; and *Dental Health* under Dr. Wesley O. Young. Under the same headings committees were formed with Dr. Robert A. Downs, as Chairman of the Health Committee; Dr. Jay H. Eshleman as Chairman of the Practice Committee; Dean Harold J. Noyes as Chairman of the Education Committee and Dr. Thomas J. Hill as Chairman of the Research Committee. In addition to the work of the committees some twenty-four special studies were conducted. Furthermore the total resources of the American Dental Association were made available to the Commission. The various American Dental Association's councils and bureaus together with the headquarters staff as a whole gave freely of their time.

In essence the purpose of the survey was to assess the position of the profession to the society it serves. The pattern established by

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Introduction to the Morning Program, Los Angeles Convocation, October 16, 1960.

society is an ever-changing one. If a profession is to be effective then account must be taken of the social environment in which it seeks to serve. Consequently the report of the survey assesses the present position and makes recommendations for alteration directed toward improved relationships between the profession and society as a whole.

Dr. Byron S. Hollinshead as Director of the survey, will address you on, "The Approach to the Studies."

The Approach to the Studies

BYRON S. HOLLINSHEAD, M.A., LL.D., L.H.D.

To begin, may I express my warmest thanks to the members of the American College of Dentists who served on one or another of our Survey Committees on Health, Practice, Education, and Research. The chairmen of these committees—Dr. Robert A. Downs, Dr. Jay H. Eshleman, Dr. Harold J. Noyes, and Dr. Thomas J. Hill —are all members of the College, as are the four dentist members of the Commission itself: Dr. Otto W. Brandhorst, Dr. Willard C. Fleming, Dr. Donald W. Gullett, and Dr. Percy T. Phillips. The staff has a heavy obligation to these individuals, as well as to those members of the College who made certain special studies for us.

I should like also to acknowledge the great debt of the Survey to the officers and staff of the American Dental Association beginning with Dr. Hillenbrand. They supplied information and help without stint; sometimes they must have felt pressed to the limits of endurance.

Again, we had valuable assistance from the people in the Division of Dental Resources of the United States Public Health Service and National Institutes of Health, and the National Institute of Dental Research. I hesitate to mention names because the list would become too long. I can hardly refrain, however, from giving public expression to our indebtedness to such College members as Dr. Francis A. Arnold, Jr., Dr. John W. Knutson, and Dr. Walter J. Pelton.

Presented at the Los Angeles Convocation, October 16, 1960. Dr. Hollinshead is Director of the Commission on the Survey of Dentistry in the United States.

To conclude the acknowledgments, may I introduce a personal note and pay tribute to my three colleagues on the platform this morning—Dr. Kesel, Dr. Mann, and Dr. Young, all members of the College. Each one contributed dedicated effort to his tasks; each possessed high competence in his field; and each gave his fullest cooperation to our joint endeavors.

While I am on this personal note, I certainly should refer to the invaluable aid the staff has received from our associates in the Washington office of the American Council on Education. The long experience of the Council in conducting studies of this sort was a tremendous asset to us.

My assignment this morning is to describe in a general way how the Survey was organized, as well as what it was trying to do.

Questions as to the kind of study the Commission wished to undertake frequently were raised at its early meetings. The consensus seemed to be that it should be a combination of holding the mirror up to dentistry by data-gathering, as well as a critical analysis leading to recommendations. In fact, the general opinion of the Commission was very close to the definition contained in the original prospectus prepared by the American Dental Association, which said that "the objective" should be to "assess the achievement, resources, and potentialities of dentistry with a view to determining the desirable areas of future growth and development" for the purpose of "describing and recommending improved approaches, techniques, and methods for the better provision of an essential health service to the American people."

In addition to providing a well-defined objective, the original prospectus outlined projects which might be undertaken in the four fields of dental health, practice, education and research. The Survey staff used these suggestions as a partial guide in preparing its first outlines of work for the approval of the Commission. The debt of this study to the procedures outlined in the original prospectus is therefore very large.

After the original outlines had been approved by the Commission, they were submitted to the appropriate sectional committees on health, practice, education, and research, where the outlines were again added to, subtracted from, or amended.

The staff then began to prepare final work plans and timing schedules for the Survey. However, there were some additional stud-

ies closely related to the main survey but which for one reason or another the Commission did not wish to include within the scope of the report itself. Probably the most important of these was the gathering of public opinions about dentistry. To perform this important task the Commission agreed to sponsor a study by the National Opinion Research Center of the University of Chicago. This organization had made previous studies in the dental field, the principal one being for the American College of Dentists in 1959. (For the Survey study the National Institute of Dental Research made a grant to the NORC which covered most of the cost.) In certain other fields the Commission also authorized special studies, some to be made by the staff, some by members of the sectional committees, and some by persons having no close relation to the Survey but possessing especial competence of one sort or another. In one case the Commission authorized a study on the legal basis of licensure, only to find that such a study had already been made; therefore, it simply reprinted two existing articles on the subject.

At every step the work of the staff was supervised by the four sectional committees and the Commission. The committees met six times in two-day sessions, and the Commission met seven times in two- or three-day sessions.

As the work proceeded it became evident that still other studies should be made which had not been planned originally. Therefore, the Commission sought some additional funds from the original donors and asked that the termination date of the Survey be postponed for three months. These studies related particularly to auxiliary personnel—hygienists, dental assistants, and dental technicians—and to dental health education in elementary schools.

However, the organization of the final reports does not deviate in any significant way from the original outlines which, as was said, were modeled closely upon the prospectus which had been prepared earlier by the American Dental Association.

Now may I shift from this general description of the organization of the studies to the other part of the question, what the Survey was trying to do. Since my colleagues on this program will say what the Survey did in the professional fields of dental health, practice, education, and research, I shall restrict myself to a brief discussion of what one of our Commission members, Dr. Willard C. Fleming,

called the fourth dimension in dental thinking. Fourth dimensional thinking, according to Dr. Fleming, is "when we [dentists] think of ourselves in relation to the world around us," or in relation to social, economic, and political change.

The Commission had many discussions on this topic, the responsibility of dentistry to society, as well as the responsibility of society to dentistry. The Commission's concern about the need for a closer relation between the public and dentistry is reflected in one of its most important recommendations, which is that:

> The dental profession take the necessary steps to organize a national voluntary council on dental health. This citizen organization should be responsible for stimulating interest in the dental health problem and for developing support for programs of dental care, research, prevention, and education.

I think it is safe to say that the thought behind this recommendation extended both ways: the man in the street should have a better understanding of the importance of dentistry, and dental opinion would benefit by being more closely identified with public opinion.

What are some of the social, economic, and political changes which have created the need for changes in the practice of dentistry? Let me cite just three: Before 1900 75 per cent of our people lived in rural areas and 25 per cent in cities. Now that situation is more than reversed. In 1900 about 5 per cent of our young people went to high school; now it is about 85 per cent. At the turn of the century at least 70 per cent of our people were unskilled manual workers. Now that number is only about 15 per cent, and even they receive high enough wages to allow them to purchase most of the things that most people have. In short, most of our people now live in cities, and are much better educated and paid than they were a short sixty years ago.

What these changes mean so far as dentistry is concerned are moot questions, but there are some obvious generalizations which can be made. In a highly industrialized and urbanized society, people work in groups and frequently purchase services in groups. Therefore, we may expect that in the future at least some aspects of dental care will be included in such group payment plans as Blue Cross, and that there will be a growth in the number of organizations using dental care plans.

Because most people now work on salaries, they expect to pay for goods and services by salary installments, and they protect themselves against emergencies by insurance. The implications of this for dental practice are clear.

Because there are not enough professional people and because some aspects of what they do may be delegated to technicians, we may expect an increasing use of auxiliaries. The increased use of technicians of one kind or another will enable the professional man or woman to give more services while keeping costs down.

Because education is now more widespread, more dental health education will be given in the elementary schools and such education should improve the dental health care of children.

Because a highly industrialized and urbanized society must come to rely increasingly on group services provided by voluntary or governmental agencies, we may expect more group action with relation to prevention and education. Such action could relate to a more widespread fluoridation of water supplies, the support of dental clinics for indigents, greater support for dental schools, the support of dental inspection and care programs for children, and larger outlays for dental research.

Since more young people are now being educated, the numbers being educated for dental service can and should be increased: dentists, hygienists, assistants, and technicians. Because we are now giving increased support, public and private, to our universities, they in turn should increase their support of dental schools.

With more youngsters going to college and with colleges having higher standards, more and better students may be expected to apply to dental schools. The schools will need to improve their curricula and the quality of their instruction to recruit and retain these high quality students.

Finally, the increasing numbers being educated and the increasing material and technical resources available make possible greatly improved research activities which might bring about some relief from man's age-old suffering from dental troubles. We now have the education and the resources to do such research, and we should not postpone getting at it.

Gentlemen of the American College of Dentists, it is some such generalizations as these which I think Dean Fleming had in mind

when he talked about the need for fourth dimensional thinking in dentistry which would relate the profession to the social, economic, and political changes we see about us.

Dentistry has not been without such thinking. Indeed, I think the dental organizations may have exhibited more social awareness than most other professions. When one considers that the first dental school in the world was established only 120 years ago, and that the biological sciences were not very far advanced even fifty years ago, we may well marvel that the standards of scientific knowledge and technical skill required by modern dentistry are as high as they are.

But to dwell on progress such as this induces the hazard of complacency, and it is to reduce this hazard that surveys are made.

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Dental Health

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The first function of the Dental Health Section is to outline the nature and extent of the dental health problem with which succeeding portions of the report must deal. The basic outlines of this problem are simple enough. The primary factor is the high incidence of dental disease, much of which could be prevented if the scientific knowledge now available were fully utilized. This factor is complicated by the widespread failure of individuals to seek oral health care, either because they do not believe that a healthy mouth is worth the cost or inconvenience, or simply because they cannot afford it. The high incidence of disease and the failure to seek treatment results in an overwhelming accumulation of neglected dental need. Poor oral health is so common that for many individuals it is more a part of normal living than a source of concern.

The full significance of this problem is most apparent when viewed against the background of our American culture. With a gross national product equivalent to $2,500 for each man, woman, and child, this nation has the economic means to bring adequate oral health care within the reach of all. A mature profession, unexcelled in the world in technical skill and scientific background, is available to provide this service. It has been demonstrated in many fields that this nation has the managerial and organizational talent to revolutionize our way of living. Despite these resources, however, only a fraction of our population are receiving the benefits of adequate preventive programs or optimum dental care. Viewed in this light, the dental health problem becomes as much a question of public conscience as of statistics.

Individuals have many oral health problems, but they become of concern to the community, or the nation, as an aggregate problem affecting the entire public. The second function of this section is to analyze the actions that the public should take to reduce this problem through group effort. Action is recommended in four areas: (1)

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to increase the effectiveness of dental public health programs; (2) to improve methods of financing dental care; (3) to assure complete treatment for all children; and (4) to increase the availability of professional service.

Dental Health Programs

Even a cursory analysis of current dental health programs indicates their inadequacy, in all areas and at all levels. Perhaps most striking is the failure to apply preventive techniques to reduce the occurrence of dental disease. Despite more than a decade of effort, for example, less than 25 per cent of the population are now receiving the benefits of water fluoridation; and it is estimated that, because of population growth, the proportion of the population *not* using fluoridated water is actually increasing. Furthermore, only about 1.6 million children out of the 29.0 million not using fluoridated water, are receiving topical fluoride applications. Other preventive methods have suffered even greater neglect.

It is apparent that much more vigorous efforts, by all agencies concerned (including the national voluntary dental health council suggested by the Commission), will be necessary if water fluoridation and other preventive methods are to reach a majority of our children. The Commission has made a number of recommendations to strengthen the dental health activities of official health agencies and to increase their effectiveness in the promotion of preventive procedures, as well as in other programs. Specifically considering the need for greater progress in water fluoridation the Commission recommends that:

> A special federal grant-in-aid be made to states to assist communities in meeting the cost of initiating fluoridation programs, on a matching basis. The funds should be granted on the basis of need. Priority should be given to smaller communities.

In many smaller communities, engineering problems and lack of financial resources, not necessarily public opposition, have stalled the adoption of fluoridation. A community of 2,000 for example, which has multiple water sources requiring complicated water treatment equipment in order to fluoridate, may find that the cost of such an installation exceeds the financial resources of the community. Experience with federal grants for the construction of sewage

treatment facilities and hospitals has shown that smaller communities are willing to invest in municipal improvements if some financial assistance is available.

One of the primary barriers to the more extensive use of topical fluoride applications has been the fact that they must be applied by a dentist or a dental hygienist. Dental practice acts in some states even forbid the application of topical medications by a dental hygienist. A busy dentist is much less likely to utilize this relatively time-consuming procedure if he cannot delegate it to his auxiliary personnel. Furthermore, the requirement that the applications be performed by a dentist makes them unnecessarily expensive to the patient. Since there appears to be nothing so complicated, or so hazardous to the patient, about applying topical fluorides that it could not be delegated to a hygienist or well-trained assistant, the Commission recommends that:

> State dental practice acts be modified to allow both dental hygienists and dental assistants to apply fluorides under the supervision of a dentist.

It is equally apparent that dental health education activities fall far short of full effectiveness. Misinformation about correct oral health practices is common, and many do not act on the information that they possess because of a lack of motivation. This report calls on all interested agencies to increase health education activities, citing specifically the American Dental Association, local dental societies, the Public Health Service, and state and local health departments. It is also suggested that part of the current effort to inform the public is misdirected since it is not based on sound principles of health education. Educating and motivating the public requires skills as specialized as those necessary to practice dentistry. The Commission therefore recommends that:

> The number of trained health educators employed by official health agencies and dental societies be markedly increased, and that education efforts be guided by their recommendations.

The extent to which official health agencies should participate in the provision of dental care has been the subject of considerable controversy in the past. Many public health dentists have been reluctant to assume responsibility for dental care administration because of the conviction that this was not the proper role of a health

department. This attitude is changing, and a growing number of individuals believe that, if treatment services are to be provided by government to certain segments of the population, the health department should not remain aloof since it can make an important contribution toward the organization and operation of effective and efficient programs. In some cases the health department may be the logical choice to administer a care program. In others it may provide consultation to another agency to assist in setting standards, assure the inclusion of preventive procedures, maintain adequate fees and high standards of treatment, and establish reasonable priorities for treatment. The Commission recommends that:

> Official health agencies assert their proper leadership in the initiation, planning and administration of dental care programs, giving first priority to school-age children.

New challenges arise constantly in our changing society. Radiation hygiene, for example, was considered a minor problem, of concern only to dentists, a few short years ago. Yet today both the profession and public health agencies are engaged in intensive efforts to reduce unnecessary radiation to the population. Other special problem areas now emerging concern the provision of dental care for the chronically ill and homebound, the treatment of dento-facial deformities, and the control of periodontal disease. Public health agencies should provide leadership in searching for solutions to these problems by initiating experimentation, conducting demonstration programs, sponsoring in-service training and epidemological investigation. The Commission specifically calls for the expansion of all existing Crippled Children's Service programs to include the treatment of dento-facial deformities.

The Commission expresses concern over the lack of emphasis on research in most health department programs. Dental public health personnel are best equipped to conduct investigations in a number of important fields, and it is unlikely that rapid progress will be made unless official health agencies assume this responsibility. Among these problem areas are the lack of generally-accepted indices for the measurement of malocclusion and periodontal disease, of information about how and where these diseases occur in the population, of rapid and adequate testing of new preventive procedures, and of knowledge about the behavioral characteristics which influ-

ence an individual's health behavior. The lack of knowledge in these important fields is illustrated by the fact that the promotion of water fluoridation has had a high priority for more than a decade, yet little more is known about why communities reject fluoridation, or how it can be more effectively presented, than was the case in 1950.

The specific deficiencies noted in current dental public health programs reflect basic weaknesses in their staffing and financial support. One of the major needs is for a greater number of well-trained, capable dental public health personnel with imagination and initiative. The modern public health dentist is a specialist requiring skills as unique to his practice as those peculiar to the orthodontist or oral surgeon. Very few dentists possess these skills and not many are interested in developing them, since they are quite foreign to those necessary for the successful practice of clinical dentistry, the goal of most members of the profession. Furthermore, the financial remuneration is considerably below that of most other areas of dental practice. To help alleviate the shortage of competent public health personnel the Survey report calls for an expansion of the federal public health traineeship program and the dental officer career development program of the Public Health Service, increased recruitment activities to present the opportunities for a career in public health to dental and dental hygiene students, and the greater use of adjunct personnel in public health dental programs. Since a major barrier to recruitment has been the low salaries offered by many official health agencies the Commission recommends that:

> Health agencies recognize the necessity of maintaining salary schedules comparable to incomes in private practice in order to attract and hold competent individuals.

An equally serious barrier to improving dental public health programs, and one that is intimately connected with the current shortages of personnel, is the very insufficient financial support. In a survey of state health department dental divisions conducted by the Council on Dental Health of the American Dental Association in 1958, dental directors were asked to estimate, in cooperation with their state dental societies, the funds and personnel necessary to develop a satisfactory program over a five-year period based on reasonable, not ideal, projections. These estimates indicate that an ade-

quate expansion of dental public health programs would raise the expenditures for dental health on the state and local level from the 1958 total of 3.7 million dollars to 16.7 million the first year. At the end of the fifth year, presuming that a gradual expansion had occurred to meet current needs, the total expenditures would increase to 28.5 million dollars, a seven-fold increase over 1958 levels.

As early as 1940 the American Dental Association recommended federal legislation to establish categorical grants-in-aid to states for dental public health programs to supplement state and local funds. Earmarked federal grants, now made to states for more than fourteen different types of health programs, have become the basic mechanism for federal-state cooperation in public health. Because of the lack of a specifically earmarked grant for dental health activities, state dental divisions have become a poor stepchild to other programs in the health department. The American Dental Association has indicated that a strong effort will be made in the near future to obtain a categorical grant-in-aid for dental health programs. The Commission supports the efforts of the dental profession, and other interested groups, to obtain more satisfactory financial support for dental health activities at the local, state, and national level and recommends that:

> A categorical federal grant-in-aid to the states be established, specifically earmarked for general dental health programs.

Financing Dental Care

Although cost is not the only barrier to the utilization of dental service, there is abundant evidence that it is one of the more important. For example, it has been shown that, in a group with the same educational background, the frequency of visits to the dentist is strongly correlated with family income. Similarly, the utilization of dental services increases sharply in a low income group when the barrier of payment is removed. Any analysis of the type of group action that can be taken to solve the dental health problem must consider possible ways to improve methods of payment for dental care.

The most important development in recent years has been the increasing number of dental care plans organized by private groups, such as industry, labor unions, and consumer cooperatives. Privately sponsored plans grew slowly until quite recently when, with adequate

protection achieved against medical and hospital costs, labor unions have shown increasing interest in purchasing dental benefits, whether through their own funds or through welfare funds which administer "fringe benefits" accepted by the union in lieu of wage increases. Although the number of dental care plans in existence is still very small, they have shown a significant growth. It is estimated that about 75 of the 130 plans now in operation can be described as offering "regular" benefits, including fillings, and over 50 of these have been established during the past decade. The number of individuals covered by some type of dental care plan (exclusive of the very restricted Blue Cross-Blue Shield plans) has risen to close to a million, double the number who had any form of protection as recently as 1955.

Dental care plans differ in many ways, particularly in the mechanism for providing professional service, the type of group that contracts for service, and the methods used to reimburse the dentist. At the present stage of development, there appears to be no one type of plan which merits universal adoption. The value of a specific type of plan can be determined only by how well it meets the needs of the individuals or groups involved. Because it is evident that much more experience is needed in the group purchase of dental care the Commission recommends that:

> Experimentation in methods of providing and paying for dental care be increased; that foundations, labor unions, corporations, and governmental agencies provide funds to support such experimentation.

One of the most significant developments in recent years has been the organization of state-wide dental service corporations. A dental service corporation is not a dental care plan as such, but a legal mechanism by which the dentists in a state can negotiate with interested groups, contract for service, and administer the provision of care. They represent an advanced development of the principle of meeting problems through organization and joint action. The Commission recommends that:

> Dental service corporations be organized by all state dental societies to facilitate the development of plans for the group purchase of care.

Dental Care for Children

Recognizing that progress in many areas cannot be made overnight, the Commission places primary emphasis on improving the

oral health of children. This report calls on states and communities to initiate programs to assure that all children receive complete dental care. To achieve such an objective will require an all-out effort along several lines, including greater research activity, strengthened health department and school programs, more rapid development of dental care plans, and the provision of dental care at no cost, or at reduced fees, for the indigent. Believing that the best hope of improving dental health conditions in the future lies with the children of today, the Commission recommends that:

> States and local communities design and initiate incremental care programs for children, covering six-year-olds the first year and adding new groups of six-year-olds each year until all children through high school are covered.
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> A. The cost of such care to be met by the family if family income is sufficient.
>
> B. All children from indigent families to receive care at community or state expense, with assistance by financial grants from the federal government.
>
> C. Programs to be developed under which communities or states would provide partial payments for dental care, also with federal assistance for children of low income families who are not indigent.

The responsibility of the community, acting through local, state, and national government agencies, for the welfare of the indigent is almost universally accepted. In theory, at least, government units do now generally accept the responsibility of providing dental care for the needy. In practice, however, provisions for care vary widely, are usually inadequate, and frequently are altogether non-existent. If dentistry is an essential part of adequate health service, it would seem reasonable that it should be made available to all who cannot afford to purchase it. Such a goal may not be attainable at this time because of the lack of dentists and shortage of welfare funds. The absolute minimum goals for the present should include, however, at least the provision of care for all needy children. Children should not suffer the irreparable effects of dental neglect before they are able to assume responsibility for their own welfare, simply because of the misfortune, ignorance, or carelessness of their parents.

Dental Manpower Resources

Within the short span of 15 years it is estimated that the population will grow from 180 million to a possible 235 million—an increase of some 55 million persons. A total of 134,000 dentists will

be required by that time merely to maintain current ratios of dentists to population. However, if dental school enrollments continue at the slightly expanded level projected for 1964, the total number of dentists in 1975, both active and inactive, would increase to only 118,000—leaving a deficit of 16,000 practitioners. To train this additional number of dentists within the next 15 years would require approximately a 75 per cent increase in the capacity of dental schools by 1970.

Actually there is good reason to believe that present ratios of dentists to population will not be large enough to meet the demand in the future. The steady advance in the educational level of our population will inevitably create new demands for care since it is largely the better educated person who is most likely to appreciate dental health and to seek the services to attain it. And because it is the person with an income sufficient to permit a reasonably decent standard of living who is most likely to seek dental services, the steady rise in real income levels will also contribute to the increased demand. These projected increases in demand will continue the trend of past experience, which has shown an increase of 114 per cent in annual per capita expenditures for dental care (in constant dollars) during a 23-year period. Other factors, less predictable but nonetheless likely, may further increase the demand for treatment. Any sizeable increase in the number of dental care plans, particularly those involving third-party payment, or in government welfare programs, would have a sharp impact on dental manpower supply. On the basis of several projections this report estimates that, if no increase occurs in dental productivity, the actual deficit in the supply of dentists may reach as high as 50,000 to 70,000 dentists by 1975.

This deficit, of course, is measured in terms of present productivity. The greater utilization of auxiliary personnel could increase productivity enough to compensate for as much as 24,000 of this deficit, and the widespread use of improved dental equipment could result in the saving of professional time equivalent to another 2,000 dentists. The further extension of water fluoridation could bring about a reduction in dental needs equivalent to the services of an additional 3,400 dentists. However, after allowance is made for all these possible savings, a deficit as high as 30,000 to 40,000 will remain.

Although it would be logical to attempt to train enough dentists to overcome this deficit, it is doubtful if this goal would be realistic. This report recommends a minimum objective of expanding dental school enrollments sufficiently to produce the 16,000 dentists needed to maintain the current ratios of dentists to population in the face of population growth.

The balance of the deficit must be made up by reducing the need for treatment through the use of preventive procedures and increasing the productivity of the dentists that are available. Improved equipment and more efficient methods of office organization can contribute to raising the level of productivity, but the major change will be dependent on a marked increase in the use of auxiliary personnel. However, the use of auxiliary personnel will not make a full contribution to reducing the deficit in manpower supply unless present patterns of utilization are modified. The dental profession must analyze the technical procedures in the dental office and thoughtfully determine those that can be delegated to lesser-trained personnel.

The role of aides in the practice of medicine is in striking contrast to the current pattern of dentistry. If physicians were as hesitant to delegate selected types of patient care as are their dental colleagues, most hospital wards would require, not a supervising nurse, but a full-time physician. Hopefully, future developments in dental practice may follow the pattern established by medicine. If so, the basic premise behind most state practice acts, which attempt to maintain standards of care by defining specifically the types of duties that may be performed only by a dentist, must be changed. The same objectives could be attained better if the legal requirements simply held the dentist responsible for all procedures performed under his direction and required him to supervise all the work of auxiliary aides. Such requirements would free the profession to experiment with new patterns of utilization, and to increase productivity by utilizing auxiliary personnel to the fullest extent compatible with high standards of patient care.

Summary

The Dental Health Section defines the extent and nature of the dental health problem—a problem compounded of a high attack of dental disease complicated by widespread failure to utilize the available

preventive and treatment procedures. After defining the impact of dental diseases on the American public it suggests methods for solving the problem through public action. The basic mechanisms that are suggested are the strengthening of preventive, educational, and treatment programs; developing methods for payment of dental service to reduce the extent to which cost is a barrier to the utilization of professional service; assuring complete treatment for all children; and increasing the supply of dental manpower to assure that adequate resources will be available to meet future treatment demands.

It was suggested in the introduction that poor oral health is so common that for many individuals it is more a part of normal living than a source of concern. It is equally easy for the aggregate dental health problem to become so familiar to those who face it every day that it becomes not a source of concern but a normal part of life. One of the major functions of the Commission on the Survey of Dentistry in the United States is to dramatize the problems posed by dental disease, to re-emphasize their seriousness, and to point to the actions that must be taken if the next generation of Americans is to enjoy a significant improvement in oral health standards.

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Dental Practice

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The dentist still is regarded by too many as only a highly skilled technician to whom to turn when trouble develops in the mouth. The image of the dentist as a professional man who renders services that prevent trouble is not always sharply outlined in the public mind. Nor do people generally understand the importance of a healthy mouth to physical and mental well-being. Perhaps dentists have become so skilled in producing artifacts that the public relies more on them for reparative treatment than for the more truly preventive services the profession is able to supply.

Surveys indicate that dentists realize they have the major responsibility for educating the public to the value of oral health and to the benefits derived from the application of such preventive procedures as water fluoridation, topical fluoride applications, dietary improvements, routine prophylaxes, and regular visits to the dentists. Studies also reveal, however, that dentists are not taking a very active role is promoting health education and preventive procedures, especially outside of their own offices.

Public apathy toward dental service arises partly from ignorance. Through its national organizations, dentistry has made increasing efforts to educate the public. Individual dentists should utilize every opportunity not only to inform their own patients, but also to inform their communities concerning the promise of oral and mental health that preventive dentistry offers. Only when the public appreciates the value of preventive dentistry, and all dentists embrace its philosophy and practice, can dentistry meet the need of the people for dental care and fulfill its role as a profession. The Commission recommends that:

1. All dentists participate vigorously in community public health projects, and
2. Dentists recognize increasingly the pre-eminent importance of preventive dentistry by utilizing all available preventive measures in their practices and by educating their patients in the value of prevention.

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In considering the preventive approach to oral health, special notice should be taken of orthodontic problems. Survey data reveal a wide discrepancy between the need for orthodontic treatment, the increasing demand for such care, and the number of qualified specialists to provide the service. Reports indicate that the active case-load for the average orthodontist is about 100 patients. There are fewer than 2,500 orthodontists in the United States. It is evident that only a small proportion of children can benefit from treatment by orthodontic specialists.

In order to improve dental health through the prevention and treatment of malocclusion, the Commission believes that there should be more scientific inquiry into orthodontic treatment methods and interceptive procedures in order to determine how this service can be made more readily available. The Commission recommends that:

> The dental profession and the dental schools take appropriate action to narrow the gap between the need for prevention and treatment of malocclusion and the services available to meet the need.

It is unlikely that dental schools will be able to graduate a sufficient number of dentists in the next ten years to maintain the current ratio of dentists to population, yet the improving economic and educational levels of the population, the developing use of pre- and post-payment programs for dental care, as well as the growth and urbanization of the population will create an increasing demand for dental treatment.

The preventive approach to better dental health for more people will not in itself solve the dental manpower problem. More time must be gained in other ways. Three ways particularly commend themselves to the Commission. They are the establishment of more group practices; the use of multi-chair offices; and the wider utilization of auxiliary personnel.

Although dentists generally practice "solo" from long tradition, they have tended increasingly since World War II to associate themselves under various financial arrangements, ranging from expense-sharing to actual employment by one dentist of several others. While there are some disadvantages in group practice there also are advantages, including the better utilization of space, equipment, and auxiliary personnel. The ready exchange of professional knowledge and experiences permitted by group association can be beneficial.

There is no question that the use of multi-chair equipment and

auxiliary personnel can increase the capacity of a dental practice, whether group or "solo." One recent study showed that the average dentist working alone annually cared for 704 patients; but using two chairs and two assistants, his treatment output increased 67 per cent, to 1,174 patients annually.

The increasing demand for dental care will necessitate expanding considerably the number of properly trained auxiliaries and delegating to them tasks to perform that heretofore have been considered to be only within the province of the dentist. Before changes are effected, however, careful studies should be made to determine how the auxiliaries can serve the best interests of the public and the profession, and what their training should be.

We mailed a questionnaire to some 20,000 hygienists. Replies were received from 7,700. From an analysis of the data collected, it would seem that the majority of hygienists are no longer in practice, and that it is a part-time occupation for many now active. Most hygienists are employed by dentists in private practice, and one-fourth of them work for more than one dentist. A major portion of their time is spent in giving prophylaxes to adults; only a small part of their time is given to patient health education.

Although the Commission is sympathetic with the desire to improve the educational experience of hygienists, it appears that the two-year curriculum may be over-educating them for the services most hygienists actually perform. The two-year program should permit hygienists to acquire a background that would enable them to perform a number of services under the direct supervision of dentists, comparable to the degree of responsibility entrusted to nurses. Certainly, two years of training are not needed to prepare for the cleaning and polishing of the exposed surfaces of the teeth. Almost half of the states specifically limit the prophylaxes given by the hygienists to the exposed surfaces of the teeth making the subgingival area, the most crucial in preventing periodontal disease, legally out of bounds for the hygienist. Yet most prophylaxes are given to adults, for whom a prophylaxis beneath the gum margin is necessary for good dental health. The hygienist has the choice of violating the law or not rendering maximum service to patients. Even the topical application of fluoride solutions to teeth following prophylaxis has been interpreted in some states as illegal for the hygienist to perform.

These restrictions and the conflicts they produce illustrate the

obsolescence of some dental practice acts and the need for revisions. The contradictions that exist between the legal and practical aspects of dental hygiene must be eliminated if the dental hygienist is to be a more effective member of the dental health team.

The four-year curriculum in dental hygiene should be taken by those who wish to pursue a career as dental health educators—a type of person in short supply in the health education field. Such persons could help to remedy the ignorance now existing about the importance of dental health care and preventive procedures. They would also possess the educational qualifications needed by the classroom teacher.

Hygienists are almost exclusively women, and responses to our questionnaire indicate that over 75 per cent are married, and over 50 per cent are mothers. In order to insure that a higher percentage of dental hygienists remain active, consideration should be given to training more men for this field. While a number of objections can be raised against such a recommendation, we do not believe that necessarily they are valid. It is claimed that males would be more difficult to control and regulate than females. Under the present statutes governing the practice of dental hygiene, the hygienist must work under the direct supervision of the dentist. This ruling, plus the fact that dental hygiene practice requires dental office equipment, should prevent the usurpation of the functions of dentists by male hygienists. Some feel that men might not be satisfied with the income, but our Survey revealed that 63 per cent of the hygienists who worked a full year reported annual incomes of more than $4,000; and some of them worked on a part-time basis. The experiences gained in the Armed Forces in training dental corpsmen for assisting at the chair, and for cleaning teeth justify experimentation in the training of male hygienists by dental hygiene schools located within a college of dentistry where facilities for males already exist.

A key person in increasing the efficiency or productivity of the dental office is the dental assistant. While there are estimated to be 82,500 dental assistants serving the 90,000 dental practitioners in the United States, many of them work part-time and many are not properly trained for the functions that they are expected to perform. Survey findings indicate that about 90 per cent of the assistants have been trained on-the-job by dentists. On-the-job training can result in considerable loss of productive time for the dentist. It is encouraging to note that a number of experiments are now under way to

develop formal training programs for this important auxiliary. The American Dental Assistant's Association is to be commended for the certification program it has been conducting. However, in 1960 only 6,700 assistants had been certified under this program.

There are estimated to be 22,000 dental laboratory technicians in the United States. This number produces a ratio of one technician to every four practicing dentists. However, many laboratory owners report that there is a shortage of trained technicians. Most technicians have received their training through apprenticeship or on-the-job training from a dental laboratory. The extent and quality of the technicians' training has varied widely, and little emphasis has been placed on the ethical relations of the technician to the profession, and to the public. Because technicians have become so proficient in mechanical performance, and because some dentists have entrusted a part of their professional responsibility to them, unfortunate results have occurred. The practitioner who sends a patient to a dental laboratory so that the technician can take the impression for a denture or make a denture repair, leads his patients and their acquaintances to believe that the practice of prosthetic dentistry requires only technical skill and that the laboratory technician has such skill. Because of one dentist's unprofessional conduct, many laymen may be persuaded to support legislation that will permit the public to go directly to the technician for prosthetic appliances.

Some idea of the numbers going directly to technicians is indicated by the findings of a recent survey of public opinion by the National Opinion Research Center of the University of Chicago. Six per cent of edentulous members of the 1,800 families interviewed reported that they had received denture service independent of the dentist. There are thought to be over 22 million completely edentulous persons in the United States. Thus, in the entire population, perhaps well over one million current full denture wearers received service directly from the technician or the dental laboratory.

Every available means must be utilized to educate the public in the vast differences between the role of the dentist and the role of the dental technician. The public and the technician must be made aware that only the dentist is qualified by education and training to diagnose the need for appliances, to plan treatment, to design appliances, and to analyze their functioning in the oral cavity. The Commission believes that dental technicians will be used increasingly in order to provide more chair time for the dentist. The Commission

indorses the certification program for laboratory technicians, as it believes that this will be a strong means for improving the educational background of the technician and for establishing a better understanding of his relation to the profession and to the public. The Commission hopes that a laboratory accreditation program on a national scale can be developed in order to give proper recognition to those laboratories that are equipped to render good technical services, and that abide by the legal and ethical codes governing dental practice. The Commission also approves the legislation that requires the dentist to provide written directions to the laboratory or the technician for the fabrication of restorations.

The Commission believes that more dental health teams headed by dentists, well trained in the science and art of the profession, and supervising the services that can be delegated legally to auxiliary help, can go far in bringing more dental care to more people. However, the Commission strongly feels that the high standards dentistry in the United States has achieved can be maintained only if dental care is rendered under the direct supervision of licensed dentists. That is why it believes that any broadening of the services performed by the auxiliaries should be guided by those who are qualified to understand the problems involved—members of the dental profession. The Commission recommends that:

1. Dentists utilize a greater number of well trained dental assistants.
2. The number of schools for assistants be increased.
3. The dental profession conduct studies designed to develop and expand the duties of auxiliary personnel. The broadening of services should begin with the dental hygienist because there is already an approved program of education and licensure for this group. The legal and educational restrictions against male hygienists should be removed.
4. As soon as the dental profession standardizes the educational programs for laboratory technicians and for dental assistants, consideration should be given to expanding the duties of these auxiliary groups. In the public interest, the education of auxiliary personnel should be carried out under the guidance of the dental profession, and the services performed by all auxilary personnel should be under the supervision of licensed dentists.
5. Dentists in all states be required by law to provide dental technicians with written prescriptions for the fabrication of dental appliances, and these regulations should be strictly enforced.

One of the chief problems confronting dentistry is to decide how to bring more efficiency and economy into dental practice. There is a lack of reliable data on the subject of practice administration. Therefore, the Commission believes that careful attention should be

given to this important subject. The Commission does not think that the best results can come through the reports of individual dentists or groups, given merely on the basis that they have been successful in their own practice administration. Although this information is helpful, the Commission feels that this is a matter of sufficient concern to justify intensive study by trained investigators. These studies could combine the talents of experienced dentists and industrial management consultants. They should study such questions as the merits of "solo" and group practice, the utilization of auxiliary help, office equipment arrangements, time and motion studies, quality of service rendered, costs incurred, and fees assessed.

The American Dental Association currently is sponsoring an independent study of these matters by the members of the staff of the Graduate School of Business Administration of Northwestern University. More research of this type is needed. Surveys indicate that many dentists do not have a sound basis for fee determination and that they use the fees that have been traditionally charged in the community. There is a tendency to recover income losses from preventive services by setting a higher margin of profit in fees for replacement services. The public has become accustomed to paying good fees for the improvements to appearance and health resulting from appliances that replace lost teeth. It has not yet adjusted to paying comparable fees for the time-consuming and skillful services that retain teeth and maintain healthy mouths. Until the public better understands these comparable values, many dentists will continue to assess fees that reflect the public attitude.

With the advent of third party payment programs and with the likelihood that they will increase in number and scope, dental organizations should give serious study to fee structure. Some dental societies, when consulted concerning group purchase of dental care, have been unable to make an estimate of costs that was considered sound. Before fees become firmly fixed in fee schedules, and tables of allowances, reasonable bases should be established that will provide the dentist with compensation commensurate with the value of the service he renders.

Dental education has been so occupied with teaching the science and art of dentistry that little instruction has been given in the basic principles underlying sound practice administration, including fee determination. Dental societies are attempting to overcome the deficiency through lectures and seminars on the subject at dental meet-

ings. A number of courses concerned with efficiency in office management presented by management experts have emphasized the commercial side of practice to the detriment of professional ethics. Despite the high fee charge for these courses and their lack of professional propriety, they have been well attended.

More knowledge is needed to enable dental schools and societies to provide a larger number of high-level courses to meet the evident need. Therefore, the Commission wishes to encourage extensive investigations by competent research groups into the broad area of practice administration, and further it recommends that local, state, and national dental organizations promote studies designed to provide information that will help a dentist establish a sound basis for determining fees. In this area the Commission also recommends that:

1. Dentist and patients have a mutual understanding of treatment plans, including fees for service, before treatment is begun;
2. That local and state dental societies be encouraged to establish and maintain mediation committees to adjudicate disputes between practitioners and patients.

There can be little doubt that State Board examinations have helped to advance dental education and to elevate American dental practice to a position of eminence recognized throughout the world, but modern developments in dentistry and dental education make it desirable to re-appraise the function of the Boards. The proprietary schools are gone and the educational standards of all dental schools must now conform to the requirements of the Council on Dental Education of the American Dental Association. The American Association of Dental Examiners has equal representation on the Council with the American Dental Association and the American Association of Dental Schools. The quality of dental graduates has improved. The dental examiners in the various states are dentists who have accepted appointment to the Boards of their respective states as a part-time avocation. Many have little training or experience to prepare them as examiners. Only a relatively small number remain long in office. In most states the governor of the state makes Board appointments from a list of dentists submitted by the state dental society. The state dental society bears the responsibility of submitting only the names of those dentists whose knowledge, judgment, and character qualify them to serve. Boards exercise too much influence and control over the dental care available to the public to permit appointment of members on the basis of prestige or any type

of politics. The recommendation on this subject is contained in the education section.

In view of the general improvement in the level of dental education, and in the knowledge and ability of dental graduates, examining boards should consider some modification in their licensing policies. For example, licenses might be granted without examination to the recent graduates of accredited schools who rank in the upper part of their graduating class. A precedent for this has been established by Pennsylvania for the graduates of the three schools in that state.

Since dentistry has received a franchise of professional freedom through state dental practice acts administered by state boards of examiners, the profession necessarily concerns itself with every device that will contribute to maintaining the best dental service for the people of the states. To administer examinations for applicants for licensure and to prevent exploitation of the public by poorly trained, improperly motivated unlicensed persons is not enough. The profession should now determine how to insure the continuing competence of those already in practice. Research is developing improvements in preventive practice, diagnosis, and treatment. Many dentists appreciate their need for continuing professional education, but there is no uniform demand by dentists for extension courses. The profession should consider how those practitioners who make little effort to continue their education can be persuaded to attend refresher and postgraduate courses regularly. The Commission recommends that:

> The dental profession explore the possibilities of various programs which might be adopted to insure the continuing qualifications of dental practitioners.

The Commission also recommends that:

> An effective relationship between state licensing boards and the Council of the National Board of Dental Examiners be developed, and that all states accept the results of the National Board examinations.

If a modern hospital overlooks dental health it cannot give the comprehensive health care to which patients are entitled. Together, medicine and dentistry have the fundamental responsibility of serving the total health needs of the community. The future development of community health resources will center around hospitals, and physicians and dentists should be united in making the in-patient and out-patient hospital services complete. Jurisdictional disputes

should not be allowed to hamper professional service to the detriment of the patient's health.

Dental education should include the initiation of students into hospital procedures. Most dental schools have hospital affiliations, and the list of affiliates is growing. Dental students in some schools receive as much as 50 hours of training in ward rounds, history taking, operating room procedures, and hospital decorum. Yet, only 318 dental internships and residency programs approved by the Council on Hospital Dental Services of the American Dental Association are available in 221 of the 430 hospitals that have received Council approval. This number may be so small because there has not been a great demand for dental internships. Therefore, the Commission recommends that:

> A larger number of carefully supervised dental internships be developed in hospitals and clinics, and that dental students be encouraged to enter internships following their graduation.

Of the 6,800 hospitals listed by the American Hospital Association, about one-third reported in 1958 that they had a dental service. A questionnaire was mailed to over 3,500 hospitals that were thought to be without a dental service to determine how many might be interested in establishing one. Over 1,900 questionnaires were returned, and about one-fourth of the respondents indicated that they already had some type of dental service. Of the 1,450 respondents without dental service, over one-third reported that they had given the matter consideration; and over 1,000 said they would be receptive to the idea if the local or state dental society presented a workable arrangement. However, over a thousand also indicated that local and state dental societies had not exhibited an interest in the establishment of a dental service in their hospitals. The Commission recommends that:

> 1. In the interest of total health care of patients, both hospitals and dental societies work for the establishment of more hospital dental departments and encourage dentists to participate in hospital service:
> 2. Hospital dental departments be delegated authority and administrative responsibility similar to the authority and administrative responsibilities of other hospital services.

The Commission also recommends that:

> 1. Dentistry be represented on the Joint Commission on the Accreditation of Hospitals, and
> 2. Dental schools develop courses through which practicing dentists inter-

ested in appointments to hospital staffs may receive basic instruction in hospital procedures.

Closely related to the larger role which dentistry should play in hospitals is a need for dentistry to be a part of all comprehensive health plans. Such plans should include dental consultation and oral surgery as well as dental participation in the treatment of such disorders as oral cancer, cleft palate, and traumatic injuries about the jaws. The Commission recommends that:

> Cooperation be encouraged between the dental profession and health insurance programs of non-profit and commercial sponsors, developed and operated to meet the public need for comprehensive health care.

In this paper, I have presented the recommendations of the Commission regarding dental practice. Because of the limitation in time, this has been done at the risk of being misinterpreted. I hope that I have been able to compress sufficient substantive information with the recommendations to provide enough background for understanding them, and that what is being supplied will motivate you to read the main volume of the Survey when it is available early in 1961.

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Dental Education

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Each person who is here today has a general familiarity with the problems that will face higher education during the next 10 to 15 years. As a citizen and a taxpayer, each of you recognizes that the operating costs of educational institutions have been steadily increasing. It costs more to build new buildings and to obtain more teachers; yet these things will have to be done because more high school graduates than ever before will be seeking college educations. It is important to understand that these problems are to be found in law schools, engineering schools, liberal arts colleges, dental schools, and all the others. Indeed, this is the environment in which higher education presently exists.

Dental education then has these problems of finances, buildings, enrollment, and faculty that are general to all types of higher education, and it has additional problems of its own. However, in a survey such as the one being reported, a constant danger exists that too much emphasis will be placed upon the problems and too little upon that which has been accomplished. Invariably, those reporting wish to be forthright and, in being so, they seek to draw attention to every possible improvement. Consequently, an unsophisticated observer might be left with distorted, incorrect opinions regarding dental education.

Perhaps, therefore, before dental education's future is considered, it should be pointed out that the dentists graduating annually from the dental schools of the United States and Canada are generally believed to be among the best in the world. Also, the standards of dental treatment and of dental education are as high or higher in these two countries than anywhere else. Indeed, the present system of dental education in the United States and Canada is admired by dental educators everywhere. Therefore, dental teachers and schools are to be complimented for their outstanding achievements even though the Survey is suggesting many ways by which dental education in this country could be improved.

Presented at the Los Angeles Convocation, October 16, 1960. Dr. Mann is Professor of Dentistry, The University of Michigan, and Associate Director, W. K. Kellogg Foundation Institute.

Undoubtedly, your greatest interest this morning lies in learning what recommendations the Commission made in this portion of the Survey. The recommendations cover most aspects of dental education: admissions, curriculum, faculties, finances, accreditation, and licensure. In the time available to us I shall read these recommendations to you and attempt to give you a brief explanation of the reasons for each one.

1. Many dental deans and teachers indicated to the Commission a pressing need for better prepared, more highly qualified students in their schools. In 1958 and 1959 (perhaps in 1960), some schools did not fill their freshman class because of a lack of qualified applicants. Also, the scholastic averages of those applying for admission to dental schools in 1959 did not appear to be as high as desirable for those entering the dental profession. For these reasons and others, the Commission recommends:

> That a national recruitment program be established to attract better students, both men and women, in larger numbers to the study of dentistry. Such a program should be under the sponsorship of the American Association of Dental Schools and should include a scholarship and loan program based on merit and need. This program would complement those of individual schools and should be integrated with the recruitment programs of other organizations and agencies. It should also provide for the recruitment of well-qualified applicants, both men and women, to dental hygiene programs and to other training programs for auxiliary personnel.

2. Data collected by the Section on Dental Education indicated that the standards for admission of students appear to be lower than desirable in some dental schools. Students are sometimes admitted with less than *C* averages in their preprofessional studies with *D* (deficient, but passing) grades in required courses. The dental aptitude test is required of applicants by every dental school, but many schools routinely accept students on either a final or provisional basis before the scores are received. The Commission recommends:

> That the admissions standards of the dental schools be reviewed for the purpose of improving the quality of the students admitted.

3. Unlike the report of the 1930's by the Curriculum Survey Committee of the American Association of Dental Schools, this Survey report does not attempt to standardize the content of courses in the dental curriculum. Instead, the Commission encourages curricular experimentation by dental schools, and is disturbed that the dental curriculum is so rigid that in almost every school all students receive

exactly the same instruction and experiences. Therefore, the Commission recommends:

That dental schools make their curriculums more flexible and stimulating. Where possible, honors programs should be arranged for gifted students.

4, 5, 6. Dental teachers and students, recent graduates, dental examiners, and the profession at large voiced the opinion to the Section on Dental Education that students should be given more instruction in practice administration, utilization of auxiliary personnel, and hospital procedures. The frequency and obvious sincerity of these requests convinced the Commission that dentists entering practice have a need for abilities such as these and that the dental schools should prepare their students more adequately in these areas. Accordingly, the Commission recommends:

That dental schools give students more instruction in how to establish and administer a dental practice.

That dental schools have active hospital affiliations and that dental students receive instruction and experience in hospital procedures.

That the dental schools give students more experience in working with auxiliary personnel, especially with dental assistants. Students should understand completely the importance that effective utilization of such personnel plays in the practice of dentistry.

7. A serious problem which continues to face dental educators is correlating the basic sciences with the clinical practice of dentistry. A series of conferences or workshops, both regional and national in scope, would undoubtedly contribute significantly to the solution of this problem and would be of assistance both to individual schools and teachers. These meetings should be planned carefully and held regularly until the content of the courses in the basic biological sciences for dental students is well defined. The time devoted to the subjects, teaching methods, ways of correlating the materials with clinical practice, orientation of students to the need for basic sciences, and similar topics should be evaluated. Another objective should be to integrate the basic science courses with one another so that their total content provides the dental student with a rich background in the biological sciences. The Commission, therefore, recommends:

That organizations such as the American Association of Dental Schools arrange and conduct a series of institutes or conferences for dental teachers to improve the content and correlation of courses.

8. The Commission made several recommendations related to the

quality of teaching in dental schools. One recommendation grew out of the consideration of the facts that 74 per cent of the dental teachers are part time; that the average part-time teacher is scheduled to spend only 8.8 hours per week at his school; that full-time dental teachers spent over 61 per cent of their time in face-to-face teaching, and part-time teachers spend about 80 per cent of their time this way; and that there are too few dental teachers who have engaged in graduate study as a preparation for teaching. Finally, only about 6 per cent of part-time teachers regard teaching as their career, a fact which is to be expected but which is still disconcerting. The Commission, therefore, recommends:

That dental schools improve the quality of teaching by:
1. Enlarging the number of teachers employed;
2. Raising the qualifications required for beginning teachers;
3. Improving the teaching skills of present faculty members;
4. Employing a larger proportion of teachers on a full-time basis;
5. Employing part-time teachers generally on at least a half-time basis.

9. In 1959, more than 40 per cent of the full-time teachers in dental schools had not published a paper within the previous three years; 62 per cent of the part-time teachers had not done so. Similarly, in 1959, about 40 per cent of full-time and 68 per cent of part-time teachers were doing no research. Undoubtedly, this situation is created to some extent by the heavy teaching loads of members of dental faculties, but methods must be found to permit teachers to devote more time to investigation and writing. The Commission recommends:

That both full-time and part-time teachers generally be encouraged to devote more time to laboratory, clinical, and educational research and to other university activities.

10. Most dental students and recent graduates feel that the quality of teaching in the dental schools could be improved, indicating that course organization, teaching methods, examinations, and other important aspects of teaching are frequently at fault. This belief is in agreement with the facts that only 26 per cent of the dental teachers have had formal courses in education, and only about 22 per cent participated in an in-service program in teaching or in dental education between 1955 and 1959.

About 85 per cent of the teachers think they would benefit from an in-service program in dental teaching if one were organized in their own school, but only 19 per cent indicate that their school does

have such a program at present. Accordingly, the Commission recommends:

> That dental schools develop or improve faculty in-service programs on the fundamental principles of teaching and the problems facing dental education.

11. No educational program can be as successful as it might unless it is supervised constantly and evaluated regularly. Although some dental schools have methods for evaluating teaching, approximately 74 per cent of the teachers indicated in 1959 that their schools did not have effective methods for such evaluations. The commission therefore recommends:

> That every dental school expand or develop a program to evaluate the effectiveness of its teaching. The methods to be employed should be decided upon by the dean and the faculty co-operatively, but provision should be made for student participation.

12. The counseling of students is an activity which apparently receives little attention in dental schools. Counseling should be easily available, however, to all dental students who need advice and guidance. Counselors should be concerned with the problems of study habits and motivation, and they should be prepared to guide students in solving problems caused by family or home situations, financial worries, or personality defects. Those faculty members who are assigned such duties should be provided with basic information related to counseling. The Commission recommends:

> That the dental schools develop or improve organized programs for the counseling of undergraduate dental students.

13. If there is any single fact about dental education upon which every interested person is agreed, it is that the dental schools need more adequate financial support. In the 1958-59 school year, the mean salary of all full-time teachers was $8,568, compared to the mean net income of $14,311 for all nonsalaried, practicing dentists. We have already discussed here today the need for better teachers and for more time for them to engage in research and other scholarly activities. We have not referred to it, but I know we would all agree that many dental schools are forced to rely upon tuition fees and income from their clinics to a greater degree than is desirable in an educational institution. Therefore, the Commission recommends:

> 1. That because of the importance of dental education and research to the welfare of the nation, and because evidence shows that most dental

schools are facing difficult financial problems, greater financial support be contributed by:

A. Alumni of dental schools
B. Benefactors
C. Business corporations
D. Foundations
E. State and local tax bodies

2. That universities give more financial support to their dental schools.

14. The pros and cons of federal aid to education have been argued in the public press and elsewhere for the past several years, and serious problems of philosophy, tradition, law, and administration attend direct appropriations for buildings, salaries, and other operations.[1] However, the majority of the presidents of the universities having dental schools favor federal aid to dental education, as do the deans of the dental schools. Further, the official positions of the American Dental Association and the American Association of Dental Schools favor federal aid so long as admissions policies and the curriculum are in no way affected. In view of these facts and the serious need for improved financial support for dental education, the Commission recommends:

> That the federal government assist dental education by providing funds for operational expenses, as well as for new construction and remodeling, and for scholarship and loan funds for dental students. This assistance should not interfere with university autonomy in admissions policies and curriculum content.

15. The expected rapid growth in the population of the United States, together with the increasing demand for dental services, clearly indicate the need for an immediate expansion of dental manpower. Because the factors affecting and perhaps modifying the need are extremely complex, it is difficult to determine exactly how much expansion is needed. Improvements in the education of the people and in their standards of living, group purchases of dental care, fluoridation of public water supplies, more efficient office management and organization, greater use of auxiliary personnel, the increased use of highspeed dental equipment, and other factors, will all influence the nation's dental manpower requirements. An acceptable goal, however, appears to be to maintain the present dentist-population ratio during the next fifteen years, but to do this it will be necessary to increase markedly the capacity of the dental

[1] Harlan Hatcher, An address to The University of Michigan Club of Washington, *The Ann Arbor News,* February 25, 1960, p. 19.

schools of this country by 1975. These conclusions of the Survey regarding future needs for dental manpower agree in principle with those presented recently in the report, *Physicians for a Growing America.* (The Surgeon General's Consultant Group that prepared this report included Harold Hillenbrand and Emory W. Morris among its members.) The Commission therefore recommends:

> That, consistent with high standards, present schools be expanded and new schools constructed to permit the graduation of at least 6,180 dentists annually by 1975. Also, additional facilities should be provided for the training of auxiliary personnel both in dental schools and other institutions.

16, 17. The Commission made two recommendations regarding state board examinations and the methods of licensure used in dentistry. Both recommendations are intended to improve the present system, and they are similar to recommendations included in the Section on Dental Practice. The Commission recommends:

> That every effort be made to improve the quality of state board examinations and to ensure the appointment of well-qualified dentists to the examining boards.
>
> That all state boards of dentistry accept the results of the National Board dental examinations in lieu of their own written examinations, thereby restricting their evaluation to technical and clinical procedures.

18. The Council on Dental Education of the American Dental Association constitutes the greatest single influence on dental education today. Many of the tasks that have been assigned to the Council in recent years, however, have had the tendency to distract from its basic responsibility—accreditation.

The Council should inspect the dental schools more often—at least every five years. It should expect the schools to improve their admissions standards, and it should establish requirements of more free time for dental students. Also, it should seek to improve the quality of dental teaching, to establish minimum requirements of clock hours in the basic courses of the curriculum, and to maintain better standards of dental library science. The complete report of the Section on Dental Education indicates other means that the Council should take to improve dental education, but these are the principal, urgent ones.

In order that the accreditation of dental schools be strengthened, the Commission recommends:

> That the American Dental Association re-evaluate the activities of the

Council on Dental Education for the purpose of permitting the Council to perform its function of accreditation more effectively.

These are the eighteen specific recommendations that the Commission is making regarding dental education. In addition, it appears to the Commission that American dentists and dental schools need a philosophy that would permit the basic biological sciences to be integrated more clearly into the pattern of dental practice and dental education. If such a philosophy were developed in a form that could be generally accepted, the dental care of the nation would improve. Practicing dentists would find greater purpose in their work than they sometimes do when performing merely the endless, sometimes futile, repair of the ravages of dental caries and other diseases. Likewise, the dental student would develop a greater pride in the profession of dentistry.

During the past fifteen or twenty years, an ever-increasing group of dentists, most of whom have had some special training in periodontics, have found a way of dental practice that is extremely satisfying to them. Today they are truly combining the basic biological sciences, oral diagnosis, the prevention and treatment of soft tissue lesions, occlusion, and restorative procedures most effectively. These dentists are general practitioners who have studied periodontics on a postgraduate or refresher basis and who, although not regarded as specialists, are following a pattern of practice that utilizes a biological understanding of the supporting structures of the teeth.

As one contemplates the future practice of dentistry and the direction in which dental education should move in the years ahead, it seems most appropriate that the dental schools should seek to develop curriculums, by 1970 at least, which will educate dentists who are much more periodontically and biologically oriented than are today's graduates. The graduate of 1970 should possess many abilities similar to those of the best-trained periodontists of today. Only by a positive, significant change in the philosophy of dental education to some concept of this type can the dental schools break from the traditional pattern of dental teaching and can they prepare their students to make fuller utilization of the basic sciences. At the same time, the goal suggested is one that is clear, one that has been achieved by some dentists, and one that probably would be acceptable to most. In fact, if tomorrow's students were able to choose, they would very likely prefer to be educated in this manner.

The concept that is being suggested would permit an interesting, integrated curriculum because it would become a frame of reference that would make most parts of restorative dentistry more meaningful. If major emphasis were being placed upon the health of the supporting structures of the teeth, then the restorative procedures of operative dentistry, crown and bridge prosthesis, and partial denture prothesis would take on new significance. They would not be mechanical; they would be preventive. No longer would a particular type of cavity preparation or a choice of restorative material be a major consideration in itself; these things would be valued for their contributions to the total oral health of patients. Contours of restorations, fine cervical margins, and proper contacts would be contributions to the prevention of periodontal disease, not feats of technic.

Oral diagnosis would receive major emphasis within the curriculum, and a great part of the clinical work would be oriented to the complete treatment of patients. Periodontics and occlusion would provide the framework to which operative dentistry, endodontics, crown and bridge prosthesis, and removable partial denture prosthesis would be related. The teaching of these latter subjects would be about as it is today, but it would assume a somewhat different direction of purpose. Probably the time devoted to periodontics would be increased generally, and the time used for complete denture prosthesis would generally be decreased. There would be more emphasis upon applied basic science courses, and the whole concept of teaching would allow the maximum correlation of the basic sciences with clinical dentistry.

Oral surgery, complete denture prosthesis, dentistry for children, and orthodontics would be integrated with the other types of dental treatment that have been discussed, but these parts of dental practice would retain approximately the same separateness that they now have in the teaching program. This is reasonable because, except for oral surgery, they deal largely with the young and old. These subjects would remain as important parts of the curriculum, and they would be integrated through their contributions to prevention.

For a long time, the dental schools have been faced with a challenge to correlate the basic sciences and clinical dentistry, but it is now time for them to act. Dental education should be made more truly a university discipline, and the public should be given

the advantages of more complete dental services. Although the challenge is not new, it has not yet been met. Some schools have done better than others, and several of the specialized fields of dentistry have made praiseworthy progress. However, there can be little disagreement with the idea that each school should seek the way in which it can meet this challenge more effectively. More experimentation is needed in our dental schools. Furthermore, such experimentation would attract good students.

The exact methods of accomplishing these improvements must be left to the schools, but the goals must be attained soon. Dental education has an obligation to the public and to the profession to provide leadership in raising dental practice to the highest possible level of quality. In conclusion, the suggestions included in the report on dental education have indicated a way in which the unequalled restorative skills of the American dentist can be retained and given increased purpose within a more biologically-oriented form of practice. Within this framework the essence of dental education would be recognized for what it truly is—an intellectual discipline oriented to highly developed motor skills.

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Dental Research

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Of all the avenues leading to better oral health, the most promising is research. One investigator, if he should discover a widely applicable means of preventing or reducing the incidence of periodontal disease, for example, might do more for oral health than several thousand practitioners of restorative dentistry.

But, in terms of time and money spent, in terms of recruitment and training of personnel, and in terms of having a favorable environment, dental research for years has lagged seriously in proportion to the importance of its possibilities. The population of this country now spends approximately two billion dollars annually for dental care—about one-tenth of the twenty billion dollar expenditure for all health care. Yet only about one-third of the dental ills of the population are being treated. If everyone were to receive the dental care he needs, the dental bill would be over five billion dollars a year. No other area of the body costs as much for its upkeep as the mouth.

Annual expenditures for dental research have increased steadily for the past 30 years, particularly during the last 10 years. But in 1958, the year for which the Survey data was collected, the expenditures still totalled only about $10,000,000, or 2 per cent of the amount spent on health research of all kinds. If expenditures for dental research bore the same relation to the expenditures for all health research that the expenditures for dental care bear to general health care, about $50,000,000 would be the current annual investment in dental research.

The federal government, through the National Institutes of Health, has provided much of the financial support for the expansion of dental research in the past decade. Of the $6,300,000 expended for the research projects in 1958 that were tabulated by the Survey, $4,700,000 was provided by federal agencies. The university contributions that were reported totalled $790,000; industry $458,000; and philanthropy $221,000. Industrial sources reported a total of over $3,000,000 spent for dental research, but the bulk of it was spent

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Presented at the Los Angeles Convocation, October 16, 1960. Dr. Kesel is Professor of Applied Materia Medica and Therapeutics and Head of the Department, University of Illinois College of Dentistry.

within their own organizations developing their own products. Many of the large industrial concerns were reluctant or found it impossible to supply data. Accurate information therefore about industrial expenditures for dental research is not available.

Of more than 4,000 philanthropic foundations listed in *American Foundations and Their Fields,* only six mention dentistry among their fields of interest. Perhaps because dental disease seems to lack dramatic appeal, dental research has received less financial support than research concerning other disorders. Cleft palate and lip are very distressing and deforming congenital abnormalities that are estimated to occur once in every 750 to 800 births. No national foundation has been established in behalf of its victims, comparable for example to that for cerebral palsy, which affects only 7 in every 100,000 births. Therefore, the Commission recommends that:

1. Financial support for dental research be increased, not only from federal sources but also from individuals, philanthropy, and corporations. The increase in financial support should be commensurate with the increase in the availability of research personnel.
2. A non-governmental agency be established for the solicitation and distribution of grants from industry and philanthropy for the advancement of research in the cause and control of oral disease.

Personnel

Most crucial to the improvement and expansion of dental research is the procurement of adequately trained personnel with sufficient time to devote to research pursuits. There is no point in securing funds for research if they cannot be profitably spent. Dental science is making rapid progress in the recruitment of personnel, particularly since the inauguration of the fellowship and training programs sponsored by the National Institute for Dental Research.

There are about 600 students now enrolled in graduate programs. If this enrollment is maintained, about 200 will become available for research each year. It costs about $15,000 a year on the average to support a researcher in his project. Thus, it seems likely that dentistry could absorb annual increments of $3,000,000 in funds, beginning immediately and continuing until 1970, when the total annual expenditure, coupled with what is now being spent, would be around $40,000,000. This calculation is based on the present rate of expansion and does not contemplate any sudden increase in the number of scientists entering dental research.

In our Survey, 45 dental schools reported a total of 878 individuals conducting research. Four hundred and eighty-five of them were designated as principal investigators. Research, however, is a part-time occupation for most faculty members. So heavy were the demands of teaching and administrative duties, or of dental practice, that 169 researchers reported that less than 10 per cent of their time was spent in investigatory work.

The best source for the recruitment of future researchers is the undergraduate dental study body. In order to develop this potential fully, the academic environment must stimulate the interest of students in research. The most strategic approach to the motivation of students is through faculty example. Only if instructors are interested in and informed about current research, and only if they encourage intellectual curiosity will research be integrated with teaching. The integration of research with teaching should not and will not make researchers of all students, but it can interest those who have the capacity for research, and it can motivate those who want to become practitioners to continue their education after graduation.

A number of schools are using faculty seminars to interest their instructors in research. There, faculty members present information concerning research in progress and discuss plans for research development or application to practice. When a respected clinical teacher who is a successful practitioner has a negative attitude toward research, he puts up an almost insurmountable obstacle to developing proper student interest in research, but a faculty member well-informed about research is not likely to belittle it in order to mask his own ignorance.

Many clinical teachers have good reason to neglect research. Although they may have the aptitude and the inclination for it, their heavy teaching loads leave them little time for any academic pursuit other than checking the technical progress of more students than they can teach effectively. Were they given time and encouragement, they might well conduct controlled clinical studies to determine where the findings of research can be applied to clinical practice. Research findings are not generally accepted until they have been confirmed by impartial observers. The clinical teacher and the dental student therefore can contribute to and benefit from the development of clinical investigations. There are now too few dentists with sufficient knowledge of research methods to determine the value of research findings in practice. The Commission recommends that:

1. Dental schools initiate or reinforce programs designed to stimulate faculty interest in research in order to improve the interest in scholarly pursuits.
2. Dental schools enlarge their faculties to provide more time for research for those who are competent to engage in it.
3. Dental schools develop and improve programs which are designed to interest dental students in research and teaching.

An obstacle to the development of student interest in research is the unbalanced emphasis that has been placed on clinical instruction. There has been a tendency for some universities, particularly those that are privately endowed, to count on income from the clinics to support their dental colleges. In order to produce income for the university, dental students have been required to spend a disproportionate amount of time in the clinic rather than in the library or laboratory. Under these conditions, training in clinical skills is likely to displace scientific education and research.

Privately endowed schools are handicapped in securing federal support by the matching grant requirement. While state-supported institutions usually find it possible to obtain appropriations equal to those offered by the federal government, the private schools find such matching extremely difficult. The Commission recommends that:

Federal assistance provided under the Health Facilities Act be liberalized to provide effective assistance to all dental schools for the expansion and improvement of their educational facilities.

The Commission believes that there should be a re-appraisal of the overhead cost stipulations that accompany research grants. Since much of any future increase in research allotments undoubtedly will come from the federal government, the Commission is particularly disturbed at federal policy in this regard. Although the federal government will pay the full cost of federally financed research conducted by industry, it allows universities to spend for overhead only 15 per cent of the grants it makes to them for investigation in identical areas. This unrealistic stipulation has caused some universities to refuse research appropriations, or to draw on their capital reserves, or to curtail teaching activities in order to meet the overhead. Therefore, the Commission recommends that:

The federal government in its support of research and training in the fields of health adopt the principle of payment to the universities of the full overhead costs.

Dental education and research have been, and still are, too

often isolated both physically and intellectually from the rest of the university. The problems of dentistry, like those of all specialized areas, are related to problems in many disciplines. Dental schools alone cannot provide the preparation for either the number or the variety of investigators needed in dental research. Competent scientists from other disciplines must be recruited, not only to increase the number of dental researchers, but also to improve the quality and quantity of dental research by supplying new approaches to its problems.

Recruitment from other disciplines should not overlook the social sciences. Dentistry has its epidemiologic, its economic, its social, and its educational problems. These are the more urgent because they have been long unrecognized; or if recognized, unexplored. Attempts have been made to secure grants for such studies, but too often these studies are so poorly designed that the requests have been denied. Although a few dental schools have developed satisfactory relations with other university divisions, with much benefit to their educational and research programs, they are the exception, not the rule. A larger number of researchers with basic science background can expand dental research in areas insufficiently explored or as yet untouched. The Commission recommends that:

> Universities assume more responsibility for the development of close relations among their dental schools and other health science schools and graduate departments in order to promote exchange of knowledge and ideas. It further recommends that:
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> 1. Substantial federal funds be made available for the recruitment and training of competent scientists from dental and other fields of science to do research in dental schools: and
>
> 2. Research efforts be broadened to include more projects in the fields of the social sciences and education, and that the collaboration of the appropriate university departments be enlisted for such study.

The establishment of the fellowship programs by the National Institute for Dental Research, and the recent inclusion of dentistry to the extent of about 1 per cent of the total research training grants provided by the National Institutes of Health, is probably the most important single step yet taken to elevate and improve dental research and education. There are approximately 250 graduate courses in 30 basic health and clinical science disciplines now offered in 35 dental schools and other dental institutions. Registration figures indicate that there are approximately 600 students enrolled in the courses. Obviously, many of the available courses do not have a high enrollment. The Commission recommends, therefore, that:

1. Financial support for fellowship and training programs be augmented.

After completing the post-doctoral fellowship program and before becoming eligible for a senior research fellowship, a number of trainees are absorbed into dental faculties and given teaching assignments that provide little time for research. Some supplement their salary by part-time practice, thereby further reducing their time in research.

In order to permit teaching institutions to utilize better the training and experience of those who have completed post-doctoral fellowship programs but have not gained sufficient stature to apply for senior fellowships, additional financial support must be found. Therefore, the Commission recommends that:

1. A form of fellowship be created between the post-doctoral and senior fellowships for career development and that it be supported by federal funds.

Recognizing the need for criteria to be applied to the many types and brands of materials used in dental restorations, metals, plastics and the like, the American Dental Association in 1928 established a working relation with the National Bureau of Standards located in Washington, D. C. The Association has continued its support and the program has grown until now eight permanent and nine temporary American Dental Association employees are stationed at the Bureau.

Chemical, pharmacological, and clinical research has produced and will continue to produce new drugs and preparations that are potentially useful in dentistry. These agents also require evaluation. To do this the American Dental Association established in 1930 the Council on Dental Therapeutics. The creation of this critical, objective agency to appraise these products stimulated investigators and manufacturers to do much more research before marketing products. Budgetary support for the Council comes from the American Dental Association, which because of competition for funds by its many activities has not been able to subsidize the Council adequately. Therefore, the Council's direct participation in research and in the analysis of pharmaceutical preparations, while very beneficial, has been limited. In anticipation of a continuing flow of new drugs, every effort should be made to protect the public and the dental profession. The Commission therefore recommends that:

1. There be an expansion of facilities for the evaluation and standardization of pharmaceutical preparations used in the treatment of dental disease.

The new knowledge that research produces must be communicated to be understood, and must be applied to have practical value. The means of doing this in dentistry, as in other specialized fields, are principally two—publications and verbal reports delivered at meetings. The chief publication in this area is the bi-monthly *Journal of Dental Research,* which since it was established in 1919 has increased the number of its articles from 32 to more than 300 per year. In 1959 the Editor estimated that he had a backlog of 40 manuscripts which could not be published within the year because of space limitations. This backlog may be relieved somewhat by two new journals:

1) *The Archives of Oral Biology,* which made its appearance in August, 1959;

2) *Dental Progress,* published by the University of Chicago Press, which began publication in the Fall of 1960.

Its plan is to give early publication to condensed research reports that have a clinical application.

The best attended meeting on research is the annual session of the International Association for Dental Research, in which the number of papers presented has grown from 2 in 1922 to over 300 in recent years. Despite the surge in papers read and articles published, however, there is still very often a considerable lag before research results are translated into practice. The Commission recommends that:

> Communication of research findings to dental teachers and to practitioners be accelerated and that federal and other assistance be provided for the dissemination of research information by the use of publications, seminars, and institutes.

The progress dental research has made is promising, and when this research has better financial support, and larger numbers of well prepared investigators become available, the result should be much less suffering from the physical and psychological effects of oral disease.

808 South Wood Street
Chicago 12, Illinois

What Is an American

RUFUS B. VON KLEINSMID, A.M., Ph. et Litt.D., LL.D.
Chancellor, University of Southern California

This is a very auspicious occasion. It would not be frequently, I am sure, that a College of such dignity in its profession, purpose, and practice would meet in any one city of the United States of America since its parish is the world.

We are to be congratulated, we members of this historical City of the Angels, that you have come to us this year for the sessions of your august organization. We receive many distinguished groups in Los Angeles and we shall continue to do so. As they grow larger and larger, so shall we. If their membership expands, we shall build an addition to our Sports Arena. Anyway, true to the spirit of the West, of the nation, we hold out our hands in warmest welcome, feeling ourselves honored in your acceptance of our invitation and wishing to place all we have at your disposal that your meeting may be a success.

This is a great land in which we live. There may be other folk who think of other lands in exactly the same terms which we would use in connection with our own, but somehow it is very difficult for us to realize that any land can be so favored, that any other area can be so blessed with materials, men and women, and opportunity as this one in which we live. And we stand among the nations of the world as an object of peculiar envy and of peculiar ability to serve, because we are a favored land.

We call ourselves Americans, but what is an American? Is there such a thing as *homo Americanus?* Is there a being who by and in and of himself because of his forebears has a right to say, "This is my own, my native land"? Yes, with proper bows, I suppose, to other and older nations in the world, it would be perfectly proper for him to say so. But by dint of circumstances, that very statement requires some explanation.

You recall, even though you were not here, the doughty navigator who wheedled from the good Queen her family jewels, and favored with the winds went out across the seas in search of what came to be

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Address, Los Angeles Convocation, October 16, 1960.

known as America. The signs were favorable; his hopes were realized. Some wag said he knew he came to America because of the labels on the tomato cans that were floating by on the waves. But he knew he had come to some land of promise (even though it was the West Indies); some land of riches, some land of peculiar favor of Heaven. And then what transpired is so recent as to be fresh in the mind of every school boy and every school girl under the Stars and Stripes. *This* is the New World.

Is the only true American the individual that Columbus and his crew found upon the islands adjacent to our coast? I don't know. He was here when the first Europeans arrived, but he gave evidence that there were others here before him, before the multitudinous tribes which spread their happy hunting grounds across the face of this continent. There were the Aztecs, there were the Toltecs, and before the Toltecs there were the nondescript groups that we classify under the general term of Indian; they were the habitants originally.

Where did the American come in as we know the American? He came for peculiar and sufficient reasons. He came from England to find freedom for the expression of his faith. He came from Holland for the same reason. He came from the institutions of the world in order that he might be given one more chance. He came to find health as well as wealth. But he was not an American. Indeed, I don't know when first we began to claim an American citizenship and an American civilization. But this I do know; that by the time I came along to earn my particular square foot, give or take a little, there were more Germans in the city of Chicago than there were in any other city of the world with one exception, and that exception was Berlin, the capital of the German Empire.

There were more Germans in Milwaukee than there were those who could have called themselves rightly natives to the American soil. In spite of what the television and the radio blurt out repeatedly, repeatedly, and repeatedly, it was not Mr. Schlitz who made Milwaukee famous. It was the German who made Milwaukee famous. Likewise did the German make St. Louis and Cincinnati and Buffalo and Baltimore famous with what he did for these various localities and what was by this time the United States of America. So did your Irish forebears, for there were more Irish in New York than in any other city in the world. There were more Scandinavians in Minneapolis than there were in any purely Scandinavian city on the face of the globe.

How many Danes are there in the area of Los Angeles, for instance? Seventy thousand Danes are located here and in other areas of the state. Are they Danes? Are the Irish, Irish? Are the Germans, Germans? We have 22,000 Greeks scattered up and down our coast. We have Indians from India in very generous colonies. You, on your off moments, are asking friends to take you to Chinatown. The Chinese here, numerous as they are, are as much at home as they were in Hong Kong, as they were in Shanghai, or in Peking; so too the Japanese and the Italians. California has many of her broad acres devoted to vineyards; the largest vineyard in the world is here, one time owned, developed, and perpetuated by the Italians.

But there is one beautiful thing about this composite America of ours. Somehow, fond as we are of the Fatherland—I am very glad to say that *this* is my Fatherland—fond as my forebears were of their Fatherland, fond as the Irish are of Cork, fond as the Scotch are of Edinburgh, they *are* Americans. In other words, it is a peculiar characteristic of our European settlers that they created a new home, that they established a new habitation, and that they became a new nation.

Who are the Americans? Only those who have been here for three generations? Oh, no. Argue that out if you want to with the Irish policeman on the corner. I should like to be there to see it. Argue that out, if you will, with your German professors in your colleges and universities. Argue that out, if you may, with your Greek professional man, with your Scandinavian merchant. These people are, as they have always tended to be immediately, citizens of the country of their adoption.

But you will say, "How can you make an American out of all of this?" You can not make more than one American out of one person, that is true, but in toto we are the inheritance of the culture of the world, the nations of the world. We are Germans, we are Dutch, we are Spanish. This blessed land here still speaks with a Spanish lilt and boasts of its Spanish forebears. If I omitted to name from whence you came, you are just as much Americans nevertheless.

We are from the four corners of the world, settled as no other nation in all the world has been settled, to furnish a home wherein conscience may be our guide, where opportunities may be equally and evenly divided among us, and where that which is desirable for one is obtainable by another, and that which is the reward of one is his reward only to express a responsibility on his part that others may strive for the same reward.

I say there is no other nation in the world like America. We are the present-day wonder of the world. How is it then, that out of all this diverse racial and ethnic composition, we have made the greatest nation in the world? Your forebears gave us something. I like to think, with rather generous praise, that the father and the mother of any American citizen today in his ancestry brought to life on the altar of Americanism the finest civilization of the world.

There are points of difference. How come then that we have been so carefully, so fervently, so ferociously, so everlastingly knit together? Let us overlook minor differences. I think one of the differences which separates us in its influence is religion. But they came for religious freedom. They became a bit exclusive in the opportunity to practice that which they believed, and so religious quarrels sprang up.

Of course, down around Boston we were children of the Pilgrims and if you should give us a name I suppose you would have to call us free churchmen. And along comes a Baptist. I have never observed that a Baptist is less a free churchman than a Congregationalist, but he was not welcome. A little farther on and a land quite as fair, quite as inviting, quite as rewarding was waiting for him, and the Episcopalian and the Lutheran and the Catholic, and what you will and where you may, they spread across the land, living in peace and in harmony for the most part.

The present tendency, labeled with a long and for some rather a difficult word in its pronounciation—we call it ecumenicity—the present trend to ecumenicity, to gather together all of these types of religious faith, may not be all that its adherents and its promotors think it means. In other words, these things have separated us into valiant bands.

I saw it announced in the paper the other day that some 4,000,000 Lutherans of four distinct connections would probably come together to form one religious group. About 20 years ago, different types of Methodist bodies, nation-wide, yea, world-wide, gathered together to make one big Methodist church. Ten million is the number of its communicants. They never stopped to question whether it was a good thing or bad. I merely leave it to you. Then there came the movement where the Congregationalists joined with the Baptists, and another branch of the Congregationalists joined with the so-called Christian church. The movement is on to unify. In numbers there is strength, and we may some day have to have that denominational strength.

But the point I am getting at is that we began long ago to get along with each other. Religion, instead of becoming separatist in its influence upon the lives of Americans, became a unifying force, first, because of the spirit of fairness, and then perhaps from the spirit of don't-careness, then the spirit of willingness to live and let live. Now we are coming together again for the influence of the power that may be resident in numbers. Religion does not any longer separate us.

When on the Sabbath you watch your neighbor go to church, you just have to pick up your old hat and go again. Do you wonder to which church she is going? And having been and returned, do you upbraid her because she had not been an attendant upon your church? No. There is a point at which we practice what we proudly call in America, tolerance.

Politics is separatist in its character. How you all became Republicans I don't know . . . in fact, the lift of the head, the lift of the eye, that proud possession somehow or other seems to mark you as such! Some of you, perhaps with less study of the problem and a little less ambition, remained Democrats!

But why should I waste my time trying to find out? I have a school to teach, I have a business to follow, I have a pulpit in which to preach, and I go about my business, maybe feeling sorry for the man who is not a Republican, or perchance feeling sorry for the man who is not a Democrat. I have made no confession, but this is what I am saying, that that does not stand between me and thee, and it is on that rock of tolerance that we shall never be broken.

And then there is the matter of geographical location which sometimes separates us. It took me two weeks to get to Yokohama on one of the finest steamers that ply the sea, with all the comforts that one can dream up, that one can possibly provide—14 days; then two weeks of rapid activity with all the details of a crowded program, and back to the airport at Tokyo and home in 16 hours. Two weeks to go there; 16 hours to get back. It is an amazing situation.

Geographical location does not separate us any more. I can be in Tokyo day after tomorrow, and I won't have to get up too early either. And as far as packing is concerned, if I don't have what I want when I get there it is so easily obtained and so reasonably.

So I could go on. The things that you are thinking of at this moment that might separate you from your neighbor must be purely personal. I probably could not sympathize with you, I could not

even imagine what these curious little whims of personal views are that drive you apart.

So as American people we are welded together. It may have its disadvantages, you know, and I sometimes wonder. I like it so, and so do you, but do you stop sometimes when things come so easily, when things come so pleasantly, when things come without the cost of, let us say, sweat of the brow or bloody sweat of the brain, and ask "Where is the hitch?" There is a catch somewhere, and it may be that for every nation in the world that looks with gratitude toward the United States of America there is a nation that looks in our direction in envy. Think it over.

I heard somebody say the other day that the world is divided into two camps, one of them under the eager anticipation of the Communist leadership, and the other under the rather lackadaisical hope that the balance of the world won't have to fight to keep freedom alive. When I say lackadaisical I am simply meaning that where everything is as pleasant and lovely and joyous sweetness and light as we know it to be in this country, we are likely to forget that there was a cost to it all. To perpetuate the institutions built upon that cost requires eternal vigilance.

We are not even worried where there is a show of uneasiness. We have a curious expression, maybe a bit crude, where there is a show of the bellicose—somebody wanting to fight something—we say, with your pardon, "Keep your shirt on." I mean we used to say that. Now we say, "Keep your shoe on." That is supposed to quiet the situation. Will it do it? Will it do it for long?

In many particulars, good friends, this is going to be the most serious year of domestic concern that you and I have ever known. You may look back and say, "Oh, no. I remember now when the Bull Moose broke loose; that was the hardest year." Or you may say, "I remember now when Abe Lincoln was sacrificed; that was the worst year." Stop to think with me, and whether you will or not immediately, I am sure the hour cometh, yea, will be, when you recognize this as the most serious day in the political life of the United States of America.

Can you let it go by blindly? No. Why? Because you are an American. You are the inheritors of that with which we are surrounded and are duty bound to pass on to our children and to our children's children. But it requires more than the evidence of confidence and faith and gratitude. It requires good, hard work, built upon a broad,

deep understanding of the problems with which we are confronted.

It is a small world. How frequently we hear that. Yes, it wasn't so small and it isn't so small. It requires more genuine mental energy, more hard-won spiritual success these days to keep what is good, than ever before in history.

You will say, "Why?" In the first place, the world is in a ferment. In your youth and mine how frequently did we hear about the Congo? Perhaps never, other than about nuggets of gold from the Congo. I remember as a boy of 10 or 12 years reading a beautiful story about Tanganyika in Africa. For years I never came across the word again. Well, it is back. South Africa—I have worked for four years beside a great scholar from South Africa and so I have heard frequently of the University of Capetown, the University of Witwatersrand—but for most of us it is an area of an institution not only unknown but we don't care about it. We are not going to do that any more. If we do, the pure, simple, intellectual recognition of the rest of the world which lies outside will never achieve success for us, and the heritage of our children will be wasted in this generation.

> The world stands out on either side
> No wonder that the heart is wide;
> Above the world is stretched the sky,
> No higher than the soul is high.
> The heart can push the sea and land
> Farther away on either hand;
> The soul can split the sky in two,
> And let the face of God shine through.
> But East and West will pinch the heart
> That can not keep them pushed apart;
> And he whose soul is flat—the sky
> Will cave in on him by and by.

Never a truer word spoken. What do our friends in the Far East ask for? Friendship and understanding. What do our friends in Europe, many of them ground under the iron heel of autocracy, ask for? Understanding, and with that understanding the flow of good will. I do not mean the flow of largess. I certainly do not mean the gifts of money or the gifts in kind. I mean that interest that an American can afford to take, because out of it all he is and all he has at one time were made possible.

How are we handling this great wealth? Well, we are said to be the most wasteful nation in the world. Why take up the various criticisms which during a political contest year one is likely to hear

on all sides? Some Democrats don't like us; they think we are losing out. There are some Republicans who don't like us either, and I am sure that practically all the Prohibitionists do not like us too well under the present practice. But with what we have, we have impressed the world. We are wasteful? Yes, we are wasteful. Every nation is wasteful.

I recently came from a country which I could not understand as having become the practice of the table, the practice of the kitchen, the practice of the pantry, merely because the margin of life was so barren. This does not say all that I mean, and I don't want you to think I am taking advantage of the situation of my host, but I never thought of eating sparrows before I went to Japan recently. There is no waste quite so to be condemned as the waste in the land, and in the presence of many, many lands that have so little.

Then there are the spiritual values that we waste. Oh, I just wish you could take a position some day on a broad vista, and from the pinnacle look out over all the possessions of the American people, their art, their music, their gifts of friendship and love, their intimacy and confidence. Here is waste.

Someone in the dank darkness of a Southern prison at the close of the War Between the States wrote a magnificent poem, the last stanza of which is as applicable today as ever it was. What did he say, looking forward to these years that you and I are enjoying in this greatest land on earth, America?

> Long as thy art true, art shall love
> Long as thy science, truth shall know.
> Long as thy God is God above,
> Thy neighbors every man below
> So long, oh, land of all my love
> Thy name shall shine
> Thy faith shall grow.

Are these the riches toward which all men at all times have set their gaze, their hopes, their longings, their anxieties, their sacrifices? My good friends, we have them, and we have them to hold and we have them to keep. Unless the kernel of corn fall in the ground and die, there is no harm in it. But we will not keep this great treasure of ours unless it be vested in human life, the life with which we are surrounded, the life of the brothers and the sisters, the men and the women, the children that are lower but join us at the kitchen fireplace.

Again with my mind I look for a moment upon the far reaches of the great Orient:

> Oh, East is East, and West is West,
> and never the twain shall meet,
> The Earth and Sky stand presently
> at God's great Judgment Seat;
> But there is neither East nor West
> Border, nor Breed, nor Birth,
> When two strong men stand face to face,
> tho' they come from the ends
> of the earth!

Mr. President, if there were ever an audience that spells strength, this is it. Three weeks ago I faced upon a hillside in the open autumn air 7,000 miles away, a great audience. As I looked them over said I to myself, "Here is the strength of the Orient." But there is strength in Africa, there is strength in Europe, there is strength in Australia. To them there is neither East nor West. The world is to be uniform where "strong men stand face to face, tho' they come from the ends of the earth."

AMERICA

Centre of equal daughters, equal sons,
All, all alike endear'd, grown, ungrownd, young or old,
Strong, ample, fair enduring, capable, rich,
Perennial with the Earth, with Freedom, Law and Love,
A grand, sane, towering, seated Mother,
Chair'd in the adamant of time.

Walt Whitman

The 1960 Convocation

SUNDAY, OCTOBER 16, 1960
BILTMORE HOTEL, LOS ANGELES

"This is the Fortieth Convocation of the College. Rigid adherence to high principles in professional life has been largely responsible for success in its work. No organization survives for very long unless it has something worth while to offer. College affairs are in healthy condition.

Our success is not measured in number of members or in the amount of money in the treasury but rather in terms of accomplishment. While we can point with pride to many attainments of the past, there exist a multitude of problems which harass the profession today. Leadership is essential and experience has shown that the College can give such initiative.

During this age of rapid social change the profession must attain a widened viewpoint. Relationships between groups are being altered with considerable rapidity. The dental profession must keep alert to these alterations.

The program this year is designed to bring to your attention certain recommendations arising from the work of the Commission on the Survey of Dentistry. The Director of the Survey and his staff will present reports on each phase of the study. These presentations will summarize the conclusions of the Commission on dental practice, dental education, dental research and dental health. From the very nature of Fellowship in the College every Fellow will have great interest in this program.

It is our hope that you will benefit from this Convocation both from a practical and spiritual standpoint."

DONALD W. GULLETT,
President

THE MINUTES*

Donald W. Gullett, President, presided. The invocation was pronounced by the Reverend John C. Weston, A.B., B.D., Chaplain of the Hollywood Presbyterian Hospital.

Dr. James P. Vernetti, Chairman, presented the report of the Necrology Committee. The names of the Fellows of the College who died during the past year follow:

Lloyd M. Barger, Baltimore, Maryland, September 16, 1959
Edward H. Bruening, Tucson, Arizona, April 21, 1960
Irving B. Clendenen, Oak Park, Illinois, January 22, 1960
Herbert C. Cooper, Portland, Oregon, April 6, 1960
Harvey V. Cottrell, Worthington, Ohio, March 27, 1960
L. M. Cruttenden, Berkeley, California, August 8, 1960
William R. Davis, Lansing, Michigan, December 14, 1959
Oswald M. Dresen, Milwaukee, Wisconsin, March 26, 1960
Linus Matthew Edwards, Durham, North Carolina, February 25, 1960
John Cook G. FitzHugh, McKeesport, Pennsylvania, September 6, 1960
Charles W. Freeman, Chicago, Illinois, June 26, 1960
Millard D. Gibbs, Hot Springs, Arkansas, July 21, 1960
Kenneth R. Gibson, Birmingham, Michigan, December 15, 1959
James T. Ginn, Memphis, Tennessee, October 31, 1959
Alaric W. Haskell, Brunswick, Maine, December 2, 1959
Karl Haupl, Dusseldorf, Germany, June 29, 1960
Andrew J. Heffernan, Wilkes-Barre, Pennsylvania, November 16, 1959
Lester H. Jasper, St. Louis, Missouri, May 3, 1960
Benjamin F. Johnson, Wausa, Nebraska, February 3, 1960
Leland Leo Kraus, Milwaukee, Wisconsin, May 27, 1959
Claude S. Larned, Battle Creek, Michigan, November 4, 1959
Charles S. Lipp, San Francisco, California, November 21, 1959
W. H. O. McGehee, Washington, D. C., September 25, 1959
William A. McKee, Benton, Illinois, February 27, 1960
Aubrey L. Martin, Seattle, Washington, April 13, 1960
Frederick F. Molt, Laguna Beach, California, October 3, 1959
Charles Nelson, Fergus Falls, Minnesota, January 19, 1960
Jesse M. Peabody, Denver, Colorado, April 6, 1960
George T. Perkins, San Antonio, Texas, April 22, 1960
Dallas LeRoy Pridgen, Fayetteville, North Carolina, September 30, 1960
James E. Pyott, Baltimore, Maryland, December 25, 1959
Harold G. Ray, San Francisco, California, July 17, 1960
Ernest H. Redeman, Marinette, Wisconsin, August 22, 1959
Emerson R. Sausser, Philadelphia, Pennsylvania, December 6, 1959
Joseph Paul Scola, Mt. Vernon, New York, May 27, 1960
Alver Selberg, San Francisco, California, April 25, 1960
Joseph L. Selden, Louisville, Kentucky, October 9, 1959
George M. Shields, Miami, Florida, November 30, 1959

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* Compiled and abbreviated by O. W. Brandhorst, Secretary.

Edmund V. Street, San Francisco, California, August 30, 1960
William H. Street, Richmond, Virginia, December 17, 1959
Willis A. Sutton (Honorary), Atlanta, Georgia, July 27, 1960
Merrill G. Swenson, Portland, Oregon, August 5, 1960
Harold C. Van Natta, Lakewood, Ohio, August 7, 1960
Edward Irl Varvel, Greeley, Colorado, July 27, 1960
Atwood M. Wash, Richmond, Virginia, February 27, 1960
Harry Jay Watson, Sr., Milwaukee, Wisconsin, September 14, 1960
Raymond L. Webster, Providence, Rhode Island, May 14, 1960
John L. Wilson, Indianapolis, Indiana, July 28, 1959
William LeRoy Wylie, Cleveland, Ohio, July 30, 1960

The audience was asked to stand in silence for a few moments in memory of the deceased Fellows.

Dr. Thomas J. Hill, Chairman, presented the report of the Nominating Committee. The Committee recommended the following men for the several offices:

President-elect	Henry A. Swanson, Washington
Vice-President	George S. Easton, Iowa City
Treasurer	William N. Hodgkin, Warrenton, Va.
Regents (4 year terms)	Percy G. Anderson, Toronto, Canada
	Carl J. Stark, Cleveland

There being no further nominations from the floor, these men were elected to the offices indicated.

Dr. Jay H. Eshleman delivered the Indoctrination Address.

Vice-President Oscar P. Snyder presided while President Gullett gave his presidential address.*

THE MORNING PROGRAM

The College was privileged at this time to hear the reports* on the recommendations of the Commission on the Survey of Dentistry in the United States by those who participated in the studies. Because of the importance of the recommendations and their possible effect on the future of dentistry, all members of the dental profession, especially the delegates and alternates to the House of Delegates of the American Dental Association, were invited to attend this session. The following program was presented:

THE PURPOSE OF THE SURVEY
Donald W. Gullett, D.D.S., Toronto, Canada

THE APPROACH TO THE STUDIES
Byron S. Hollinshead, M.A., LL.D., L.H.D., Chicago, Ill.

*These presentations appear elsewhere in this issue.

THE STUDIES AND RECOMMENDATIONS:

Dental Health
Wesley O. Young, B.S., D.M.D., M.P.H., Boise, Idaho

Dental Practice
Robert G. Kesel, M.S., D.D.S., Chicago, Ill.

Dental Education
William R. Mann, D.D.S., M.S., Ann Arbor, Mich.

Dental Research
Robert G. Kesel, M.S., D.D.S., Chicago, Ill.

THE FELLOWSHIP HOUR AND THE LUNCHEON

At the conclusion of the essay program, an hour was set aside for an opportunity to renew old acquaintances and to meet new friends.

The luncheon was held in the Biltmore Bowl, and was under the auspices of the Southern California Section of the American College of Dentists. Dr. Leroy E. Knowles, Chairman of the Section, presided. The guests at the head table were presented. Dr. Jack S. Rounds then introduced dentists of "fame in other fields"—sports:

Dr. Neill Kohlhase: Water Polo champion and presently Coach, University of Southern California; Coach of U. S. Olympic Water Polo Team, 1956 and 1960.

Dr. Robert L. Van Osdel: High Jump champion, University of Southern California; U. S. Olympic Team, 1932, medal winner.

Dr. Les Horvath: All-America Football team, Ohio State University, 1944; Heisman Trophy winner, 1944; outstanding pro-Football player.

Dr. Clarence Houser: Shot and Discus champion, University of Southern California; U. S. Olympic Team, 1924 and 1928, medal winner.

Dr. Charlie Borah: Track and Relay champion, University of Southern California; U. S. Olympic Team, 1928, medal winner.

Dr. Edgar Buchanan: Movie and Television actor; now devoting full-time to dramatic activities in California.

Dr. Frank Taylor: Golf champion; member of Walker Cup team representing the United States.

Dennis Day, scheduled to appear as the entertainer, was unable to be present. The Modernaires, in his place and on short notice, presented an enjoyable program that was received enthusiastically.

THE AFTERNOON PROGRAM

After a procession of the candidates for Fellowship and their sponsors, the Officers, the Regents, the speaker, and the recipients of the Awards, Dr. Robert W. McNulty, Orator of the College, pronounced the invocation.

Dr. Rufus B. von KleinSmid, Chancellor of the University of Southern California, addressed the group on the topic: "What Is an American." (This is published elsewhere in this issue.)

THE FELLOWSHIPS

Fellowships in the college were conferred upon the following persons:

James Joseph Ailinger, Buffalo, N. Y.
Frank M. Amaturo, Chicago, Ill.
Melvin H. Amler, New York, N. Y.
John Alfred Anderson, Chicago, Ill.
Leland Dale Anderson, Iowa City, Iowa
Robert Kenneth Armstrong, Memphis, Tenn.
Theodore Galt Atwood, San Francisco, Calif.
Hugh M. Averill, Rochester, N. Y.
Polly Ayers, Birmingham, Ala.
Thomas King Barber, Bensenville, Ill.
Lloyd Baum, Loma Linda, Calif.
Leonard Berman, Mt. Vernon, N. Y.
James E. Berney, Davenport, Ia.
Wallace Henderson Black, El Paso, Texas
Gustaf Edgar Boman, Duluth, Minn.
Gerald Henry Bonnette, (Navy)
Robert Lloyd Borland, II, Los Angeles, Calif.
Charles Frederick Brand, Glenshaw, Pa.
I. Norton Brotman, Baltimore, Md.
Stuart W. Browning, New Braunfels, Texas
Carl Leon Busbee, Conway, S. C.
Francis L. Bushnell, San Francisco, Calif.
Arthur Beverly Carfagni, San Francisco, Calif.
J. C. Carrington, Jr., Austin, Texas
John G. Carr, Camden, N. J.
Emanuel Cheraskin, Birmingham, Ala.
John E. Chrietzberg, Atlanta, Ga.
Alan York Clarke, Portland, Ore.
Daniel Joseph Collins, Tupper Lake, N. Y., (Vet. Adm.)
Julian Richard Conant, (Navy)
Vivian David Cooper, Birmingham, Ala.
Henry Ivan Copeland, (U. S. Air Force)
James Milton Courtney, Cleveland, Ohio
Byron Noel Coward, Corpus Christi, Texas
James Edward Cummings, Denver, Colo.
Walter Leonard Cuthbertson, San Francisco, Calif.
Albert A. Dahlberg, Chicago, Ill.
James S. Dailey, Los Angeles, Calif.
George L. Delagnes, San Francisco, Calif.
Alex Dinin, New York, N. Y.
J. Eugene Dodson, San Francisco, Calif.
Frank Nagel Dorsey, Anchorage, Alaska
Edward J. Driscoll, (USPHS)
Arthur Albert Dugoni, South San Francisco, Calif.
Charles Keith Emery, Corpus Christi, Texas
Clinton Campbell Emmerson, Hemet, Calif.
Peter F. Fedi, Jr., (Navy)
Frank John Fiaschetti, Binghamton, N. Y.
Sidney B. Finn, Birmingham, Ala.
Ben J. Fisher, Indianapolis, Ind.
Lawrence W. Ford, Columbus, Ohio
William Francis Ford, Winnetka, Ill.
Leonard Samuel Fosdick, Wilmette, Ill.
Mollie Davidson Foster, Pittsburgh, Pa.
John Wallace Frame, Sr., Los Angeles, Calif.
Edward F. Furstman, Los Angeles, Calif.
Lawrence Leonard Furstman, Beverly Hills, Calif.

Oscar Ginder, New York, N. Y.
Samuel W. Glynn, Honolulu, Hawaii
Paul William Goaz, Oklahoma City, Okla.
Arthur Gold, Springfield, Mass.
Abraham Goldstein, Brooklyn, N. Y.
Jake Joseph Goodwin, Jr., Longview, Texas
William Truett Goss, San Antonio, Texas
J. Fred Grant, Spokane, Wash.
Gus West Gray, (Navy)
Bernard Leon Grossman, Harrisburg, Pa.
Ben H. Haines, Las Cruces, New Mexico
Homer N. Hake, Des Moines, Iowa
Maurice C. Harlan, (U. S. Air Force)
Harold W. Hart, Winnipeg, Canada
Paul Z. Haus, New York, N. Y.
Clinton Erwin Haynes, Clayton, Mo.
G. Ronald Heath, Lansing, Mich.
Arthur Charles Heibert, Akron, Ohio
Paul Harold Heiser, San Angelo, Texas
Alvin Carl Hileman, San Francisco, Calif.
Matt Alois Holzhauser, Milwaukee, Wis.
John B. Hopkins, Los Angeles, Calif.
Edward Harold Hunter, Jr., St. Louis, Mo.
Vernon Edmund Hyde, Fresno, Calif.
William Howard Hyde, Brooklyn, N. Y.
Nicholas Anthony Ippolito, Brooklyn, N. Y.
Allen Masao Ito, Honolulu, Hawaii
Joseph John Jablonski, Detroit, Mich.
George Wendell James, Indianapolis, Ind.
William Andrew Johnson, Waco, Texas
James William Kapp, St. Joseph, Mo.
William Paul Keller, Indianapolis, Ind.
John Raymond Kilgallen, Brooklyn, N. Y.
Arthur I. Klein, Indianapolis, Ind.
Metro Joseph Kotanchik, Upper Darby, Pa.
Gerald Melvin Kramer, Lynn, Mass.
Morris Krantz, White Plains, N. Y.
Joe Russell Kuebler, Port Arthur, Texas
Paul Worth Kunkel, Jr., Portland, Ore.
Bruce Robert Kurtz, Pasadena, Calif.
Herbert Bonell Laffitte, (Army)
Robert Lorenz Lang, Portland, Ore.
Harold James Edward Lantz, Wynnewood, Pa.
Lindell Lewis Leathers, Washington, D. C.
Theodore Cheung Lee, San Francisco, Calif.
Fredrick Brackin Lehman, Cedar Rapids, Iowa
Murray Angus Leitch, Detroit, Mich.
Benjamin Franklin Loveall, San Luis Obispo, Calif.
Charles Edward Loveman, Baltimore, Md.
Victor O. Lucia, New York, N. Y.
Burton Lynch, Jr., U. S. Air Force
Steve Walton Lynch, Chicago, Ill.
Don Chalmers Lyons, Jackson, Mich.
Clarence Milton McCall, Jr., (U. S. Air Force)
Charles Francis McDermott, Pittsburgh, Pa.
Robert Walls McEldowney, Harrisburg, Pa.
Joseph Edward McGrath, Newburgh, N. Y.
James T. McGuinn, New York, N. Y.
Aaron Burton Markowitz, Paterson, N. J.
Tully A. Mayer, Pharr, Texas
Jose Enrique Medina, Baltimore, Md.
Eugene Stoft Merchant, Omaha, Neb.
Lester J. Moriarty, Watertown, S. Dak.
Charles M. Moore, Montclair, N. J.
Leonard Robert Moore, Union, N. J.
Melburn L. Morrison, Riverside, Calif.
Morton Hansen Mortonson, Jr., Milwaukee, Wis.
Herbert V. Muchnic, Beverly Hills, Calif.
Lawrence Lee Mulcahy, Jr., Batavia, N. Y.
Clarence Yaulpa Murff, Jr., (Navy)

Frank Harold Nealon, (Vet. Adm.)
Austin Sipple Neeb, Grosse Pointe, Mich.
William Allen Newman, (Navy)
Wilbur Neal Newton, Webster Groves, Mo.
Julius Norman Obin, New York, N. Y.
James George O'Connor, Garden City, N. Y.
Lyle Elwood Ostlund, Everett, Wash.
William S. Parker, Sacramento, Calif.
William Blaine Parsons, San Antonio, Texas
Charles Merritt Pearce, Jr., Dallas, Texas
Robert Lloyd Pearce, Pittsburgh, Pa.
Albert R. Pechan, Ford City, Pa.
Chester Irving Perschbacher, Appleton, Wis.
Brewer Albert Peterson, Eureka, Calif.
Fred Ambrose Peterson, Denver, Colo.
Floyd Webster Pillars, Des Moines, Iowa
Charles L. Pincus, Beverly Hills, Calif.
Max Pletman, Yonkers, N. Y.
Homer B. Porritt, Pittsburgh, Pa.
William Beryl Prophet, John Day, Ore.
William H. Pruden, II, Paterson, N. J.
James Duncan Purves, Toronto, Canada
Alfred J. Raccuia, Brooklyn, N. Y.
Robert Andrew Rainer, Jr., McDonough, Ga.
Edwin Compton Randol, Kentfield, Calif.
Norman H. Rickles, Portland, Ore.
Edward A. Riedel, Seattle, Wash.
John Phillip Roffinella, Oakland, Calif.
Francis Harrison Romick, San Francisco, Calif.
Donald Charles Ruthven, Houston, Texas
John Thomas Ryan, Seattle, Wash.
John William Sabo, Pueblo, Colo.
Joseph Armand Sciutto, Berkeley, Calif.
Frant T. Scott, Jacksonville, Fla.
Brodie Glenroy Secrest, Cambridge, Ohio
Ira L. Shannon, (U. S. Air Force)
Albert B. Shulman, Detroit, Mich.
Sidney I. Silverman, New York, N. Y.
George William Simpson, Franklin, Ind.
Marvin Simring, Brooklyn, N. Y.
Eugene William Skinner, Wilmette, Ill.
Reidar F. Sognnaes, Los Angeles, Calif.
Charles Angelo Spacagna, Providence, R. I.
Robert Fink Spangler, York, Pa.
Albert D. Spicer, Westerly, R. I.
Floyd Erwin Straith, Detroit, Mich.
Howard Elliott Strange, Chicago, Ill.
Ottomar Albert Strateman, New Braunfels, Texas
William Lafayette Stovall, Houston, Texas
Lucian Szmyd, (U. S. Air Force)
Louis G. Terkla, Portland, Ore.
Emil P. Traina, Teaneck, N. J.
Minor Oscar Turrentine, Columbus, Ga.
Robert Fenwick Vason, Mt. Dora, Fla.
Theodore Harry Vermeulen, Chicago, Ill.
Ott L. Voigt, Houston, Texas
Robert V. Walker, Dallas, Texas
John Arthur Watson, San Diego, Calif.
George Roberts Webber, Enid, Okla.
Herman Lewis Weisler, New London, Conn.
John Graham Whinery, Amarillo, Texas
Robert Green Wight, Yakima, Wash.
Chas. H. M. Williams, Toronto, Canada
James Clarence Wing, New York, N. Y.
Harry Winkler, Jr., Portland, Ore.
Samuel Henri Yoffe, Harrisburg, Pa.

In Absentia

Cecil Raymond Albright, (Army)
Henry Roy Cash, Victoria, Australia

Clarence Lloyd Endicott, London, England
Malcolm Stewart Joyner, Adelaide, Australia
John Sutherland Lyell, Sydney, Australia
Noel Desmond Martin, Sydney, Australia

THE AWARDS

Honorary Fellowship was conferred upon Dr. Rufus B. von Klein-Smid in recognition of his many contributions to human welfare and his sustaining interest in dental education.

The *William John Gies Award* was given to Dr. Carlos H. Schott, Cincinnati, in recognition of his interest in developing dental clinic services for the underprivileged in that area of Ohio.

The *Award of Merit* was given to Miss Fern Crawford, Secretarial Assistant in the Central Office, for her services to both the College and the dental profession for more than a quarter of a century.

THE EVENING MEETING

Dinner was served in the Ballroom of the Biltmore Hotel to more than 600 guests. The invocation was pronounced by Paul H. Dunn, Ph.D., Director of the Institute of Religion, Church of Jesus Christ of Latter-Day Saints.

President Gullett introduced the guests at the head table, their wives, and those persons who had contributed to the functioning of the Convocation. He then proceeded with the installation of the newly elected Officers and Regents of the College:

President	Edgar W. Swanson, Chicago
President-elect	Henry A. Swanson, Washington
Vice-President	George S. Easton, Iowa City
Treasurer	William N. Hodgkin, Warrenton, Va.
Regents	Percy G. Anderson, Toronto, Canada
	Carl J. Stark, Cleveland

The gavel was turned over to the incoming President, Dr. Edgar W. Swanson, who asked Dr. Phillip E. Blackerby, Jr. to present the *Service Key* of the College to Dr. Gullett. (Dr. Blackerby's remarks appear following these Minutes.)

Vice-President Easton presided while President Swanson gave his Inaugural Address. (The Address appears following these Minutes.)

The speaker of the evening was the Reverend Bob Richards, A.B., M.A., LaVerne, California; he spoke eloquently on "Life's Higher Ideals."

This was followed by a musical program by "The Los Angeles County Dentists' Band" under the direction of Dr. Frank C. Blair, Jr. Dancing followed the adjournment at 10:30 p.m.

PRESENTATION OF SERVICE KEY

To: Donald W. Gullett
By: Philip E. Blackerby, Jr.

President Swanson, Fellows of the College, and distinguished guests, it is my great privilege this evening to pay a brief tribute to our retiring President, Dr. Don Gullett. I know there is really little I can add to what all of you already know about his qualities as one of our most distinguished dental leaders.

Dr. Gullett's reputation as a dental administrator, statesman, and scholar is known far and wide. For example, if we were to ask Canadian dentists who is one of their most outstanding leaders, they would surely point to Don Gullett. If we were to ask leaders of American dentistry who from another country has contributed most to the progress of American dentistry, in a quiet but effective way as a consultant to the American Dental Association, their answer would undoubtedly be "Don Gullett." In view of his active participation in international affairs of dentistry, he would certainly be pointed to as a world leader by the members of the Federation Dentaire Internationale. And finally, I have no doubt whatsoever that the same kind of question put to us as Fellows of the American College of Dentists would again show him to be acclaimed unanimously as an outstanding leader and contributor in the progress of the College.

In his splendid and inspiring President's Address this morning, Dr. Gullett included several quotations which I think may be used appropriately to characterize the man himself and the nature of his leadership. For example, he quoted a 300 year old saying that, "A man cannot be an island unto himself." How well this typifies his own philosophy. Then, in referring to recent social trends in Canada and the United States, he stated that, "The movement is progressive—never retrogressive." Again, how characteristic this is of Don Gullett's record of service to dentistry and to the public.

Again, by way of offering a warning to dentists who might tend to

be apathetic in regard to the social responsibilities of our great profession, Dr. Gullett reminded us that, "The leadership *can* pass into other hands." An apt and timely note of caution! And in this instance, the statement suggests a second interpretation as well, since we have tonight witnessed the inevitable transference of leadership of the College—from Dr. Gullett to our new President, Dr. Edgar Swanson.

I know all of you in the College join me when I say that we are deeply grateful for Don's contributions as a Fellow, a Regent, and during the past year, as President, for his unselfish devotion to dentistry and to the ideals of the College, and for his forward-looking and inspiring leadership. Now, as I present the Service Key of the American College of Dentists to our retiring President, I speak officially for the Officers and Regents when I say that we are deeply grateful for the privilege of working with you, Dr. Gullett.

And finally, before I close, may I use another quotation from his remarks as presiding officer at the Convocation this afternoon. You will recall that he said, "Behind every man, there is a woman—with nothing to wear." Now, to prove to you that even the best man can be wrong sometimes, I would like to ask Dr. Gullett's lovely wife, Alice, to stand and be recognized and admired.

Dr. Gullett accepted the Service Key and responded graciously.

The Inaugural Address

EDGAR W. SWANSON, D.D.S., M.S.D.

It is with sincere humility and a deep sense of pride that I accept the gavel and the presidency of the American College of Dentists. Dr. Gullett, you have served the College in a most inimitable manner. Your years of experience in organized dentistry has been of tremendous value to the College and has reflected even greater honor to your own already impressive record which makes it more difficult for the man who follows you.

In 1940, I was inducted as a Fellow in the American College of Dentists. This was an honor which I deeply appreciated and have enjoyed in many ways. Since that time I have had the privilege of serving the College by being a member of several of its special and standing committees, and an officer of the Illinois Section.

Five years ago, I was elected a Regent of the College. Here again was an honor I never anticipated because I see so many Fellows about me who are more deserving and who could contribute more than I. However, this gave me an opportunity to become associated with as fine a group of men it has been my pleasure to know and to work with, namely, the Officers and Regents of the College who have come from all parts of the United States and Canada. This is a hard working Board and I wish every one of you could see them in action. If that were possible, I think most every Fellow of the College would go back to his Section inspired to do his bit for the control of dental disease on both the local and national levels.

It is an education in itself to listen to the discussions on matters of administration and policy of the College, usually presented by the Secretary, "Mr. College" himself, Otto Brandhorst (a driver but a most beloved man), and other mattters propounded by the Officers and Regents themselves. Much interest in shown, and marked attention is given to the chairman of the standing committees when they make their reports to the Board which usually provoke much discussion. Many of these committee reports have contained so much valuable material that they have been printed in the journals of the

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Presented at the Los Angeles Convocation, October 16, 1960. Dr. Swanson is Professor of Operative Dentistry and Secretary of the Faculty, Dental School, Northwestern University.

American College of Dentists and the American Dental Association. Several were of such a nature that pamphlets have been printed and distributed to the Fellows of the College, incoming and graduating students, and to the membership of the American Dental Association. We are always mindful that our contributions of every nature should coincide with the policies of the American Dental Association. Many projects have come to fruition by the collaboration of both bodies.

Also, I think you should know that during the four years I served as a Regent, there was only one absentee and that was bcause of illness. Another item I think you should know is that the Officers and Regents receive no travel or expense accounts to attend these meetings. They devote their time, money, and valued counsel on matters pertaining to the projects and problems confronting the profession and the work of the College. As President-elect, the budget allocated me $5.00 for "incidentals."

Membership in the College has been by invitation in recognition of some outstanding achievement or contribution made by the nominee to the profession and society on the local and national levels. Too frequently Fellows who have been so honored by membership in the College sit back in complacency, with the feeling that they have done their bit and are satisfied to enjoy the many privileges this affiliation affords. Membership in the College should be an incentive for further research and activity in the advancement of dentistry, for as G. V. Black has so often been quoted, "The professional man has no right to be other than a continuous student."

I am sure you have noted an increase of younger men being inducted into the College. Some of the Fellows of the College have been quite critical of this action. I believe the unwritten policy of the Board of Censors not to consider nominations for Fellowship to anyone who has been out of school less than 10 years should be changed. I am sure, too, that if you were to make some observations you would find quite a few young men who have been out of school for only seven or eight years but who are making a tremendous contribution to the profession, particularly in the fields of research and education.

The College is now 40 years old. During this comparatively short time it has contributed much to dentistry and to the American Dental Association. What the next 40 years will bring, no one can tell, but I am sure that we will see a tremendous advancement in the field of dentistry because of the improved basic training which is

being given to our dental students not only in the classrooms, but in the most modernly equipped laboratories and clinics as well. These students are also receiving a most valuable training in many of our hospitals, so that when patients require hospital service the dentist will be able to conduct himself in hospital routine with credit to himself and to his medical colleagues.

In the 40 years of the life of the College, it has developed a number of traditional features. One of them is the orations read or delivered by the retiring President, and the incoming President at the dinner following the Convocation, and at which our ladies are present. These speeches were given by the leaders of the dental profession who contributed much to the success and accomplishments of the College. It is through their efforts and foresight that the College enjoys its high place in dentistry today. While I heartily approve and revere these honored gentlemen and their words of wisdom, I believe you have listened to enough speeches of late (both educational and political) that you, especially the ladies, would be most unhappy if I followed their trend and presented a 30 minute paper. I am neither a writer nor a speaker. For this reason, I am going to follow the example set three years ago by our "peerless and fearless" Past-President, Jerry Timmons, by curtailing my inaugural address to these few words.

In closing, I again thank you for the honor you have bestowed upon me by electing me to the presidency of such a scholarly organization. I hope I will not fail you. One thing I can say for sure is, that if Otto Brandhorst keeps his good disposition, we will have a good year!

25 E. Washington Street
Chicago, Illinois

MINUTES OF THE MEETINGS OF THE BOARD OF REGENTS

October 14, 15, and 18, 1960, Los Angeles

First Meeting

The Board of Regents of the American College of Dentists convened in the Biltmore Hotel, Los Angeles, on Friday, October 14, 1960, at 9:00 a.m. Twelve members were present. President Gullett presided.

Minutes of the meeting of February 7, 1960, in Chicago, were approved.

Report on Minutes was received.

Reports of Officers and Regents were received.

The Treasurer's report indicated a balance in the checking account of $30,078.69, and U. S. Bonds in the amount of $33,000.00.

The Secretary reported as of October 1, 1960, a membership of 2,649 Fellows, including 29 Honorary Fellows. He reported the deaths of 18 Fellows since the February meeting of the Board of Regents. (For the complete list of Fellows who died since the last Convocation, see the Convocation Minutes in this issue.)

The Secretary also reported an up-swing in section activities, indicating a wider interest in the various projects before the College and the profession.

Second Meeting

This afternoon meeting was devoted mostly to hearing the reports of committees. These reports, and decisions affecting them, will be published in subsequent numbers of the *ACD Reporter.*

New Business: It was voted to increase the subscription price of the JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS to $7.50 a year, and $2.00 for single copies, after December 31, 1960.

Because Fellows are experiencing difficulties with transporting their cap and gown to the annual meeting, the Board decided to discontinue the issuing of cap and gown to new members and to supply the candidate and sponsor with a cap and gown on a rental basis after 1960. The rental charge will be borne by the College.

These Minutes have been compiled and abbreviated by the Secretary, O. W. Brandhorst. The detailed Minutes are on file in the Central Office.

The Exchange Fellowship plan suggested by the Fellows of Great Britain was approved in principle, with details to be developed.

A plan for an interchange and distribution of dental publications was approved.

Third Meeting

This evening meeting convened at 7:30 p.m. The Board reviewed the activities of the College and the worthiness of the numerous projects proposed. A budget showing a net balance of $763.33 was adopted.

The Board approved the suggestion that members be urged to support the good will efforts of the hospital ship, *SS HOPE I,* which stands for "Health Opportunities for People Everywhere." Publicity is to be given the project.

Fourth and Fifth Meetings

Saturday morning and afternoon, October 15, were devoted to a review of a number of the activities of the College.

President Gullett, at the request of the Board, read his presidential address, entitled "The Meaning of the Present," which projected some of the urgent problems facing the profession, the background that produced the present situation, and the responsibilities ahead.

The topic discussions were informal. However, persons had been designated to introduced the several subjects to be discussed:

The Objectives of the College	Edgar W. Swanson, Chicago, Ill.
The Relation of the College to the Dental Profession	Henry A. Swanson, Washington, D. C.
Dentistry as a Health Service	Walter J. Pelton, Washington, D. C.
The Use of Auxiliary Services in Dentistry	Philip E. Blackerby, Jr., Battle Creek, Mich.
World Relations	Carl L. Sebelius, Nashville, Tenn.

The discussions were good, with broader horizons evident in several areas, and greater effort in the solution of many of the problems indicated.

Several special committees were appointed to expedite activity in some of these areas, including one to give attention to the report on the Survey of Dentistry.

Sixth Meeting

This meeting was held on Tuesday morning, October 18, from 8:00 to 9:00 a.m. It was the first meeting of the new Board. Dr. Edgar W. Swanson presided. Committee appointments were discussed.

Dr. John E. Gurley was selected as Historian for the ensuing year.

The printing contract for the JOURNAL for 1961 was awarded to the present printer, The Ovid Bell Press, Inc., Fulton, Mo.

The plans for the Chicago meeting of the Board of Regents (February 5, 1961) and the 1961 Convocation in Philadelphia (October, 1961) were discussed. The Bellevue Stratford Hotel, Philadelphia, will be the ACD headquarters.

CALENDAR OF MEETINGS

CONVOCATIONS

October 15, 1961, Philadelphia

October 28, 1962, Miami Beach

October 13, 1963, Atlantic City

November 8, 1964, San Francisco

American College of Dentists

OFFICERS, 1960-1961

President

EDGAR W. SWANSON
25 E. Washington St.
Chicago, Ill.

President-elect

HENRY A. SWANSON
919 18th St. N.W.
Washington, D. C.

Vice-President

GEORGE S. EASTON
102 Dental Bldg.
Iowa City, Iowa

Treasurer

WILLIAM N. HODGKIN
Warrenton, Va.

Historian

JOHN E. GURLEY
350 Post St.
San Francisco, Calif.

Secretary

OTTO W. BRANDHORST
4236 Lindell Blvd.
St. Louis, Mo.

Editor

THOMAS F. MCBRIDE
Ohio State University
College of Dentistry
305 West 12th Ave.
Columbus, Ohio

REGENTS

PERCY G. ANDERSON
Faculty of Dentistry
University of Toronto
124 Edward St.
Toronto, Canada

CARL J. STARK
1238 Keith Bldg.
Cleveland, Ohio

RALPH J. BOWMAN
121 East 60th St.
New York, N. Y.

WILLIAM B. RYDER, JR.
2000 Van Ness Ave.
San Francisco, Calif.

WALTER J. PELTON
Room 3324 HEW Bldg., South
Washington, D. C.

JAMES H. SPRINGSTED
230 Stilz Ave.
Louisville, Ky.

PHILIP E. BLACKERBY, JR.
W. K. Kellogg Foundation
Battle Creek, Mich.

CRAWFORD A. MCMURRAY
Alexander Bldg.
Ennis, Texas

Committees: 1960-1961

BYLAWS

WILEY F. SCHULTZ, *Chairman,* 624 Hanna Bldg., Cleveland, Ohio 1961
GERALD D. TIMMONS, 3223 N. Broad St., Philadelphia, Pa. 1962
V. JOHN OULLIBER, 3798 25th St., San Francisco, Calif. 1963
GEORGE W. TEUSCHER, 311 E. Chicago Ave., Chicago, Ill. 1964
WILBUR P. MCNULTY, 3501 S. Harrison St., Ft. Wayne, Ind. 1965

CONDUCT

WILLIAM F. SWANSON, *Chairman,* University of Pittsburgh, School of Dentistry, Pittsburgh, Pa. 1961
CARLOS H. SCHOTT, Forest Hills Drive, East Hyde Park, Cincinnati, Ohio 1962
JOHN F. JOHNSTON, 4736 E. Pleasant Run Parkway, Indianapolis, Ind. 1963
JOHN E. BUHLER, Emory University, School of Dentistry, Atlanta, Ga. 1964
STEPHEN P. FORREST, 3556 Caroline St., St. Louis, Mo. 1965

EDUCATION

WILLIAM J. SIMON, *Chairman,* State University of Iowa, School of Dentistry, Iowa City, Iowa 1961
L. WALTER BROWN, JR., 136 Harrison St., Boston, Mass. 1961
ALTON W. MOORE, University of Washington, School of Dentistry, Seattle, Wash. 1961
EDWARD J. COOKSEY, 1101 Hermann Professional Bldg., Houston, Tex. .. 1962
DONALD A. KEYS, University of Nebraska, College of Dentistry, Lincoln, Neb. 1962
DENTON J. REES, 1033 S.W. Yamhill, Portland, Ore. 1962
JOHN B. WILSON, 1427 San Marino Ave., San Marino, Calif. 1962
EDWARD J. FORREST, 808 S. Wood St., Chicago, Ill. 1963
KENNETH V. RANDOLPH, 24 Bates Rd., Morgantown, W. Va. 1963
JOHN J. TOCCHINI, 344 14th St., San Francisco, Calif. 1963
FRANK M. WENTZ, 111 N. Wabash Ave., Chicago, Ill. 1963

Consultants

J. WALLACE FORBES, 1420 Medical Arts Bldg., Philadelphia, Pa.
G. WILLARD KING, 840 N. Lake Shore Drive, Chicago, Ill.
SHAILER PETERSON, 222 E. Superior St., Chicago, Ill.
REGINALD H. SULLENS, 840 N. Lake Shore Drive, Chicago, Ill.

GROWTH AND AGING OF THE FACE

JOHN E. GILSTER, *Chairman,* 4660 Maryland Ave., St. Louis, Mo. 1961
JACK KREUTZER, 2 College St., Toronto, Canada 1962
WILTON M. KROGMAN, 1040 Cornell Ave., Drexel Hill, Pa. 1963
SAMUEL PRUZANSKY, 64 Old Orchard, Skokie, Ill. 1964
ROBERT M. RICKETTS, 875 Via de La Paz, Pacific Palisades, Calif. 1965

Consultants

WILLIAM S. BRANDHORST, 9827 Clayton Road, St. Louis, Mo.
E. V. COWDRY, M.D., Washington University School of Medicine, St. Louis, Mo.

HEALTH SERVICES

HAROLD M. KRAMER, *Chairman,* 1414 Medical Arts Bldg., Portland, Ore. 1961
HENRY D. COSSITT, 942 National Bank Bldg., Toledo, Ohio 1961
EDMOND A. WILLIS, 1221 Frederica St., Owensboro, Ky. 1962
JAMES E. BAUERLE, 1101 Medical Arts Bldg., San Antonio, Tex. 1963
ALBERT H. TRITHART, Division of Dental Health, Montana State Board of Health, Helena, Mont. 1963

Consultants

RUDOLPH H. FRIEDRICH, Columbia University, College of Physicians and Surgeons, 630 W. 168th St., New York, N. Y.
B. DUANE MOEN, 222 E. Superior St., Chicago, Ill.

JOURNALISM

ISSAC SISSMAN, *Chairman,* 4041 Jenkins Arcade, Pittsburgh, Pa. 1961
WILLIAM P. SCHOEN, JR., 1757 W. Harrison St., Chicago, Ill. 1962
HERMAN L. HUBINGER, 501 Second National Bank Bldg., Saginaw, Mich. .. 1963
RALPH ROSEN, 7247 Delmar Blvd., St. Louis, Mo. 1964
LAWRENCE W. BIMSTEFER, 1 Kinship Road, Baltimore, Md. 1965
THOMAS F. MCBRIDE, Editor, *Ex-officio,* Ohio State University, College of Dentistry, Columbus, Ohio

PROFESSIONAL RELATIONS

BYRON W. BAILEY, *Chairman,* 1528 State St., Santa Barbara, Calif. 1961
MAURICE J. HICKEY, University of Washington, School of Dentistry, Seattle, Wash. 1961
ROBERT JORDAN, 310 Medical Arts Bldg., Atlanta, Ga. 1961
JOHN W. CREECH, 2012 Del Norte St., Berkeley, Calif. 1962
HARRY N. WAGNER, Morgan Bldg., Henryetta, Okla. 1962
CHARLES A. WALDRON, Emory University, School of Dentistry, Atlanta, Ga. 1962
WILLIAM A. ALSTADT, 400 Worthen Motor Bank Bldg., Little Rock, Ark. 1963

Consultants

CHAUNCEY D. LEAKE, Hamilton Hall, Ohio State University College of Medicine, Columbus, Ohio
MR. ARIS MALLAS, JR., Texas Research League, 403 E. 15th St., Austin, Tex.

RESEARCH

SEYMOUR J. KRESHOVER, *Chairman,* National Institute of Dental Research, Bethesda, Md. 1961

HOMER C. VAUGHAN, 608 Fifth Ave., New York, N. Y. 1962
ROBERT G. KESEL, 808 S. Wood St., Chicago, Ill. 1963
A. GERALD RACEY, 1414 Drummond St., Montreal, Can. 1964
JAMES A. ENGLISH, University of Buffalo, School of Dentistry, Buffalo, N. Y. 1965

Consultant

THOMAS J. HILL, Brecksville, Ohio

WORLD RELATIONS

PAUL E. BOYLE, *Chairman,* Western Reserve University, School of Dentistry, Cleveland, Ohio 1961
A. RAYMOND BARALT, JR., University of Puerto Rico, School of Dentistry, c/o School of Medicine, San Juan, Puerto Rico 1962
HAROLD HILLENBRAND, 222 E. Superior St., Chicago, Ill. 1963
GERALD H. LEATHERMAN, 35 Devonshire Place, London, England 1964
OBED H. MOEN, 6 Main St., Watertown, Wisc. 1965

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DONALD W. GULLETT, 94 Coldstream Ave., Toronto, Canada
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ARTHUR J. SKUPA, 906 S. Park Ave., Hinsdale, Ill.
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Book Reviews

DENTAL AUXILIARY PERSONNEL. By Robert K. Stinaff, D.D.S. 157 pp. St. Louis: C. V. Mosby Co. 1959. $3.85.

This is a compilation of the proceedings of a two-day Workshop conducted by the American Academy of Dental Practice Administration in 1958 at Chicago.

The book is divided into four major sections all dealing with the complexities encountered when using dental auxiliary personnel in practice. The information given on the many ramifications of this problem is quite complete. The authors present data, along with ideas from leading men in the field of practice administration, that are enlightening to the basic problems involved.

The entire theme of the book tends to bring out the need of educational programs for the dental assistant which would lead to a form of certification that could be recognized nationally by the profession.

The book can be recommended to dentists who desire a better understanding in the management of auxiliary personnel. Due to the repetition of concepts and the narrowness of scope this book would probably be more suitable as a reference source rather than a text for use in dental schools.

Paul R. Weisenstein, Columbus, Ohio

PRACTICAL ORTHODONTICS. By George M. Anderson, D.D.S., Sc.D. With the collaboration of Paul A. Deems, D.D.S., and with four contributors. Ninth Edition, 738 pp. St. Louis: C. V. Mosby Co. 1960. $18.00.

This text has been considered a standard work in the orthodontic field since the 1st edition in 1914. This, the 9th edition, appears to have been revised in some respects. The most notable change is the style and type of print with the resultant ease in reading as compared with previous editions.

The illustrations in this edition have been reviewed and brought up-to-date as evidenced in the section on diagnostic records. Figure No. 214 has been reoriented to show a more logical relationship. (It might have been a printing error in the 8th edition, but to observe the illustrations 45° off normal was quite confusing.)

The significant chapter on cephalometric examinations contributed by Broadbent is not as new as the publisher would have prospective readers believe. However, the use of cephalometrics is noted throughout the whole book.

Under the chapters on appliances there is a strong leaning toward the so-called labial-lingual technique with very little on other types of appliances. One exception is the chapter on the edgewise arch mechanism by one of the four contributors. A comparison of the use of these various appliances under the chapters on treatment of malocclusion might have made this a more "middle of the road" presentation as advertised by the publishers.

The changing of the placement of references to the end of the chapters, with the exception of the chapter on history, is a most welcome change. Many of the earlier references have been replaced by more recent publications and quite a few have been added since the last edition.

This reviewer is of the opinion that there has been little over-all change in this already popular well used text. The book has been brought up-to-date with

late references, some new illustrations, some replacements and some deletions, and a little rearrangement.

Benjamin H. Williams, Columbus, Ohio

ORAL ANATOMY. By Harry Sicher, M.D., D.Sc. 3rd Edition, 514 pp. St. Louis: C. V. Mosby Co. 1960. $13.50.

Ever since the appearance of Dr. Sicher's 1st edition of his *Oral Anatomy,* this reviewer has been impressed with his breadth of knowledge of the subject, with his inimitable manner of presenting it clearly and succinctly, and with his ability to apply the anatomic details to the practice of clinical dentistry.

The present edition rather than containing deletions, instead presents important additions to the subject matter. Thus it brings up-to-date new knowledge that has accumulated with reference to the developmental growth of the skull and to the functional anatomy of the temporo-mandibular articulation, about which so much interest is shown in modern dentistry. Other additions, too numerous to mention, are incorporated, all of which add immensely to the value of this outstanding and noteworthy book. Also, in conformity with revised editions of modern textbooks on anatomy, this 3rd edition includes the new anatomic nomenclature which was adopted by the International Nomenclature Committee meeting at Paris in 1955, although it retains the old and familiar terms which are placed in parentheses whenever new ones are introduced.

Several new illustrations have been added, all of which increase the merits of this work. Among the advantageous features of this treatise, as opposed to the standard textbooks on anatomy, are the concentration of the subject matter including a detailed description of the skull; of the muscles, viscera, blood vessels, lymphatics and nerves of the head and neck; of the alveolar processes; and of the temporo-mandibular articulation, as well as the application to dentistry of these structures. Thus, chapters are devoted to such topics as the anatomy of local anesthesia, arterial hemorrhages, propagation of dental infections, tracheotomy and laryngotomy, in addition to which is an excellent description of the edentulous mouth.

In short, this reviewer definitely is of the opinion that every practitioner of dentistry should have a copy of this work in his professional library and should never let it collect dust.

Linden F. Edwards, Columbus, Ohio

PARTIAL DENTURES. By Merrill G. Swenson, D.D.S. and Louis G. Terkla, D.M.D. 2nd Edition, 389 pp. St. Louis: C. V. Mosby Co. 1959. $10.50.

This book covers comprehensively the subject of partial dentures; the revisions and changes from the earlier editions are for the better. The first part is concerned with the principles, the philosophy, and the requirements of partial dentures. The second part is a step-by-step application of these principles to the construction of the appliances from the first contact with and instruction to the patient, to the completion of the denture and insertion in the mouth.

The consideration of the patient's knowledge and attitude, and the necessary information to be imparted is particularly well-handled. Included is the presentation of the treatment plan, the explanation of mouth preparation, and the aims of the intended construction. A description of the partial denture and a

consideration of good and bad appliances is included. It is gratifying to see these topics, so vital to the success of the appliance, discussed so well; particularly in view of the tendency of too many practitioners to neglect these aspects in their haste to proceed with the construction.

The authors suggest one more classification of partial dentures, based as they state "upon reasoning rather than memory." This adds to classifications already proposed, none of which has been accepted universally. Until general acceptance of any classification is achieved, only greater confusion can result. The very question of a classification should be re-examined. The analogy to cavity classification can be questioned, and also the extent of practical application.

Surveying of casts is treated well. Emphasis is placed on the advantage of the anterior tilt of the cast to utilize the distal undercut of bicuspid abutments with two free-end denture bases. It is difficult to understand why the authors do not apply this same principle to the clasp they describe at length, and generally prefer for cuspids. The esthetics, retention, and likely causation of caries by this cuspid clasp are controversial.

The recommendation that two abutment teeth be clasped for each edentulous area (including double abutting for free-extension bases) is worthy of serious consideration. It may well be the means of avoiding many instances of loosening of abutments in this type of partial denture. The necessity for maximum tissue coverage and support is well expressed.

The illustrations in the text are profuse, clear, and well executed. The descriptive matter is full, if somewhat repetitive (perhaps for emphasis), and well placed by being adjacent to the illustrations for simplified and easy study. The second part follows in full and careful detail every step in the construction of partial dentures, including flasking, and polishing of both gold and chrome cobalt skeletons.

One puzzling omission is the lack of emphasis on the necessity for a relatively uniform thickness of the elastic impression material—a point that has been made by so many researchers.

A chapter describing a number of partial denture solutions, and fundamentals involving cleft palate cases is also included. A really outstanding feature is the complete list of references covering 18 years, and carefully categorized for every phase of partial denture construction.

A partial glossary of prosthodontic terms compiled by the Academy of Denture Prosthetics completes the text.

William D. Heintz, Columbus, Ohio

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