

# JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

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## AMERICAN COLLEGE OF DENTISTS

Convocations have been held on this schedule (since organization in *Boston*, Aug. 20 and 22, '20): (1) *Chicago*, Jan. 26, '21; (2) *Milwaukee*, Aug 13 and 18, '21; (3) *Montreal*, Jan. 25, '22; (4) *Los Angeles*, July 16 and 19, '22; (5) *Omaha*, Jan. 23, '23; (6) *Cleveland*, Sep. 12, '23; (7) *Chicago*, Mar. 5, '24; (8) *Dallas*, Nov. 12, '24; (9) *Louisville*, Sep. 22, '25; (10) *Philadelphia*, Aug. 22, '26; (11) *Chicago*, Jan. 26, '27; (12) *Detroit*, Oct. 23, '27; (13) *Minneapolis*, Aug. 19, '28; (14) *Chicago*, Mar. 24, '29; (15) *Washington, D.C.*, Oct. 6, '29; (16) *Denver*, July 20, '30; (17) *Memphis*, Oct. 18, '31; (18) *Buffalo*, Sep. 11, '32; (19) *Chicago*, Aug. 6, '33; (20) *St. Paul*, Aug. 5, '34; (21) *New Orleans*, Nov. 3, '35; (22) *San Francisco*, July 12, '36; (23) *Atlantic City*, July 11, '37; (24) *St. Louis*, Oct. 23, '38. [Next: *Milwaukee*, Wis., July 16, 1939.]

Sections and dates of meetings in College year of 1938-39 (between convocations).— (1) *Kentucky*: Dec. 2, '38; June 13, '39. (2) *No. Calif.*: Nov. 30, '38. (3) *Maryland*: June ?, '39. (4) *New York*: Nov. 25, '38, Feb. ?, '39, May ?, '39. (5) *Minnesota*: Feb. 23, '39. (6) *New England*: . . . . . (7) *Wisconsin*: Apr. 17, '39. (8) *Colorado*: June ?, '39. (9) *Pittsburgh*: Dec. 14, '38, Jan. ?, '39, Apr. ?, '39, June ?, '39. (10) *Iowa*: May 2, '39. (11) *Illinois*: Dec. 12, '38, Feb. 12, '39. (12) *St. Louis*: Dec. 12, '38. (13) *Oregon*: . . . . . (14) *Texas*: . . . . .

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

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

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

## JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

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## AMERICAN COLLEGE OF DENTISTS

### PRESIDENTIAL ADDRESS<sup>1</sup>

CHARLES E. RUDOLPH, D.D.S.

*Minneapolis, Minnesota*

It is axiomatic that the duty of a president finishing his term is to report, not plan. His successor has the privilege of planning the coming year's work. To me it is unbecoming for the outgoing officer to presume to indicate what policies should be followed in the future. For this reason I have asked that the President-elect be given the time usually accorded to the President, for a discussion of policies and plans which he might have in mind. His address will be the high point in the proceedings of this convocation, for from it we all shall receive our instructions and inspiration for the new year.<sup>2</sup>

Before giving a résumé of the year's activity I should like to express, to each member who has made a contribution to dentistry through the American College of Dentists, my personal thanks and congratulations. I am certain that each of us appreciates his rare privilege of working in the ever widening and alluring environment accorded by this association. It would be unbecoming for me to single out any individual or committee for special public mention, although I have many in mind. May it suffice to say that the College expects every member to fulfill the obligation of membership, and in so doing to bring the standard of the profession to greater heights each succeeding year.

It is my belief that the work accomplished this year has merit. The committees are functioning with vigor and enthusiasm. Your evaluation of their reports will, I am sure, give the committees added zest to continue their brilliant performances. The meetings of the sections have been invaluable to the College as a whole. It has

<sup>1</sup> Convocation: Hotel Statler, St. Louis, Mo., Oct. 23, 1938; item 49, abstract of minutes: *J. Am. Col. Den.*, 5, 223; 1938, Dec. (this issue).

<sup>2</sup> Merritt: *J. Am. Col. Den.*, 5, 184; 1938, Dec. (this issue).

been my privilege to attend several, and my estimate of their value is very high. Time has not yet lent stability and uniformity to the efforts of these groups, but it will. More encouragement from the officers and regents will soon accomplish that. New ideas are constantly coming to the parent body from the sections. My experience with them leads me to suggest that, during the annual meeting, each section be represented by an elected delegate at a stated session of the Board of Regents. In this way a more closely knit group could be fostered.

The Illinois section was, as usual, host to the officers, regents and many sectional representatives at a luncheon meeting in the Stevens Hotel, Chicago, during the mid-winter meeting of the Chicago Dental Society.<sup>3</sup> The College is grateful for this yearly courtesy by the Illinois members. The meeting was climaxed by a very scholarly address by Rev. A. M. Schwitalla of St. Louis, Mo., on "Some problems common to medicine and dentistry."<sup>4</sup>

In March the Minnesota section had the rare privilege of being guests at the annual banquet of the International Association for Dental Research, at the Nicollet Hotel, Minneapolis. Our immediate past-president was one of the guest speakers and made the introductory proclamation of the College research fellowships and awards. To me, this meeting was the "high spot" in our public manifestations during this year. Dr. Albert L. Midgley placed before this large group of pronouncedly young scientists a major objective of this College, in a manner befitting its dignity and his ability.<sup>5</sup> The impact of this contact is still reverberating, and I believe the College will be of invaluable aid to struggling researchers.

During this research session several officers and regents met informally and discussed the current important problems of the College. At several other intervals different officers were able to confer, and to plan and transact important College business. All in all it has been a busy and eventful year.

It is indeed fortunate for your outgoing president that his meeting is being held in the hometown of our wonderfully efficient Secretary.

<sup>3</sup> Brandhorst: *J. Am. Col. Den.*, 5, 120; 1938, Sep.

<sup>4</sup> Schwitalla: *J. Am. Col. Den.*, 5, 40; 1938, Mar.-June.

<sup>5</sup> Midgley: *J. Den. Res.*, 17, 317, 1938, Aug.; *J. Am. Col. Den.*, 5, 115, 1938, Sep.

All the credit must go to him and those in the St. Louis section for this splendid reception. The program planned for this convocation is a new high, as it should be from year to year. For the unswerving loyalty, and constant untiring counsel and labor, of Dr. William J. Gies, our Assistant Secretary, the College is indeed grateful. Your president has received his gentle guiding help throughout the year and a simple expression of thanks seems so inadequate.

In the experience of the speaker it has never before been his privilege to serve with, and in, a more unselfish and devoted group of people than the American College of Dentists. The helpful stimulating environment is not ordinary in any sense, and I have personally benefited spiritually and mentally from the experience.

The College is a going concern. It is not attempting to replace or displace anything or any group. Its purposes are distinctly and simply stated. It is, at all times, the wish of its officers and members to be of assistance to the great American Dental Association, and in no way to interfere with or detract from that Association's program for dentistry.

# AMERICAN COLLEGE OF DENTISTS

## INAUGURAL ADDRESS<sup>1</sup>

ARTHUR H. MERRITT, D.D.S., M.S., F.A.A.P.

*New York City*

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### I. INTRODUCTION

As we stand on the threshold of a second century in the evolution of American dentistry it would seem to be an appropriate time—reflecting upon the achievements of the past—to consider ways and means by which those achievements can be made “stepping stones to higher things.” For there can be no purpose in surveying the past unless, in doing so, we take increased devotion to the unfinished tasks which it presents, to the end that we may be better fitted to deal with them and the problems which the future is sure to bring.

Beginning as a mere craft, without organization or the facilities for education, American dentistry has, in the first century of its existence, advanced to the status of a learned profession; has created a system of professional education which is second to none in this

<sup>1</sup> Convocation: Hotel Statler, St. Louis, Mo., Oct. 23, 1938; item 78, abstract of minutes: *J. Am. Col. Den.*, 5, 227; 1938, Dec. (this issue).

country; has made the name of American dentistry the synonym for excellence throughout the civilized world—the only profession, indeed, to which Europe looks to the United States for leadership; and has given to humanity the greatest boon within the gift of man—surgical anesthesia. These are notable achievements and worthy of any profession. They bear testimony to the high ideals of those who, in the past, have given of themselves and their talents that the profession of dentistry might serve more acceptably. But it is not of these things I would speak, but of the possibilities of the future; not of the accomplishments of the past, but of the unfinished tasks of the present. Much remains to be done. And fortunate indeed is that profession which has within its ranks a group such as that represented by the American College of Dentists, which makes service the sole purpose of its existence.

With these things in mind, and animated by the inspiring record of the past, I have chosen as the subject for consideration in the year just ahead: *Dentistry's present and future objectives*. Never did these present a greater challenge than in this year of 1938. They press upon us at every turn. The field is already white to the harvest. But the obligations which they impose cannot be met except as we are willing, individually and collectively, to give the best that is in us. It means long and persistent effort. As has been well said: "You cannot make a silk purse out of a sow's ear by deep breathing." No more can the objectives of the College be met by wishful thinking. It is only by the sweat of men's brows that anything worthwhile in life is ever accomplished.

In order that the program for the ensuing year (as well as for the years to come) be given careful consideration, I recommend that each section endeavor, in an adequate number of meetings annually, to consider carefully—and to formulate recommendations on—a wide range of matters of current interest and concern in the affairs of the College. A year ago the regents inaugurated the policy of inviting the members of each section to indicate their views and preferences not only on listed subjects presented by the regents to each section, but also on the proceedings of the College and of the regents as published in the successive issues of the *Journal of the American College of Dentists*, and on such other matters as each section independently

might regard as deserving or requiring special attention. The proposals and recommendations of the sections could and should be made highly constructive influences. Therefore, I earnestly hope that each year each section will send to the President, the Secretary, or the Board of Regents, repeated evidences of readiness to participate actively in the work of the College. This, it seems, would be an excellent means by which the efforts of our sections and of the officers and regents would be effectively coordinated. It is not enough that we should come together each year in an annual convocation. The inspiration gained in these annual gatherings will be lost unless it be kept alive throughout the year by the interest and cooperation of all the sections.

## II. DENTISTRY'S SOCIAL RESPONSIBILITIES

No one who has given serious thought to the present-day problems of dentistry can fail to be impressed by their magnitude and complexity. And first among these is dentistry's responsibility toward those of the public who are not now receiving adequate dental care. A considerable number of these can no doubt be reached through education and, by the application of preventive and early treatment, can provide for their own needs. The number who can pay all or part of the cost of needed dental treatment doubtless represents the majority of the people of this country. In recognition of this situation the dental profession has for years carried on a campaign of education in the belief that the logical approach to the problem is along the lines of prenatal and postnatal nutrition plus the detection and correction of dental defects in early life. The public, as a result of such instruction, has come to appreciate the value of dental health as never before and in increasing numbers have availed themselves of its benefits. These conditions have not, however, completely solved the problem. There are still millions of people who receive little or no dental care, and who are insisting that something be done about it. At the National Health Conference recently held in Washington, to consider the need for a coordinated health program, the Committee recommended an annual federal expenditure, rising in ten years to about \$850,000,000, to increase and expand the present governmental health activities. If these recommendations are



adopted, it means nothing less than the first step in this country toward the socialization of both medicine and dentistry. This is a grave situation and one which the dental profession should be prepared to meet. It cannot do this by opposing socialized dentistry, or by citing figures to show that it has not been successful where it has been tried. Experience has shown that you cannot beat something with nothing. Dentistry must come forward with a constructive program, or some other agency less well fitted will assume control. And heaven help any profession upon which is placed the paralyzing hand of bureaucracy.

### III. DENTAL EDUCATION

Another important problem is that of dental education. How is the dentist to be trained in his undergraduate years in order that he may be able to measure up to the reasonable demands of the public whom he must serve? And having been so trained, how is he to be kept abreast of professional progress? These are questions which can profitably engage our attention. And if we are wholly frank with ourselves we will be forced to admit that the profession, as a whole, is not alive to its opportunities or responsibilities—is not in fact always rendering the service which could reasonably be expected of it. This, I think, is rather generally recognized by educators in and outside dental circles. The Carnegie Foundation's survey would seem to confirm this. Failure to keep abreast of professional growth doubtless explains much of the inefficiency which is too frequently seen in present-day practice though the dental school is probably not entirely blameless. Lack of regular study—unwillingness to attend meetings, or to engage in post-graduate study—is no doubt a large factor in our problem, perhaps the largest factor. A periodic examination as to meetings attended, books read, post-graduate courses taken, etc., might be fruitful in correcting a situation which stands at the very threshold of professional progress.

### IV. RESEARCH

No one can reflect upon the problem presented by the millions who are in need of dental care without realizing at the same time that the first step in its solution is to find some way by which the present

almost universal incidence of dental disease can be materially reduced. This need cannot be met by present-day methods of practice. The only way out is through research. This, too, is realized by the dental profession. Along with its campaign of education it has, for years, carried on a program of research along many lines. And this it has done with almost no aid from outside. Since little had ever been previously done in the field of dental research the work undertaken was largely pioneer in nature. This meant a certain amount of experimentation, duplication and inefficiency. No one is to be blamed for this. Under the circumstances it was almost inevitable. But has the time not come when many of the research activities of the profession should be brought together in a central bureau? Here plans for research could be made, funds allocated, information obtained, library facilities provided, findings correlated and so on. An excellent plan by which this might be put into effect has been put forward by one of our own members, Dr. Alfred Walker of New York.<sup>2</sup> I suggest its consideration by our Research Committee.

#### V. ENDOWMENTS

In an article appearing in one of our metropolitan newspapers, entitled "*Stepchildren of science*," the author raised the following question and gives his answer:

"If teeth are guilty of all the evils charged against them, why aren't dentists equipped to find the cause and get rid of it? The answer is that dental schools aren't endowed or equipped for post-graduate and research work. They are the neglected stepchildren of science. Even the instructors for the most part must practice on the side to get a living. Brilliant young men who need backing for cancer research usually find it; but who will support one who wishes to spend his life discovering the mysteries of teeth? It is a queer civilization that endows dog hospitals and wont spare the money to discover why bad teeth cripple its people."

Since all research in dentistry as in medicine is carried on in the interest of the public, it is the public who should support it. For some reason not entirely clear, despite the observations of newspaper critics, dentistry has never received the financial assistance in re-

<sup>2</sup> Merritt: *J. Am. Col. Den.*, 5, 95; 1938, Mar.-June.

search which its importance deserves. Why this is so should be made a matter of careful study. Ways by which philanthropic organizations and men of wealth can be interested in a problem so vital to the welfare of the public should be given careful consideration. When this is done, and the matter presented as a great opportunity for service, is it not probable that there will be found those who are willing to support it? Such assistance is essential in any effort that is made to meet the needs of those who at present are without dental care, since this problem can be solved only along the lines of prevention. Research must find the way and the public, in whose interest it is carried on, must pay the bill.

#### VI. EDUCATION OF THE PUBLIC

This it is believed should be along two lines: (a) education as to the importance of dental health and ways by which it can be achieved, including the coöperative efforts of the individual, and (b) the need for financial support of research, pointing out that it is the public who is the beneficiary of the findings of research. Most of the educational activities of the profession to date have been along the first line. And this is one step in the direction of prevention, for it can never be wholly successful without the coöperation of the individual. But this of itself may prove to be a boomerang, for to educate people to the importance of dental health, without making it possible for them to obtain it, is hardly the part of wisdom. The public is already aware of its needs and is asking that something be done to meet the situation. What the public does not understand is that it too has a responsibility in the matter, and that it is only through the coöperative efforts of the dental profession and the public that the problem of dental health for all the people can be solved. It is this phase of the subject that needs to be stressed in the future, for it stands at the very threshold of our problem. It is a problem that must be solved and dentistry must find the way.

#### VII. SPECIALIZATION IN DENTISTRY

This is one of the newer problems facing the dental profession, and one which must be given consideration in the interest of all concerned. Dentistry has become so complex it is hardly to be

expected that its practitioners can be proficient along all lines. This means that specialization is inevitable, which in turn makes it necessary that provision be made for the instruction and certification of those desiring to specialize. In undertaking to do this it would seem that we could hardly do better than to follow, in principle, the plan that has been put into successful operation by the medical profession, which in 1933-34 set up an Advisory Board for Medical Specialties for the purpose of coördinating graduate education and certification of those wishing to specialize. This Board acts in an advisory capacity to such medical organizations as may seek its advice concerning ways and means for the education and certification of medical specialists. It consists of two representatives from each of the approved examining boards of the medical specialties, and of such other national organizations as are directly concerned. The conditions under which these approved examining boards shall operate are set forth at some length, and include conditions for organization, qualification of candidates, and definition of special branches of medicine recognized as suitable fields for the certification of specialists. The Advisory Board meets annually at the time and place of the meeting of the American Medical Association. The problem in dentistry is in some respects not unlike that in medicine. We could hardly do better than profit by the experience of our medical co-workers in this field.

#### VIII. POST-GRADUATE INSTRUCTION

It logically follows that before certification of specialists in dentistry can take place, provision must be made for post-graduate instruction. The subjects to be included in each specialty, the time required to complete the course and the like, are matters requiring careful study. This would be the duty of the National Advisory Board if and when set up, the formation of which would seem to be the first step toward solving the problem of post-graduate instruction and certification of specialists in dentistry. In some respects, however, the problem in dentistry is radically different from that in medicine, a fact which needs to be considered in devising plans for graduate instruction and certification of specialists. In the first place dentistry is not overcrowded. There is at present no need for limiting those who

wish to take up the study of dentistry by imposing very high standards for admission, as is sometimes done by professions that are overcrowded, or by protracted post-graduate courses for certification of specialists. Secondly, dentistry deals with problems that are less serious than those with which medicine is faced. For these reasons, among others, post-graduate instruction in dentistry need not be as time consuming in the preparation of specialists as in medicine. It should, however, be made adequate.

#### IX. DENTAL JOURNALISM

It must be evident to any one who has given the matter any consideration that the present situation in dental journalism is far from satisfactory. A multitude of local and state bulletins can never meet the requirements of a growing profession. What is needed is several types of journals, some regional and some national in scope, devoted to research, clinical dentistry, abstracts and possibly to some of the larger specialties. Also there might be considered the possibility of publishing a popular journal under the auspices of organized dentistry that could be sent, gratuitously if need be, to every member of the dental profession. Such a journal would take the place of the present "throw-away," and at the same time keep the recipient informed regarding the activities and ideals of organized dentistry. A dental-health magazine for the public might also be considered.

#### X. JOURNAL OF DENTAL RESEARCH

It is well nigh incredible that in a profession numbering 60,000 members, and calling itself scientific, there should be less than 4 per cent who are willing to subscribe for a journal devoted entirely to scientific research and costing but \$4.00 annually. Yet that is the situation despite the fact that an organized effort has been and is being made throughout the United States to stimulate interest in such a journal. For almost twenty years the *Journal of Dental Research* has continued publication with an annual deficit of approximately \$2,000. Its loss to the profession would be irreparable. With a view to placing it on a self-sustaining basis, plans have been set in motion to raise an endowment fund of \$50,000 and materially

to increase the number of its subscribers. This must not be allowed to fail. The American College of Dentists has been most generous in its support. Much, however, remains to be done. Less than one-half of this fund, known as the "William J. Gies Endowment Fund for the Journal of Dental Research," has been subscribed. Relatively few have been willing to aid it by their subscriptions. And yet a few thousands added to those already on the list, would make the *Journal* self-supporting. It is unbelievable that the dental profession will allow this to go by default. It cannot do so and lay claim to being a scientific profession. It is strongly urged that the College continue its support, especially in an effort to increase the number of subscribers. The *Journal of Dental Research* represents a great ideal and as such should have our wholehearted support. In it the soul of dentistry marches on. Shall we not keep in step?

#### XI. HOSPITAL INTERNSHIPS FOR DENTAL GRADUATES

There are probably few things in the post-graduate education of the dentist of more value than a hospital internship. It provides an experience to be had in no other way. Since hospital internships are a matter of great importance to all concerned, such internships should be made available to as many as possible. This is necessary at this time when some state dental boards are considering the advisability of admitting to their examinations only those having had such training. Before this can be done on a large scale it will be necessary to provide such internships for dental graduates. More and more the importance of this matter is being recognized by both dentistry and medicine.

#### XII. DENTAL TECHNICIANS

This is another of the major unsolved problems in dentistry. It is generally agreed, I think, that the dental technician in some form is an important adjunct in dental practice. The growing complexity of dentistry, the difficulty if not impossibility of becoming skilful in all its branches, would seem to indicate that the technician is here to stay. How then can dentistry make use of this important ally, in fairness to itself, to the technician and to the public? There should

be some way, satisfactory to all concerned, in which this can be done. And dentistry should find the way.

#### XIII. CONCLUSION

These, it would seem, are some of the things which might profitably engage our attention in the year just ahead. Their importance in the progress of dentistry is fully recognized by the College. Many of the subjects alluded to have been made topics for discussion by several of those who have preceded me as president of this organization. Standing committees, representing most of the subjects to which reference has been made, are already at work studying many of these problems. Their solution is not easy. They will not all be solved in the next twelve months—perhaps not in the next twelve years. But that should not discourage us. "It's not what man does exalts him" or a profession, "it's what man would do." The American College of Dentists is dedicated to service. As such it will continue to go forward in its efforts to advance the usefulness of American dentistry. And in doing this it is asking your coöperation and mine, for only as you and I do our parts can the College hope to succeed.

## HOW CELLS MANAGE THEIR SOCIAL PROBLEMS<sup>1</sup>

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### I. INTRODUCTION

Better social integration is the order of the day. Dentists and physicians will agree that social adjustment within the Nation and between Nations is a more pressing problem than dental or medical research. Every angle must be explored. Both dentists and physicians are trained biologists. They know that the human body is a community of cells which is well integrated, and which adjusts itself in a marvelous way to many external and internal disturbances. Day by day dentists and physicians give assistance. What is more natural for them than to consider the community of the body politic in the light of their experience?

Comparison of the modes of integration of cells and of people is not new. More than a generation ago the analogy was described by Virchow, Haeckel, Milne-Edwards and others. But its advocates allowed their imaginations to run away with them. They went too far and received a lot of unfavorable criticism. Today, there are more data, but the data have usually been considered in a one-sided way. It is desirable to examine the available facts in better perspective, as in binocular vision, by superimposing and blending the biological and the sociological points of view.

<sup>1</sup> Read at the convocation of the American College of Dentists, Hotel Statler, St. Louis, Mo., Oct. 23, 1938; item 51, abstract of minutes: *J. Am. Col. Den.*, 5, 223; 1938, Dec. (this issue).



## II. BIOLOGICAL POINT OF VIEW

Prof. E. B. Wilson, of Columbia University, is the acknowledged leader among cytologists investigating cells from the standpoints of development and inheritance. He has examined the concept that "the multicellular organism may be regarded as a 'cell-state' the one-celled members of which have undergone a physiological division of labor," and has stated his belief that it "offered a simple and natural point of attack for the problems of cytology, embryology, and physiology, and revolutionized the problems of organic individuality. Its value as a means of biological analysis needs (in his opinion) no other demonstration than the immense advances that it made possible. Inevitably in practice we treat cells as distinct, though closely coördinated, elementary organisms or organic units; and although some writers have questioned the validity of this procedure it nevertheless remains an indispensable means of analysis."

On the basis of long experience in the experimental investigation of the organization and individuality of living animals, Prof. C. M. Child, of the University of Chicago, has concluded that "social integration is a dynamic integration of human organisms, and the human organism is an integration of cells, tissues and organs. Unquestionably these differences in order of magnitude of the integration determine differences in detail in the processes concerned, but both cell and human being are living systems, and we believe that the human being is a product of evolution from the cell. We may expect, therefore, to discover a fundamental similarity or identity in the more general laws and processes of integration from the one extreme of the cells or the simplest organism to the other of the great modern state or nation."

Prof. W. B. Cannon has written a book on "The Wisdom of the Body," based on numerous researches by himself and his colleagues in the Physiological Laboratory of the Harvard Medical School. In this interesting volume he did not hesitate to compare methods of integration in the bodies anatomic and politic. In the last chapter he made specific recommendations as to means for attaining stability in human society based on methods employed by the cells in the body anatomic. To these we shall return later.

It is significant that W. H. Wheeler, an accomplished entomologist,

made the following statement. There is, he said, "a striking analogy, which has not escaped the philosophical biologist, between the ant colony and the cell colony which constitutes the body of a metazoan animal; and many of the laws that control the cellular origin, development, growth, reproduction and decay of the individual metazoan are seen to hold good also for the ant colony regarded as an individual of a higher order. As in the case of the individual animal, no further purpose of the colony can be detected than that of maintaining itself in the face of a constantly changing environment till it is able to reproduce other colonies of a like constitution. The queen mother of the ant colony displays the generalized potentialities of all the individuals, just as the metazoan egg contains *in potentia* all the other cells of the body. And, continuing the analogy, we may say that since the different castes of the ant colony are morphologically specialized for the performance of different functions, they are truly comparable with the differentiated tissues of the metazoan body." If this comparison is justified between the cells of the body anatomic with the individuals of an ant colony, we think that it is also justified with individuals of the human body politic which is, as Jennings states, a lower or less advanced stage in social integration.

Support is also obtained from the investigations of Raymond Pearl, who has pointed out that at the human level "the group behaves biologically in certain respects as a whole. For the adequate study of such phenomena there is rapidly developing a separate division of science, which is called 'group biology' or the biology of populations. . . In a theoretically ideal social organization there would presumably be a constant relative number of persons engaged in each of the differentiated occupations, which when integrated together are essential to the well-being and survival of the society as a whole." Pearl has established the fundamental fact that the growth of human populations, and of populations of many animals as well as of yeast cells, follows a definite curve expressed by one and the same mathematical formula. It reaches stability as the growth of the human body does. Here we come to what appears to be a fundamental difference between integration in the bodies anatomic and politic. The duration of the integration, or life span, of the former is definitely fixed whereas the latter may continue to

live perhaps indefinitely. Some think, however, that civilizations likewise rise and wane.

Other biologists could be mentioned who believe the analogy between modes of integration in the body anatomic and the body politic to be justified as a working hypothesis. Disagreement can usually be traced back to remarks made many years ago by Huxley, Sedgwick and Whitman about the inadequacy of the cell theory. If these investigators could come back to life and view the facts now well known they might recast their opinions.

It is not surprising that many, who are not biologists, make free use of the organic analogy. Thus, Arthur E. Morgan, great engineer and first Chairman of the T. V. A., has written: "The human body is a society of innumerable cells, each living its individual life while serving the whole. . . Certain conditions seem to be ideal for the life of a cell, and the body has developed many systems of controls and balances to maintain that ideal, uniform environment." After some discussion, he concluded that: "A wholesome and stable social order must also be achieved and maintained by balance and proportion through inward controls." President H. G. Moulton, of the Brookings Institution of Washington, in an interesting discussion of the principles of economics, wrote that the economic system "is constantly undergoing evolutionary change." In his view ". . . the economic system is an evolving organism." Likewise the philosopher, John Dewey, compared the body anatomic with the body politic, or social organism, for he said: "The economic-material phase of life, which belongs in the basal ganglia of society, has usurped for more than a century the cortex of the social body."

### III. SOCIOLOGICAL POINT OF VIEW

What is surprising is the attitude of sociologists. They seem to have turned their backs on all biological data, with the exception of the fact of organic evolution, and to have chosen to utilize—in building their science—materials which appear to them to be of more actual value. But in fairness we have to thank the pioneer-sociologists for their penetrating insight into natural phenomena: ". . . it is well-known that certain important conceptions such as the struggle for existence, the survival of the fittest and the physiological

division of labor, were derived from sociological sources and later extended to the entire world of organisms in Darwin's theory of evolution" (Wheeler). Sociology is now advancing rapidly in close touch with economics. Attention is being given to "measurable factors." In addition, the importance of *ideas* is properly recognized. "Recognition of this dominance of ideas in social integration has been perhaps the chief factor in leading sociologists to regard biological analogies as at least remote and of little practical value" (Child). To think of the cells as possessed of ideas or governed by *attitudes* of superiority, inferiority, or difference in social status, is asking too much. They are, so far as we can tell, thoughtless little creatures easily ignored by those who do not use a microscope. Sociologists flirt with the psychiatrists who emphasize the total personality, or unity, and ignore the individual parts or plurality. This is another reason why the cells are neglected by them.

When specifically asked whether the ways that cells are associated in the human body are of any significance in relation to the association of individuals in a community, sociologists answer, "perhaps;" and add that "a comparison of the modes of integration was made some fifty years ago and that it did not get us anywhere." When pressed for their opinion they almost with one voice declare that such comparisons are really vicious because they are unscientific and likely to lead the unwary astray. Barnes, in his outline of the development of sociology, reminds us that many early sociologists tried "to show that human society exhibited in its organization systems of organs possessed by the individual biological organism." This is, very definitely, *not* what we are attempting to do. He states, however, that the result "was of significance for social science in the way of emphasizing the necessity of a proper coördination and harmony between various constituent groups of human society." We are interested solely in the *modes of integration* of cells in the biological organism and of people in the social organism or body politic. Keller is particularly emphatic. He blames Spencer for becoming enamored of the analogy between organism and society. After Spencer, "the Germans got hold of it and constructed huge volumes of uninspired muddlement about the structure and like of the social body." That,

except for some penetrating ideas, much nonsense was written, owing to lack of training in biology, we do not deny.

Keller is right in saying that "an analogy is no proof of anything." He is justified in reminding us of "the exhorter who described the life cycle of the butterfly and wound up triumphantly: 'Now who shall say that there is no proof of immortality!'" But what really must we understand by *analogy*? It has many meanings depending upon how and in what connection it is used. We gladly skip the mathematics. *Ordinarily*, as specified by Funk and Wagnalls, it signifies "resemblance or similarity of properties or relation; agreement or semblance in certain aspects, as in form or function; similarity without identity." Thus, an analogy between the biological and social organisms is that both are alive. Another way to put it is that they are analogous insofar that they are alive. This is similarity in a particular respect obviously without identity of the objects compared. To speak of closeness of resemblance is simpler and more direct than to talk about the degree of analogy.

Funk and Wagnalls give two definitions of analogy as employed *in logic*: (1) "Reasoning in which from certain observed and known relations or resemblances others are inferred. (2) Reasoning that proceeds from the individual or particular to a coordinate individual or particular, thus involving both induction and deduction." To reason in either of these two ways by analogy is unsafe and should not be resorted to unless no other *modus operandi* is available. In this comparison of methods of integration in the bodies anatomic and politic we are not trying to prove any thesis. The argument of analogy as employed in logic, or in any other way, is not being used. What we propose to do is to note resemblances and dissimilarities in the methods of integration and their effectiveness in the two situations. Comparison is essential in scientific progress and needs no apology.

Keller, however, admits that reasoning by analogy can be very helpful: "If in one field of investigation (say the organic) we know that certain phenomena are produced in a certain way, and if in an adjacent, less understood field (say the social), we find analogous phenomena, we are justified by long experience in the inference

that the unknown producing factors in the new field are probably similar to the known ones in the older range." And he proceeds himself to use just this method. Actually it is of doubtful value. Take an example: We know that in the organic field certain phenomena of integration are produced by chemical substances, called hormones, and that in the less understood social field phenomena of integration, analogous in that they likewise involve stimulation and inhibition, likewise occur; but we are not justified in the inference that the producing factors in the social field are probably similar. Far from it. Integration in the social field involving stimulation and inhibition may result from such factors as war and religion. These are not very similar to hormones. Again: It has been established in the organic field that cells reproduce themselves by simple division, and that in the social field the process of reproduction is analogous since it results in increase in number, but we are not justified in concluding that the reproductive factors are similar in both fields. On the contrary, we know that sexual intercourse is not required in the community of cells but is necessary in the body politic. The word "similar," as applied by Keller to analogous phenomena, is almost as meaningless as his argument by analogy is useless. Neither can we agree with Keller in his statement that "animal adjustments are typically physical, while human adjustment is typically not physical." Both psychologists and sociologists deal with life.

Psychology, MacIver reminds us, "is interested in the nature of the behaving unit, in the structure of the individual mind which makes behavior possible. . .;" while "what the sociologist is interested in is pre-eminently the way in which beings endowed with consciousness act in relation to one another." Altering a few words, it can be said that the cytologist, who deals with cells, is interested in the structure of the individual cell which makes behavior possible and with the way in which cells endowed with vitality, and all that the word implies, act in relation to one another. MacIver further remarks that "the territory which the sociologist explores changes even as he explores it. This fact has an important bearing on his method and results." We agree with him that, in contrast, human nature was not very different thousands of years ago. But a human

being, while living, is always changing, so that the material of a cytologist is in point of fact much closer to that of a sociologist than is that of a physicist or a chemist who can control the conditions at will.

Evidently, in order further to test the justifiability of our comparison of modes of integration in the bodies anatomic and politic, we must as amateurs examine briefly the architecture of society as described by sociologists with the hope of ascertaining how far the terms and definitions which they use are applicable to the relations of cells in the body anatomic. MacIver defines certain key-words, among which are *society* and *community*. He explains very precisely how these may properly be used to designate human relationships. In the relation between two chemical constituents "each may be affected by the existence of the other, but the relation is not a social one." There is no mutual awareness. "Without this recognition there is no society. It exists only where social beings conduct themselves, or 'behave' toward one another in ways determined by their recognition of one another."

Similarly the behavior of cells in the body anatomic toward one another is determined by a kind of *recognition*. We think at once of grafts of skin cells and transfusions of blood cells. The old misguided practice of trying to obliterate birth marks by treatment with radium may, many years later, result in the development of a skin cancer. Before this happens the area of skin involved must be removed and a piece of skin taken from the same person must be grafted in its place. After severe burns, and injuries of other sorts, skin grafting is also indicated. The cells of the tissue receiving the graft recognize the cells of the graft, and accept them without hesitation. When, however, the grafted skin is taken, not from the same person, but from another individual, the receiving cells recognize them with difficulty and the graft does not grow so well. When, finally, the grafted skin comes not from a human at all but from some other animal the receiving cells fail to recognize the cells of the graft, treat them as unassimilatable aliens, attack and destroy them. It is easy to think of comparable situations on the human level. People moving from one part of the United States to another are recognized as compatriots, settle down and feel at home. Others

from Great Britain speaking the same language are recognized and welcomed, but they find it more difficult to adapt themselves to the slightly different social environment. Still others from Fiji or Borneo are not recognized, fail to make themselves understood, and are rejected as foreigners. Blood transfusions afford other examples of recognition based on compatibility or the reverse. Blood cells taken from a vein of the arm and injected back into a vein of the leg are received immediately and without question. Blood from persons of the same "blood group" is recognized as compatible in other persons of the same group; but blood from a radically different group is not accepted, and the reaction against it may be so violent as to cause death. Most of the cells injected belong to the red variety, which are dead or nearly so, and the recognition or lack of it is not by similar cells of the donor but is an expression of community reaction by several groups, or associations, of cells in the donor. We recognize dead people as well as living ones.

Recognitions by living people and by living cells appear, at first, to be altogether different; they are by no means the same, yet there is an underlying similarity. We recognize our friends by seeing them near at hand or hearing them talk. Our sense organs inform us of physical alterations in our environment brought about by the receipt of light waves and sound waves characteristic of people we know. Obviously the cells have no eyes or ears, but they likewise are living beings sensitive to alterations in the fluid about them occasioned by other cells with which they are familiar and to which they are accustomed. With them, also, recognition depends in the last analysis upon response to physical stimuli, for chemical changes are at rock bottom physical in nature. The difference is in the character of the physical stimuli and their means of perception.

The behavior of the cells of certain lowly animals, the marine sponges, is interesting in this connection. E. B. Wilson, in reaching the conclusion to which we have alluded, was influenced by the experiments of H. V. Wilson with sponges, which have been extended by Galtsoff. The latter separated the cells of living sponges by squeezing them through bolting silk No. 20, as we may say that the citizens of different nations are squeezed through the immigration filter at Ellis Island. After this separation the citizen sponge-cells originally derived from violet, gray, red and yellow species of sponges



were permitted to regroup themselves. They sorted themselves out into violet, gray, red and yellow groups which quickly reconstructed the bodies anatomic of the particular species to which they belonged. Humans liberated from Ellis Island also associate themselves to form national groups which tend likewise to grow. Galtsoff found that the sponges do this because, when through random movements the sponge cells of a given species touch each other, they cleave together. When, on the contrary, sponge cells of two different species come in contact they do not maintain contact and build a multicellular organism derived from the two species. Similar experiments with sponges, not conveniently marked by Nature with distinctive pigments, showed after separation the same sorting out and coalescence of cells of the same species, and the same failure of cells from different species to unite. This was proved by marking the cells with carbon or vital dyes before squeezing through the silk.

Returning to the definition of *society*: MacIver explains that "to be mutually aware and to act on that awareness is hardly enough to create a social situation." There is no social relation between hunter and wolf but both are aware of each other. "Society implies some sort of 'belonging together' . . . Any relationship that is based on recognition, in any degree, of a common life may be properly termed a social relationship." It is clear that the cells of the body anatomic belong together and live a common life dedicated to the welfare of the whole. In these respects the cells are much more social than human beings. Yet, MacIver says, "we do not belong to the society as the cells 'belong' to the organism." With this we agree, for the bonds are not the same and the individuals belonging together are of a different order of size and complexity. It is true that cells of sponges become associated by contact and that in the growth of the human embryo contact of cells is an important factor, but chance contact is by no means the only factor. Chemical substances of cellular origin from a distance reach the cells, as ideas and materials do in a growing human society, and influence the cells physically in perfectly definite but little known ways. As a result, some cells move about and station themselves where they can be most useful. There are distance as well as contact bonds in both cellular and human societies.

MacIver's further characterization of human as distinct from

cellular society is interesting: "The only centers of activity, of feeling, of function, of purpose which we know are individual selves. The only society which we know is a society in which those selves are bound together, through time and space, by the relations of each to each which they themselves create or inherit." By changing a few words this would serve as an admirable description of the linkage of cells in the body anatomic. Thus: The only centers of physiological activity that we know are individual cells and groups of cells. The only cellular society of which we have any information is one in which those cells are bound together, through time and space, by the relations of each to each which they themselves create or inherit. Society depends, according to MacIver, "on differences as well as likenesses . . . Thus the division of labor is coöperation before it is division. It is because they have like wants that people associate in the performance of unlike functions." Exactly the same holds for cellular integration and the statement that this is so needs no elaboration.

Another sociologist, Prof. North, has defined a *social class* "as a distinct section of the population whose members occupy a similar status with respect to rights and privileges, who perform a similar function in the economic organization of the society and who tend to exhibit common characteristics such as folkways and mores, ideology, attitudes, educational equipment, and because of common characteristics and common interest at least potentially possess a feeling of solidarity." This definition applies fairly well to classes of cells in the body anatomic except that ideology and attitudes are unrecognizable or non-existent. The nerve-cells, for instance, constitute a definite part of the cellular community. Except for minor differences all nerve cells are on the same status with regard to rights and privileges. They all perform the function of rapid integration. They have many common characteristics in hereditary endowment, action pattern and material equipment. They do associate themselves in large or small clumps. Whether they possess a feeling of class solidarity we cannot tell, but there are physical factors which result in solidarity.

The most fundamental attribute of society, MacIver believes, is the yearning of man for society. Separation from society in solitary

confinement is a dreadful punishment. Again we find the same feature in the cleaving of cells to cells. When cells are removed from the body, and are cultivated in artificial media (tissue cultures), the individual cells group themselves together and sometimes attempt to establish the relations in which they formerly existed in the body. "Society is a system of relationships between human beings who are in a process of continuous readjustment to one another, to the system as a whole and to the continuously changing environment. Its moving equilibrium is itself a unity of these three closely inwrought aspects" (MacIver). This comes very close to the biologist's conception of the relationships of cells in the body anatomic. "The mark of a community is that one's life *may* be lived wholly within it, that all of one's social relationships *may* be found with it. . . . A community, according to our definition, is always a group occupying a territorial area" (MacIver). The body anatomic is therefore more than a society; it is a community of cells, for it is limited in space, as in most things, more definitely than a human community, and the component cells *may* live their lives entirely within it. If the conditions are favorable, both people and cells may leave the community and adjust themselves to other communal relations—foreign lands and tissue cultures.

The unity of a human being is more impressive than that of any nation, even the most totalitarian one thus far conceived. The individual cells project themselves into the whole dynamically, each kind in its own way. In doing so, they lose part of their ego, individuality, freedom, call it what you will. Many of them retain, however, their ability to live independently of the whole. This has been conclusively demonstrated again and again by studies in *tissue culture* by the Lewises, Carrel and others. When cells cut from the body of an adult are planted in nutritive media resembling blood plasma, they go on living and multiplying by division as long as conditions remain favorable. As is to be expected, other things being equal, the cells which can be removed from the body with least mechanical injury survive better than those possessed of long processes intricately bound together like nerve cells which have to be cut apart. Highly specialized cells find it more difficult to adapt themselves to the new surroundings than cells which are more adapt-

able. Except for minor differences attributable to altered physical environment, these cells in tissue cultures look very much like those in the body. They do not show any structural features to correspond to the ego which they retain and no longer lose by projection into the community. It is significant that these isolated cells show a marked inclination to behave as they did when they were parts of the body anatomic. If taken from the heart they contract rhythmically; if removed from glands, they attempt to arrange themselves in a kind of glandular structure; and if they were originally leucocytes, they may continue to act as leucocytes.

Part of the individuality of human beings, in the body politic, is likewise projected into the whole. The people sacrifice or lose part of their freedom and independence which they extend into the group consciousness. They gain thereby in social security as the cells do. When they, like the cells, are removed from their native body politic they can survive, but only if conditions are favorable. If they get lost in the Sahara Desert, they die. If they find themselves in a remote village in China, they experience great difficulties. Adaptable persons will get along better than those whose lives have been highly artificial and specialized. The appearance of people separated from their native land does not betray the fact that their ego is all their own, and no longer partly merged in the consciousness of the group, but it is so. They will try to do what in the body politic they had been trained to do best in much the same fashion that cells, forcibly removed from the body anatomic, attempt to do in tissue cultures.

But these relations are not one-sided. The community gains by projection into it of the individuality of socially acting vital units; and the units gain, for they would not have developed their individuality to the same degree had it not been called forth by membership in the community. This is an important point. Let us consider the humans first and the cells later. Authentic cases of children who have matured without social contacts with other humans have been reviewed by Briffault. Such children are said to resemble lower animals in their behavior and some appear to be almost imbeciles. They are entirely lacking in that individuality which can come only from social adjustments with other humans. We can

imagine what a "find" a socially disinherited child would be to the modern psychologist and sociologist. These specialists are unable to experiment with children as King Psammaticus of Egypt and some other absolute monarchs up to King James IV of Scotland are reported to have done (see MacIver).

The social contribution by the group to the development of cellular individuality is also very great and deserves careful study. Experimentation is difficult but not for humane reasons. A young cell removed from an embryo, before it has become differentiated or individualized in a distinctive fashion, and placed alone in culture medium, would not suffer in quite the same way. The isolated child remains solitary and alone. But it is safe to say that the cell would simply multiply by division, and produce a very limited cellular community, if the conditions remained favorable. The cells of this isolated community, however, would be lacking in many of the attributes they would have developed had they been permitted to profit by the normal, natural social contacts provided in the embryo. How futile would be a group of young nerve-cells separated alike from the sense organs from which they should derive stimulation, and from muscle or gland cells which they should in turn activate! As individuals they would be grotesque and useless. On the whole, it is likely that the cells would undergo greater deprivations than the children, because the social contacts that they should enjoy, if they are to develop normally, are more powerful, binding and controlling than for humans.

It is because the life of humans is more their own, less projected into the community and less dependent on the community, that they are more independent than cells. MacIver remarks: "In a sociological reference a being has more individuality when his conduct is not simply imitative or the result of suggestion, when he is less the slave of custom or even of habit, when his responses to the social environment are not quasi-automatic and subservient, devoid of understanding or of personal purpose." As rugged individualists, the cells are weak-kneed creatures. But they are individuals none the less. Since the term *individual* implies something which cannot be divided, or which is ordinarily undivided, it can be even more appropriately used to designate a cell than a person. A cell is not

made up of smaller units which can be separated and still live; whereas a person is constructed of many billions of cells, most of which can be separated from the whole and will live in artificial media under suitable conditions.

There are many definitions of *individuality*. We may take that of Child: "In the first place the organic individual is alive and therefore consists essentially of the complex of substances termed in general protoplasm; secondly, it is more or less definitely limited in size; thirdly, it possesses a more or less definite morphology, a visible form and structure, which is associated in some ways with dynamic and primarily chemical activity; fourthly, a greater or less degree of order, coördination, correlation, or harmony, as it is variously called, is perceptible in the character of its form and structure and in the dynamic activity of its constituent parts." This definition applies to cells and to people. Cells, like people, are individuals in many other respects of which the following are only a few:

1. They pass through periods of youth, maturity and old age inevitably ending in death.
2. They must breathe, have food, drink and suitable surroundings.
3. They specialize by tending to do less and less better and better.
4. They can go on living while their neighbors die.

It is clear, from this discussion, that the sociological concepts of individuality, division of labor, class, society and community hold without great modification for the cells in the body anatomic. It is also evident that we join a distinguished company of biologists, and follow other thoughtful persons, when we compare social integration at the cellular and human levels. It is not a realm of make-believe that we see when we look down a microscope, like the Wonderland which Alice entered through a rabbit hole, for all of the observations on cellular behavior to which we refer can be verified. But, when we liken the way living cells solve their social problems to the manner in which human beings provide for social integration, we must "watch our step." Because the cells do thus and so is interesting and perhaps significant; but it does not necessarily follow that humans, who really are so different and who live so differently, should follow suit. Nature speaks in parables which must be interpreted with respect and discernment, not literally. We are confident that she is a good instructor. She points out what not to do as clearly as what

we should do, if we are to integrate humans in the body politic in a more satisfactory manner and provide better social security.

#### IV. COMPARISON

Let us view the arrangements which Nature has made through millions of years for labor, distribution of commodities, social security and other features of the community of cells. Before this audience I need not give details. Your ideas will amplify what I have to say.

*Labor.* 1. Labor begins at different ages depending upon capability and kind of occupation. Neutrophilic leucocytes, for instance, only function as phagocytes in their old age after they have passed the period of reproductive activity by mitosis.

2. Division of labor is between classes of citizen-cells—gland cells, nerve cells and so on.

3. Duplication in kind of labor for a given objective is supplied as a community safeguard—the nervous and hormonal control of blood vessels.

4. There is a strategic reserve of workers, but the labor is spread so that there is no serious unemployment. We think of the physiological reserve of liver cells, kidney cells and others.

5. Hours of work are unequal depending upon the kind of labor and rest is provided according to needs. The heart, at 70 beats per minute, rests 15 hours per day. Gland cells of the pancreas serve at intervals when required. Erythrocytes, as long as they are present in the circulation, carry oxygen or remove carbon dioxide.

6. The tools for work are owned by the individual cells and are parts of them.

7. Sit-down strikes are ineffective in production systems (thyroid) because there are no construction lines, since all work is individualistic from beginning to end of manufacture. Nevertheless, efficiency is great, as in fat production from carbohydrates. One of the greatest needs of the German body politic during the war was for fat. Yet no amount of contemplation by skilled German chemists of the domestic cow enabled them to do likewise.

8. No dislocation of labor is permitted by sudden use of new labor-saving devices or by substitution of different commodities, oil for coal, etc.

9. There is no discrimination in labor based on sex or old age.

Aged, and even dead cells, serve the body in essential ways. Thus, epidermal cells provide protection; and red blood-cells, vitalizing oxygen.

*Distribution.* 1. This is managed by a single community-run system of transportation. No surplus in one place and want in another is tolerated. Consequently there is no confusion between apparent and actual surplus.

2. The producer-consumer relation is very direct; the only middle men are endothelial cells.

3. Delivery is unequal and is conditioned by need and not by ability to pay. It is therefore a public utility.

4. Amounts of everything in circulation are stabilized by balancing mechanisms; also temperature and other factors. *Surplus* is reduced by decrease in cellular activity of the manufacturers and by storage of products. The moment these measures become insufficient, the excess is discarded by the kidneys. In other words, a surplus is unhesitatingly eliminated before it can "gum up the works." *Economy is sacrificed to stability.* *Want* is overcome by increase in cellular activity, and release from storage, also, to a lesser extent, by decrease in elimination.

5. Danger signals are very effective. It is as if a bureau of standards had outposts in all strategic parts of the body and called for, and immediately obtained, adjustments whenever required.

*Social integration.* 1. The constitution, under which each cellular community works, has been developed over a very long time, and it is not subject to sudden and fundamental changes.

2. Government is largely automatic. Many citizen-cells are without direct representation. When there is representation it is unequal for different classes. The power of the ruling class of nerve cells is definitely limited to certain actions prescribed in the constitution.

3. Laws, or codes of behavior, are to maintain order and not to provide equal treatment for all. They regulate internal as well as external relations. There is no crime except by cancer cells.

4. The social system is based on regulated exchange of service. Money, capitalism, and individual competition are absent.

5. Position in the community is fixed. Class distinctions are definite because division of labor must be maintained; but there is no class antagonism.



6. Action and reaction bring about equilibrium.

7. Stability of living conditions promotes individual equality within classes, but is obtained by sacrifice of freedom of initiative and by devotion to the state. On the whole it is not a pretty picture.

*Social disintegration and death.* 1. Failure of stabilizing mechanisms.

2. Failure of distribution by the system of transportation accounts for about one death in every four.

3. Antisocial behavior of citizen-cells—cancer—causes perhaps one death in every nine. Here there is a particularly interesting analogy. The cancer cells and the anarchists were originally law-abiding citizens. As a result of some injury they become antisocial. This is less likely to happen in a young, growing person and in a young, expanding body politic. Both pursue their antisocial careers for a considerable time unknown to their respective communities. It is customary for cancer cells and anarchists, when they have quietly gathered sufficient strength, to strike through the system of transportation. Then all is lost.

4. Self-handicap leads, perhaps, to destruction of the body anatomic through domination of some idea and the submergence of balanced judgment. This is very important but difficult to express. Fads and autosuggestion, etc., promote, by a kind of propaganda in the cellular community, dangerous tyranny on the part of nerve cells. Plato, in his discussion of tyranny, has given us a clear view of propaganda. "Tyranny is not so much a form of government as political death, or sleep during which all conscious exertion of power is extinguished. The people, like a vast mass of brute matter, are fashioned by their tyrant into whatever form he pleases: he sends jugglers among them, under the name of priests, who fill them with dreams favorable to tyranny; by the instrumentality of these men, he darkens their minds, stupefies them with intellectual mandragora, and gradually plucks up by the root every free and manly and noble sentiment; ultimately, with more than Circean art, he transforms them into hogs, rings their noses, and turns them to grunt, feed and fatten for his use in the sty of slavery." It is interesting to note that the principles of propaganda and of hypnotism are identical. They are to eliminate all thoughts which give balanced judgment so that the force of the one remaining is so greatly enhanced that behavior is unconsciously determined thereby.

## V. CONCLUSIONS

Cannon has expressed the opinion that knowledge of social integration of cells in the human body affords useful suggestions as to social integration in the nation. His views were published the year before the "New Deal" began. He believes that stability is of prime importance. Stability is almost the same thing as *social security* of living conditions. Warning signals of increasing disturbance are well developed in the body anatomic and immediately acted on. Their development in the body politic would be a contribution of great value to social welfare. To locate and anticipate factors tending to upset stability, or security, has been assigned by President Roosevelt to the "National Resources Committee." Cannon says: Does not contemplation of the cellular community "imply that when there is prospect of social perturbation there should be power to limit the production of goods to a degree which would reasonably adjust the supply to the demand? power to lay aside stores of goods which could be released if crises arise? power to require the accumulation of wage reserves which could be used at times of temporary unemployment? power to arrange emergency employment or training for new types of labor skill? and power to accelerate or retard the routine processes of both the production of goods and their distribution, in accordance with desirable adaptations to internal or external disturbing factors?" This appears to be exactly the power which Roosevelt wants.

Cannon proposed specifically "... a board of industries or of trade associations, representing key industries or the more highly concentrated industries, and endowed (in some of the schemes) with mandatory power to coördinate production and consumption for the benefit of wage earners; provision for regularity and continuity of employment, with national employment bureaus as an aid, with unemployment insurance as a safety device, and with planned public works as a means of absorbing idle workmen; ... shortening of the working time and prohibition of child labor; the raising of the average industrial wage." Certainly the New Deal sacrifices, as the cellular community does, economy to social security. Cannon has not, however, sufficiently emphasized that the body anatomic is a totalitarian state and that it exemplifies the dangers of a managed social

order as well as some of its virtues. Citizen-cells pay for this stability by

1. Limitation of sexual activity to a special class.
2. Loss of individual initiative and of the possibility of leadership within a given class.
3. Inequality between classes of cells, in hours of work, in age of employment, and in representation in government.
4. Increasing fixation in the social order and erection of barriers between classes.
5. Complete devotion to the state.

The totalitarian cell-state is so constituted that it can survive only for a limited period, placed at three score years and ten. Perhaps this is due to excessive integration and lack of adaptability. The life of human totalitarian states may be similarly limited.

We have compared the body anatomic, made up of cells, with the body politic, made up of people. It is quite obvious that social integration of humans does not date back very far. In fact we are novices in this respect. Jennings, the great zoologist of Hopkins, has stated that in social organization the ants have reached "... to a stage in evolution far beyond that of man." The parents in societies of ants have practically no career, social or otherwise, except propagation of the race. The female is chosen and she is protected, pampered and fed for the sake of the young she gives to her particular community. Other females, not serving the state in this way, are ruthlessly killed, or are subjected to an operation like castration, so that they may be relieved of their sexual longings and become useful in different ways. The purpose of the males is to fertilize this single mother. When one of them has done so the remainder are similarly eliminated or their masculinity is destroyed. Jennings has written: "Society is nonsexual; carried on not by husbands and wives, fathers and mothers, but by neuters. The whole distracting business of mating, of marrying and giving in marriage, is cut out of these societies; the individuals can apply themselves wholeheartedly to their life careers. The young produced by the group-mother are cared for by certain of these neutral workers who make this their life business. The family does not exist; it is a state in evolution that has been left behind."

The society of ants is another totalitarian state in its limitation of sexual activity, loss of individual initiative, and fixation in the social order not unlike the cellular community. We note that it went so far and no farther. In many millions of years it has ceased to develop. Again this may have been due to excessive social differentiation and loss of adaptability.

Both the cells in our bodies and the ants in their societies are slaves of their respective states. In the reshaping of our social order we must not allow the increasingly strong social bonds to become chains.

## COÖPERATION BETWEEN DENTISTRY AND MEDICINE IN RESEARCH AND GRADUATE EDUCATION<sup>1</sup>

IRVINE McQUARRIE, Ph.D., M.D., F.A.C.D.

*Department of Pediatrics and the Graduate School, University of Minnesota,  
Minneapolis, Minn.*

May I take this occasion, Mr. President, to express my sincere gratitude to you and to the other Fellows of the American College of Dentists for the signal honor which you have conferred upon me this evening, and to congratulate you on the splendid spirit and achievements of your organization. You are to be commended particularly on the theme of this year's general program, because better coöperation with other professional groups is bound to make their efforts as well as your own more effective.

In emphasizing the need for more thorough-going coöperation between medicine and dentistry in particular, you have called attention anew to the essential unity of background and of purpose between the two great professions, which are dedicated to the preservation of human health. Through the inspiring dissertations of your spokesmen on today's program, you have displayed admirable insight into the complexity of our mutual problems and have recognized the futility of single-handed effort. I feel sure that this commendable attitude on your part will elicit a ready response from the more enlightened members of the medical profession, who have long recognized the advantages to be gained from active coöperation between the various special groups within their own ranks.

One cannot discuss the subject of the interrelationship between the medical and dental professions without recalling two classical examples of the good that may flow from proper teamwork between them. I refer to the priceless gift of ether anesthesia to the medical world by the dentist, Morton, and the discovery of block anesthesia,

<sup>1</sup> Address at the convocation of the American College of Dentists, Hotel Statler, St. Louis, Mo., Oct. 23, 1938; item 76, abstract of minutes: *J. Am. Col. Den.*, 5, 227; 1938, Dec. (this issue).

which has become an indispensable tool for the dental profession, by the ingenious surgeon, Halstead. We take justifiable pride in the fact that these immortal achievements were rendered possible by complete coöperation between members of the two professions. When Morton went in search of an agent for eliminating the element of pain from tooth extractions, it was Jackson, his preceptor in medicine, who suggested the use of sulphuric ether. His epoch-making demonstration of its effectiveness and safety in major surgery was staged with the coöperation of Warren, senior surgeon at the old Massachusetts General Hospital. On the other hand, it was the dental profession which first adopted and made extensive use of Halstead's discovery of block anesthesia and finally, six months before his death, paid him an appropriate tribute for his invaluable contribution made some thirty-seven years previously. Reference to earlier medical history reveals the fact that it was only through a chain of fortuitous circumstances that our two professions first sprang into separate existence and later grew apart like two trees from a common root. Fortunately, for all concerned, however, the inter-professional barriers set up in a former day by medical and dental bigots of the tradesman type are rapidly falling away, leaving the "no-man's land" between the two domains free for proper cultivation on a coöperative basis.

With the rapid advances in our fundamental knowledge, the scopes of our several fields have been broadened until they now overlap all along the imaginary line which has been supposed to separate them. At no other point does the interrelationship between the two broad fields become so close as it does in the field of research, because science is universal and recognizes no professional boundaries. The dentist is confronted with many unsolved problems which he can attack effectively only in coöperation with medically trained investigators, unless he has perchance had this training himself. The physician is confronted with many of the same problems, because they involve the general health of his patients. However, he is likewise at a disadvantage in his attack upon them because he lacks the special knowledge and experience possessed by the dentist. Consequently there must be a high degree of coöperation between the two, if real progress is to be made.

It is recognized by leaders in the profession that one of the greatest needs of dentistry at this time is for better qualified personnel for dental research and teaching. The chief purpose of graduate education in both clinical medicine and dentistry is to meet this need by preparing promising young men to become better teachers and investigators and also more expert as practitioners. The need for this advanced type of training in the field of dentistry has been made apparent as a result of efforts put forth by the progressive members of your own organization, by certain public and private philanthropic agencies, and by the educational leaders in our universities, who are always eager to raise standards. During recent years medical education has experienced a veritable boom in the direction of graduate study, as a result of the demands for certification by the various special boards, which have set up minimal requirements involving advanced training in some of the basic sciences, such as physiology, biochemistry, bacteriology, pathology and anatomy. The better knowledge a physician or a dentist has in one or more of these scientific branches, the better he is likely to be, not only as an investigator, but as a clinician or as a teacher as well, other conditions being equal. It is on this assumption that men who have already completed their undergraduate courses, and have qualified for their medical or dental degrees, are advised to return to the basic sciences for more advanced study and for more detailed experience with special laboratory techniques while continuing their clinical training.

At the University of Minnesota this type of graduate medical education, as contrasted with the superficial post-graduate refresher type, has grown steadily in importance since its introduction a quarter of a century ago. The establishment of the Mayo Foundation for Medical Education and Research as an integral part of the Graduate School of the University gave great impetus to this advanced form of training. As it operates today, the Graduate School sponsors a large number of post-doctorate fellowships in the various clinical and preclinical branches. Appointments run from one to three years, during which the fellow pursues advanced studies in both a major and a minor field while carrying out some original investigation. If the latter proves successful, he is allowed to present his results in the form of a thesis for either the Ph.D. or master degree in the

special field in which he takes his major work. Fellows in the clinical branches are expected to continue their clinical training along with their special studies, on the assumption that they will thereby become outstanding clinicians. For training in the educational aspect of the project, all fellows are expected to participate in the teaching of undergraduate students. The success of this program has been acclaimed by all who have been in a position to examine its results.

Through the combined efforts of President Guy Stanton Ford, formerly Dean of the Graduate School, and members of the faculties of the Dental and Medical Schools, a new project in research and graduate education in dentistry, identical with that in medicine, has recently been inaugurated at the University of Minnesota. A special clinic for study of the many dental problems of childhood has been established. In addition, a spacious, new laboratory completely equipped for chemical, bacteriological and pathological research has been provided to supplement the facilities already available. As a nucleus for a larger development, a number of full-time, permanent positions have been created. Provision has already been made for (1) a director for the research clinic, (2) a director for the laboratory, (3) a research pediatrician, (4) a secretary, and (5) at least three post-doctorate fellows. The latter are being supported by a grant from the Carnegie Corporation. Arrangements have been made to utilize the graduate teaching resources and other facilities of the Medical School where these are needed. The pediatric wards of the University Hospital have been made available for hospitalization of special-problem cases requiring metabolic or other studies which cannot be carried out in the Children's Dental Clinic. Responsibility for the conduct of the research and graduate teaching programs has been placed in the hands of a small special committee of members of the Dental and Medical Faculties appointed by the President of the University. Already a promising series of original studies on dental caries, malocclusion, and related conditions has been initiated under a plan of complete coöperation between members of both faculties. Since attention was first directed to the potentialities in this new set-up, additional interesting problems have presented themselves almost daily.

While it is obviously too early to predict results, it is gratifying



to record that the personal relationships in the organization have been most amicable and stimulating to all concerned. There has thus far been no intimation of any difference in interest, responsibility or credit on the basis of departmental or professional affiliation. Those who have been most instrumental in the development of the coöperative program sincerely believe that its successful application will result in immeasurable benefit to scientific progress, to undergraduate as well as graduate education, and to the quality of clinical practice. They are convinced that this example of coöperation and good fellowship between members of the two professions within the walls of our teaching institutions will carry over, not only into dental and medical practice, but also into the many public activities in which the two groups share a common interest.

While comparatively few of the members of the American College of Dentists may be able to participate directly in the carrying out of laboratory or other scientific investigations, every member will be able to contribute significantly to the cause by supporting the admirable research program of the College in a material way. It seems to me equally important to support it by helping to create a favorable attitude toward its objectives on the part of influential people everywhere. Such an attitude should be most effective in stimulating properly qualified young dentists to take up this type of career, because without them the program cannot succeed, no matter how much material support it may receive. Since the demand for properly qualified personnel in the academic field already far exceeds the available supply, we are safe in predicting successful careers for those dental graduates who avail themselves fully of the opportunities for advanced training which have recently been provided at a number of our leading dental and medical schools. Such men are destined to assume leadership in the vast program of improvement in dental research and practice, which the wise men in the profession see in the offing.

## AMERICAN COLLEGE OF DENTISTS

ST. LOUIS CONVOCATION: OCTOBER 23, 1938<sup>1</sup>

ABSTRACT OF MINUTES: COLLEGE AND REGENTS<sup>2</sup>

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

*St. Louis, Missouri*

### I. BOARD OF REGENTS: OCT. 20, 21 AND 24

*Oct. 20 (10:00-12:00 a.m.); first session:* present—nine. (1) Minutes of session in Chicago, Feb. 13, 1938,<sup>3</sup> read and approved. *Reports of officers:* (2)Secretary, (3)Assistant Secretary, (4)Treasurer (34), (5)Editor; all accepted. (6)Report of Censors: approved(52). (7)No resignations of membership during past year.

*Oct. 20 (2:00-5:00 p.m.); second session:* present—ten. *Reports of committees:* (8)Ceremonies—approved and Committee commended; (9)Ways and Means—following recommendation among many approved: Sections should be urged to study reports of committees, for more complete information of sectional membership.

*Oct. 21 (9:30-12:00 a.m.); third session:* present—nine. (10)On question of admission of women to College: voted fellowship be limited to men. (11)President instructed to appoint committee to assist in promoting endowment fund of *Journal of Dental Research*. *Reports of committees (con.):* (12)By-law, accepted(35,53); (13)Censors (supplementary), accepted(52).

<sup>1</sup> All sessions of the College, and all of the Board of Regents excepting one, were convened in the Hotel Statler. One evening session of the Regents was held, after dinner, at the home of Secretary Brandhorst.—[*Ed.*]

<sup>2</sup> An abstract of the minutes of the convocation in 1937 (Atlantic City) was published in the *J. Am. Col. Den.*, 4, 74; 1937, Sep. The corresponding addresses, reports, editorial, etc., were included in the same or succeeding issue, excepting the third and fourth parts of the report of the Committee on Dental Prosthetic Service, which were published in the first two issues in 1938.

<sup>3</sup> For announcements of "ad-interim actions" see *J. Am. Col. Den.*, 5, 68; 1938, Mar.-June; also 5, 129; 1938, Sep.

Oct. 21 (2:00-5:00 p.m.); *fourth session*: present—ten. Session open to representatives of all sections, to participate in discussion of reports of committees. *Reports of committees (con.)*: (14)Centennial Celebration(54), (15)Certification of Specialists(40), (16)Prosthetic Service(42), (17)Research(29, 43), (18)Education(39), (19)Hospital Dental Service(46), (20)Journalism(47), (21)Legislation(40), (22)Socio-economics(41), (23)Public Relations(38); all thoroughly discussed and accepted, and recommendations referred to Regents for study and action.

Oct. 21 (9:00-12:00 p.m.); *fifth session*: present—nine. (24)Nominating Committee(56), appointed by President Rudolph, approved: J. B. Robinson(5 yr.); W. F. Lasby(4 yr.); P. V. McParland(3 yr.); E. P. Brady(2 yr.); H. E. Friesell(1 yr.). (25)At suggestion of Treasurer, Secretary and Treasurer instructed to develop plan whereby two signatures will appear on checks. (26)Editor having called attention to precedent established, at his suggestion at St. Paul Convocation (1934), whereby no one will serve in same position in editorial staff of *J. A. C. D.* for more than five years<sup>4</sup>—and to fact that his term, in harmony with spirit of that action, will expire in December—elections to active editorial staff followed: *Editor*, J. E. Gurley; *Associate Editor*, O. W. Brandhorst; *Assistant Editor*, W. J. Gies. *Reports of committees (con.)*: (27)Budget; adopted. (28)Censors (supplementary); approved(52).

Oct. 24 (10:00 p.m.-2:15 a.m.); *sixth session* [*first of new administration*]: present—eleven. (29)On recommendation of Committee on Dental Research, voted "Regents record their willingness to appropriate from reserve funds, over a period of time, the sum of \$25,000, if necessary, for the establishment of William John Gies Fellowships in Dental Research, and for the development of dental research generally." (30)Voted to hold meetings of Regents, and of sectional representatives, during progress of Chicago Mid-Winter Clinic Meeting. (31)Vote of thanks extended to St. Louis Section for generous coöperation throughout convocation. (32)W. J. Gies reappointed Assistant Secretary.

<sup>4</sup>*J. Am. Col. Den.*, 1, 121; 1934, Oct.

II. CONVOCATION: OCTOBER 23<sup>5</sup>

*Morning (9:30-12:15 p.m.); first session:* President Rudolph in chair. Members present: 200. (33)Minutes of Atlantic City convocation read and approved.<sup>6</sup> (34)Treasurer's report accepted(4). (35)Committee on By-laws(12, 53) presented following proposed amendments(a-b), as approved by Regents, for action on by-law at afternoon session—and on constitutional provision at convocation in 1939:

(a) *Proposed amendment of the By-laws: To amend "Section A: Members," by adding a new sub-section: 5. Interpretation of a constitutional provision.* Article II (membership), Section 5 (forfeiture of membership), Sub-section A, Clause (a)—which provides for automatic forfeiture of membership by any member who would give a "course of instruction in dentistry under any auspices other than" those there specified—is hereby interpreted to mean that, in accord with the designated and implied obligations of membership in the College for the attainment of the stated objectives of the College, each member will be fraternally ready at all times to give to dental colleagues, privately or publicly, the benefit of any knowledge of, or experience in, dental practice he may have that would be useful to them; but will give "courses of instruction in dentistry," for remuneration, only as an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited professional or educational agency.<sup>7</sup>

(b) *Proposed amendment of the Constitution: To amend Clause (a), specified above, and in accord with the proposed by-law, to read by substitution as follows:* (a) give courses of instruction in dentistry, for remuneration, under any conditions other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited professional or educational agency.<sup>7</sup>

(36)*General theme of program—"Dentistry's opportunity and responsibility in public relations:"* (37)Introduction, C. E. Rudolph, President. (38)Problems confronting us, O. W. Brandhorst, Chairman, Committee on Public Relations. (39)Preparation for public service,

<sup>5</sup> The total registration of members in attendance was 452. Publication of the proceedings of this meeting has been begun in this issue (pages 181-272).

<sup>6</sup> See footnote 2, page 220.

<sup>7</sup> See the revised membership pledge: *J. Am. Col. Den.*, 5, 69; 1938, Mar.-June.

*A. W. Bryan*, Chairman, Committee on Education. (40)Safeguarding the public through dental laws: (A) General considerations, *W. N. Hodgkin*, Chairman, Committee on Legislation; (B) Certification of dental specialists, *C. O. Flagstad*, Chairman, Committee on Certification of Specialists. (41)Our socio-economic problems, *G. W. Wilson*, Chairman, Committee on Socio-economics. (42)Guarding frontiers of public welfare, *W. H. Wright*, Chairman, Committee on Dental Prosthetic Service. (43)The value of research, *A. L. Midgley*, Chairman, Committee on Research. (44)That the work may continue, *J. V. Conzett*, Chairman, Committee on Endowments. (45)Related fields and opportunities, *M. W. Carr*, Chairman, Committee on Oral Surgery. (46)Extending our services, *Howard C. Miller*, Chairman, Committee on Hospital Dental Service. (47)Our literature, *J. C. Black*, Chairman, Commission on Journalism.

*Luncheon (12:30-1:45 p.m.)*; second session—under auspices of *St. Louis Section*: *T. E. Purcell*, Chairman of Section, in chair. Members present: 230. (48)Address—"What causes dictators?" *Hon. Lee Merriwether*, St. Louis, Mo.

*Afternoon (2:00-4:30 p.m.)*; third session: President *Rudolph* in chair. Members present: 400. (49)Presidential address: *C. E. Rudolph. Papers*—(50)"Dental health for American youth:" *C. W. Camalier*, President, American Dental Association. (51)"How cells manage their social problems:" *E. V. Cowdry*, Ph.D., Department of Anatomy, School of Medicine, Washington University, St. Louis, Mo. (52)Fellowship conferred upon following new members present, after ceremonial procession of Regents and newly elected members (*asterisks indicate election to membership before March 15, 1938*):

\**Abbott*, T. R., Milwaukee, Wis. *Applegate*, O. C., Ann Arbor, Mich. *Archer*, W. H., Jr., Pittsburgh, Pa. *Armbrecht*, E. C., Wheeling, W. Va. *Arnold*, E. B., Houston, Tex. *Ashton*, J. T., Alexandria, Va. \**Austin*, L. T., Rochester, Minn. \**Barnwell*, C. M., Atlanta, Ga. *Barry*, A. L., E. Orange, N. J. *Bartlett*, A. A., Detroit, Mich. *Bassett*, C. T., Washington, D. C. *Baus*, E. P., Milwaukee, Wis. *Bell*, D. G., San Francisco, Cal. *Bennett*, P. H., Tucson, Ariz. \**Berkey*, H. T., Ft. Wayne, Ind. *Berthel*, R. W., St. Paul, Minn. *Bertram*, I. R., Denver, Colo. \**Branch*, E. A., Raleigh, N. C. *Brandon*, G. I., Baltimore, Md. *Brauer*, J. C., Iowa City, Iowa. *Broadhurst*, G. B., St. Louis, Mo. *Brock*, D. W., St. Louis, Mo. *Brock*, S. H., Dallas, Tex. *Broussard*, A. C., New Orleans, La. *Brown*, C. F., Denver, Colo. *Brown*, J. A., St. Louis, Mo. *Brown*, J. H., Newton, Miss. *Brown*, L. B., Atlanta, Ga. *Brown*, W. W., Joplin, Mo. *Bryans*, W. J., Lee, Mass. \**Cadarette*, L. A., Detroit, Mich. \**Callaway*, G. S., New York, N. Y. \**Canavan*,

W. H., Boston, Mass. *Carson*, K. P., Minneapolis, Minn. *Chandler*, A. W., Pensacola, Fla. *Chapin*, W. C., New York, N. Y. *Chase*, O. J., Jr., New York, N. Y. \**Clark*, H. B., St. Paul, Minn. *Cobb*, F. E., Minneapolis, Minn. *Coleman*, C. B., Poplar Bluff, Mo. *Colgan*, J. G., McCook, Neb. *Collins*, M. L., New York, N. Y. *Colver*, H. B., Boise, Idaho. *Cook*, W. A., Detroit, Mich. *Cory*, E. F., New Haven, Conn. *Coulter*, M. R., Mankato, Minn. *Crawford*, W. H., New York, N. Y. \**Daley*, F. H., Boston, Mass. *Daniels*, W. A., Springfield, Mass. \**Davis*, T. J., St. Louis, Mo. \**Deaton*, J. W., Texarkana, Ark. *Dickson*, W. A., Minneapolis, Minn. *Dillon*, E. L., Kansas City, Mo. *Dixon*, A. P., Cumberland, Md. *Donovan*, J. M., Neenah, Wis. *Downs*, B. H., Colorado Springs, Colo. *Dressel*, R. P., Cleveland, Ohio. *Duckworth*, T. G., San Antonio, Tex. *Eader*, T. S., Frederick, Md. *Elliott*, M. D., Boston, Mass. *Enloe*, Alfred, Atlanta, Ga. *Epstein*, I. A., St. Paul, Minn. \**Ernst*, H. W., St. Paul, Minn. *Essig*, N. S., Philadelphia, Pa. *Fenton*, H. R., Austin, Minn. *Fisher*, H. M., St. Louis, Mo. \**Fitzgerald*, E. J., Bath, Me. *Fladeland*, R. H., San Diego, Cal. *Flesher*, W. E., Oklahoma City, Okla. *Foerster*, F. H., St. Louis, Mo. \**Fonner*, L. A., Ft. Wayne, Ind. *Ford*, E. H., Des Moines, Iowa. \**Ford*, J. W., Chicago, Ill. *Foster*, C. S., Cedar Rapids, Iowa. *Foster*, W. T., San Antonio, Tex. *Fountain*, L. S., Hot Springs, Ark. \**Gamard*, E. A., New Orleans, La. *GaNun*, G. M., New York, N. Y. *Gaver*, G. W., Baltimore, Md. *Genre*, F. J., New Orleans, La. *Gibbs*, M. D., Hot Springs, Ark. \**Gibson*, K. R., Detroit, Mich. \**Gilchrist*, H. A., Edmonton, Can. *Goldstein*, Harold, Baltimore, Md. \**Grant*, F. E., Dedham, Mass. *Gray*, M. H., Little Rock, Ark. \**Green*, R. O., St. Paul, Minn. \**Griffith*, C. A., Minneapolis, Minn. *Grover*, G. H., San Francisco, Cal. *Haberle*, F. E., Chicago, Ill. *Hagan*, C. W., Pittsburgh, Pa. *Hahn*, H. F., Milwaukee, Wis. *Hall*, A. B., St. Paul, Minn. *Hall*, C. T., Detroit, Mich. *Harpole*, H. J., Atlanta, Ga. *Harris*, S. D., Detroit, Mich. \**Harrison*, W. P., Hollywood, Cal. *Haverstick*, E. E., St. Louis, Mo. *Hayes*, H. H., Chicago, Ill. \**Hayes*, L. V., New York, N. Y. *Hays*, S. E., San Antonio, Tex. *Hebble*, C. H., Columbus, Ohio. *Heintz*, K. P., Cumberland, Md. *Hemsworth*, L. C., Waterloo, Iowa. *Henderson*, A. H., Greenville, Miss. *Henry*, R. R., Minneapolis, Minn. *Higgins*, H. B., Spartanburg, S. C. *Higley*, L. B., Iowa City, Iowa. \**Hilgemann*, V. H., Ft. Wayne, Ind. *Holiday*, Houghton, New York, N. Y. *Honey*, E. A., Sr., Kalamazoo, Mich. *Hopping*, J. G., Birmingham, Ala. *Hughes*, D. C., New York, N. Y. \**Hughes*, G. A., Oakland, Cal. \**Humphreys*, K. J., Los Angeles, Cal. *Hunt*, L. T., Lincoln, Neb. *Hutchinson*, W. E., Little Rock, Ark. *Inskipp*, E. F., San Francisco, Cal. \**Jackson*, Wilbert, Clinton, N. C. *Jarvis*, H. C., Cincinnati, Ohio. *Jay*, Philip, Ann Arbor, Mich. *Jersin*, G. B., Baltimore, Md. *Johnson*, E. E., Rutland, Vt. \**Johnson*, E. H., Pine Bluff, Ark. *Johnson*, M. E., Waukesha, Wis. \**Johnston*, H. B., Atlanta, Ga. *Johnston*, J. F., Indianapolis, Ind. *Jones*, P. E., Farmville, N. C. *Jones*, R. B., Willimantic, Conn. *Jordan*, J. D., Little Rock, Ark. \**Jordan*, L. G., Washington, D. C. *Justin*, J. P., Milwaukee, Wis. *Kaplan*, Harry, Washington, D. C. *Keller*, W. C., New York, N. Y. *Kingery*, R. H., Ann Arbor, Mich. \**Kornfeld*, Max, St. Louis, Mo. *Kraus*, E. H., Milwaukee, Wis. *Kremer*, L. W., Chicago, Ill. *Krogh*, H. W., Washington, D. C. *Kurth*, L. E., Chicago, Ill. *Lacey*, G. D., Dallas, Tex. *Lawton*, H. C., St. Paul, Minn. *Leabo*, Walter, Shreveport, La. *Leggett*, R. M., San Francisco, Cal. *Leonard*, R. R. C., Baltimore, Md. *Lewis*, F. L., White Plains, N. Y. *Lord*, DeF. D., Santa Fe, N. M. *Lovett*, Ethelbert, Baltimore, Md. \**Lundy*, W. E., Memphis, Tenn. *Lux*, Konrad, Waco, Tex. *McBride*, T. F., Pittsburgh, Pa. *McCall*, W. B., Temple, Tex. *McCarthy*, H. B., Baltimore, Md. *McCarty*, W. D., San Antonio, Tex. *McCracken*, W. H., Detroit, Mich. \**McFarland*, H. M., Kansas City, Mo. *McKenna*, P. J., Springfield,

Mass. *McLaughlin*, W. J., Bridgeport, Conn. *McRimmon*, D. C., Ft. Worth, Tex. *MacKay*, G. W., Millinocket, Me. *Marcinkiewicz*, C. J., Detroit, Mich. \**Marshall*, L. W., San Francisco, Cal. *Mayer*, E. L., St. Louis, Mo. *Meisser*, J. G., Cleveland, Ohio. *Merchant*, H. A., Omaha, Neb. *Miller*, Jesse, Maryville, Mo. *Miller*, S. C., New York, N. Y. *Milliette*, G. T., Milwaukee, Wis. *Miner*, C. L., St. Cloud, Minn. *Mitchell*, G. A., Atlanta, Ga. *Monroe*, C. A., Boulder, Colo. \**Moore*, C. A., Lexington, Miss. *Moore*, N. A., Kansas City, Mo. *Morris*, E. W., Battle Creek, Mich. *Muir*, N. F., Roanoke, Va. *Murphy*, R. H., Macon, Ga. *Muzzey*, I. P., Athol, Mass. *Myers*, L. E., Omaha, Neb. \**Myers*, R. E., Louisville, Ky. *Newton*, W. T., Houston, Tex. *Northcutt*, J. E., Kansas City, Mo. *Noyes*, H. J., Chicago, Ill. *O'Brien*, P. F., St. Louis, Mo. *Ogle*, Willard, Dallas, Tex. *Olive*, R. M., Fayetteville, N. C. *Ostrem*, C. T., Des Moines, Iowa. *Packwood*, L. R., Fresno, Cal. *Pallen*, R. L., Vancouver, B. C. *Parks*, A. K., Memphis, Tenn. *Parsons*, L. M., Baltimore, Md. *Patridge*, M. O., Minneapolis, Minn. *Petray*, H. C., Oakland, Cal. *Pierson*, F. A., Lincoln, Neb. *Pilcher*, William, Petersburg, Va. *Poe*, E. J., St. Louis, Mo. *Poindexter*, J. B., Huntington, W. Va. *Pridgen*, D. L., Fayetteville, N. C. *Pryor*, W. J., Cleveland, Ohio. *Reichmann*, F. J., Oklahoma City, Okla. *Rider*, T. T., Missoula, Mon. *Ridgley*, J. M., El Paso, Tex. *Robb*, Malcolm, St. Louis, Mo. *Rodgers*, F. C., St. Louis, Mo. *Rogers*, F. H., Boston, Mass. *Rogers*, R. L., Amarillo, Tex. *Rossmann*, Louis, Baltimore, Md. *Sauer*, R. J., Chicago, Ill. \**Schmid*, A. R., Worthington, Minn. \**Scott*, J. D., Kansas City, Mo. *Seibert*, R. C., St. Louis, Mo. \**Shapiro*, Simon, Brooklyn, N. Y. \**Shellman*, J. F., St. Paul, Minn. *Slater*, W. K., Knoxville, Tenn. *Sloman*, E. G., San Francisco, Cal. *Small*, H. B., Burlington, Vt. \**Smedley*, W. P., Denver, Colo. *Smith*, C. C., Peoria, Ill. *Smith*, E. A., New York, N. Y. *Smith*, F. N., Baltimore, Md. *Smith*, F. W., Iowa City, Iowa. *Snyder*, D. P., Columbus, Ohio. *Sommers*, R. S., Des Moines, Iowa. *Spencer*, G. L., Lincoln, Neb. *Spinney*, D. F., Boston, Mass. *Spotts*, W. B., St. Louis, Mo. *Springsted*, J. H., Berea, Ky. *Squires*, F. A., White Plains, N. Y. *Squires*, William, New York, N. Y. *Stafne*, E. A., Rochester, Minn. \**Stillwell*, E. C., Glen Ridge, N. J. *Stricker*, C. H., Cincinnati, Ohio. *Sturm*, C. R., Fairmont, W. Va. \**Sullivan*, J. D., Toledo, Ohio. \**Sundby*, E. J., Duluth, Minn. *Taggart*, C. I., Burlington, Vt. *Tannebring*, W. C., Beverly, Mass. *Taylor*, E. W., Memphis, Tenn. *Templeton*, J. W., St. Louis, Mo. *Terrell*, W. H., Pasadena, Cal. *Thielen*, B. F., Paris, Tex. *Thom*, L. W., Minneapolis, Minn. *Thompson*, E. L., Daytona, Fla. *Thompson*, E. C., Buffalo, N. Y. *Traynor*, P. A., Wilmington, Del. *Trier*, J. H., New York, N. Y. *Turner*, L. C., San Antonio, Tex. *Tweed*, C. H., Jr., Tucson, Ariz. *Tyler*, J. E., Worcester, Mass. \**Viner*, F. J., Omaha, Neb. \**Wahl*, L. P., Wausau, Wis. \**Wald*, S. S., New York, N. Y. *Walsh*, A. L., Montreal, Can. \**Walsh*, J. R., E. Orange, N. J. *Wash*, A. M., Richmond, Va. \**Weaver*, S. M., Cleveland, Ohio. *Webster*, F. W., Lincoln, Neb. *Welker*, J. J., Toledo, Ohio. \**West*, J. B., Elmira, N. Y. \**Wheeler*, R. C., St. Louis, Mo. *White*, W. W., Kansas City, Mo. *Whiteman*, W. J., Detroit, Mich. *Wilson*, H. R. C., Cleveland, Ohio. *Wintrup*, J. P., Wilmington, Del. *Wood*, H. T., Detroit, Mich. *Wood*, W. A., Mobile, Ala. *Woods*, F. S., Portland, Me. *Wright*, C. J., Lansing, Mich. *Zemsky*, J. L., New York, N. Y. *Ziegler*, Samuel, St. Paul, Minn. [Additional fellowships—honorary, in absentia, posthumous—are indicated in sections 62-75, below.]

(53) Proposed amendment of By-laws, presented by By-laws Committee at morning session(35), again read; unanimously adopted. *Reports of committees (con.)*: (54) Centennial Celebration(14) and

(55)Gies Testimonial—both accepted; (56)Nominations(24)—following for officers presented: *President-elect*, A. W. Bryan; *Vice-president*, W. N. Hodgkin; *Secretary*, O. W. Brandhorst; *Treasurer*, H. S. Smith; *Regent*(5 yr.), E. G. Meisel. (57)President asked for nominations from floor; none presented. (58)Nominees for offices presented by Committee(56) unanimously elected(77).

*Evening (7:00-10:30 p.m.); fourth (dinner) session:* President Rudolph in chair. Members and guests present, 396. *After-dinner program:* (59)Historical review—"A recognition of the contributions of St. Louis dentists to the early development of dentistry:" *Walter Hyde*, President, American Association of Dental Editors. (60) Report of Necrology Committee:<sup>8</sup>

C. F. Ash, '22	New York, N. Y.	Jan. 25, 1938
T. B. Beust, '28	Louisville, Ky.	Nov. 24, 1937
A. D. Black, '21	Chicago, Ill.	Dec. 7, 1937
W. S. Davenport, '26	Paris, France	Feb. 26, 1938
F. A. Delabarre, '28	Boston, Mass.	Apr. 15, 1938
F. A. Gough, '26	Brooklyn, N. Y.	Aug. 15, 1938
F. A. Hamilton, '26	Indianapolis, Ind.	Sep. 3, 1937
F. R. Henshaw, '22	Indianapolis, Ind.	May 27, 1938
F. W. Hergert, '29	Seattle, Wash.	Sep. 3, 1937
C. N. Johnson, '21	Chicago, Ill.	July 17, 1938
H. L. Keith, '37	Wilmington, N. C.	July 29, 1938
F. C. Kemple, '38	New York, N. Y.	May 21, 1938
Charles Lane, '26	Detroit, Mich.	Apr. 28, 1938
A. C. LaTouche, '23	Los Angeles, Calif.	May 10, 1938
A. R. McDowell, '27	San Francisco, Calif.	May 14, 1938
W. D. M. Moore, '27	Chicago, Ill.	July 19, 1937
R. T. Oliver, '26	Washington, D. C.	July 11, 1937
A. R. Ross, '23	Indianapolis, Ind.	May 13, 1938
John Scholten, '32	Cedar Rapids, Iowa	Mar. 8, 1938
E. F. Sullivan, '32	Boston, Mass.	Mar. 27, 1938

(61)After ceremonial procession of Regents and guests, *honorary fellowship* conferred upon (62)*V. P. Blair*, M.A., M.D., F.A.C.S.,

<sup>8</sup> To be published, in full, in the succeeding issue. Numerals following names indicate years of admission to membership.



St. Louis, Mo.; (63)*Irvine McQuarrie*, B.A., Ph.D., M.D., Minneapolis, Minn.; (64)*A. M. Schwitalla*, S.J., M.A., Ph.D., St. Louis, Mo. (65)*President's announcements of fellowships conferred during past year by Regents: In absentia*, upon (66)*Arthur Amies*, Melbourne, Australia; (67)*P. A. Ash*, Sydney, Australia; (68)*J. V. H. Best*, Sydney, Australia; (69)*H. K. Box*, Toronto, Ont.; (70)*R. L. Davis*, Woonsocket, R. I.; (71)*F. C. Kemple*,<sup>9</sup> New York City; (72)*H. F. Sommers*, Hong Kong, China. *Posthumously*, upon (73)*C. N. Hughes*, Atlanta, Ga.; (74)*W. M. Robey*, Charlotte, N. C.; (75)*R. C. Young*, Anniston, Ala. (76)Address—"Coöperation between dentistry and medicine in research and graduate education:" *Irvine McQuarrie*(63), Department of Pediatrics and Graduate School, University of Minnesota, Minn. (77)New officers installed(58). (78)Inaugural address: *A. H. Merritt*.

[*Next convocation: Milwaukee, Wis., July 16, 1939.*]

<sup>9</sup> Previously announced in the addendum to the current register of membership: *J. Am. Col. Den.*, 5, 39; 1938, Mar.-June.

## AMERICAN COLLEGE OF DENTISTS

PROCEEDINGS OF THE ST. LOUIS CONVOCATION, OCTOBER 23, 1938

MORNING SESSION—GENERAL THEME: DENTISTRY'S OPPORTUNITY AND  
RESPONSIBILITY IN PUBLIC RELATIONS<sup>1</sup>

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### I. INTRODUCTION

Charles E. Rudolph, D.D.S., *President*

*American College of Dentists, Minneapolis, Minn.*

Inasmuch as I have designated *Public relations* as the theme for this year, the Secretary, Dr. Brandhorst, has built the program for

<sup>1</sup> Compiled by the Assistant Secretary. The morning session was opened with brief executive proceedings that included the reading of the minutes of the preceding convocation (Atlantic City, July 11, 1937) and reports of officers.

the morning with this in mind. His report for the Committee on Public Relations, graphically given, will portray the scope and interdependability of the functions of most of the committees of the College. It will show how this College, in its endeavors, points unswervingly toward the betterment of conditions relative to the health-welfare of the people of the nation.

## II. PROBLEMS CONFRONTING US

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

*Committee on Public Relations,<sup>2</sup> St. Louis, Mo.*

One needs to give our general theme only brief thought to realize its far-reaching import. It is almost all inclusive. Therefore it would be folly to assume that, on this occasion, we could refer to all relations. For many years the American College of Dentists has been struggling with problems that are a part of "public relations." The program this morning will illustrate how the College is trying to meet its responsibilities in this respect. *Fig. 1* indicates the public relationships of our standing committees, each of which will present a brief statement on a part of its activities.

The Committee on Public Relations will limit the present statement to some of the phases not mentioned by the other committees. Our studies in general may be summarized under the following headings:

- (A) Relationships with other scientific organizations:
  - (a) American Association for the Advancement of Science
  - (b) International Association for Dental Research
  - (c) American Association of Dental Schools
  - (d) American Public Health Association
- (B) Activities of the U. S. Public Health Service in dentistry
- (C) Activities of the Children's Bureau in dentistry
- (D) Public dental education
- (E) Other matters of interest to the profession and public, not covered by other committees

Because of the great amount of current interest in the appeal for "dentistry for the masses," we present a few facts regarding the

<sup>2</sup> Members of the Committee on Public Relations (1937-38): O. W. Brandhorst, *chairman*; C. W. Camalier, F. H. Cushman, H. V. McParland, T. J. Hill.

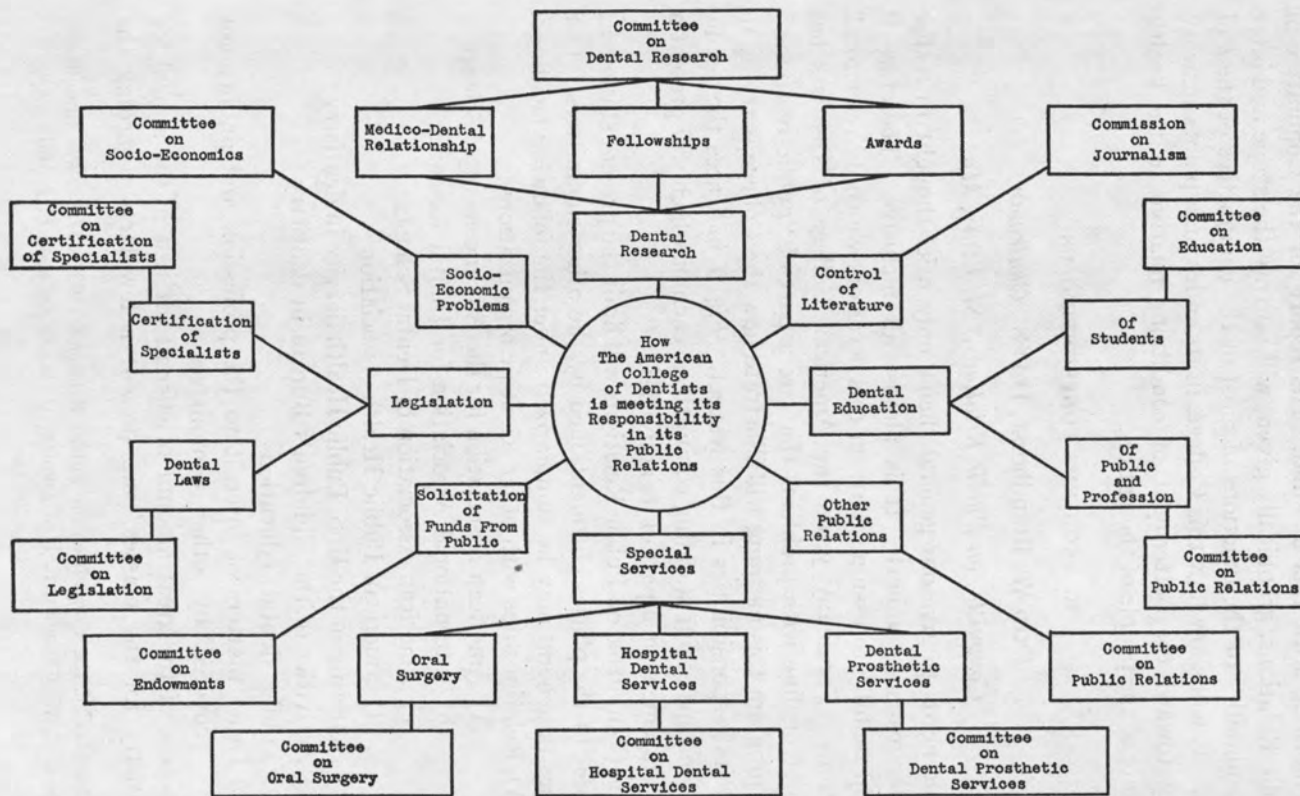


FIG. 1. DIAGRAM SHOWING PUBLIC RELATIONSHIPS OF STANDING COMMITTEES OF AMERICAN COLLEGE OF DENTISTS

necessity for an expanded program of public dental-education, and correlate therewith certain time elements that are involved in any practical plan for dental services for the masses. From studies of the oral conditions of 119,413 school children in St. Louis in 1933, and of 5000 adults in Missouri and Southern Illinois in 1934, it was found that the individual needs, *expressed in hours*, were these:

Kindergarten child.....	5.23	Professional person.....	12.1
Grade child.....	6.35	College student.....	12.2
High-school pupil.....	8.8	Merchant.....	18.7
Vocational pupil (white)....	10.6	White-collar person.....	15.7
Teachers-college student		Farmer.....	21.4
(white).....	7.7	Housewife.....	18.9
Rural grade-child.....	7.8	Housemaid.....	20.8
Urban adult.....	17.2	Trade and factory worker...	23.5
Rural adult.....	19.2	Unclassified person.....	18.8

These estimates are based on the first year's service—to take care of present conditions and allowing for one additional filling six months later. The question immediately arises whether sufficient practitioner-time is available for a plan of services for the masses. The following estimates, we believe, are conservative:

Average number of hours in dentist's working day...	8
Average number of working days per week.....	5
Average number of working weeks per year.....	50
Average number of working hours per year.....	2,000
Approximate number of dentists in United States..	62,500
Approximate population of United States.....	125,000,000
Average number of persons per dentist.....	2,000

If each dentist has 2,000 hours in which to serve 2,000 persons, there will be only one hour per person per year, if the maximum number are served. The question arises whether an increase in the number of dentists can be expected in the near future. Statistics show that, at present, the number entering the profession—plus the number needed to serve proportionately the increase in our population—is about the same as the mortality rate of dentists. Hence, we are at a stand-still in this respect and cannot depend upon an increase in the number of dentists, unless special means are applied. Thus it be-

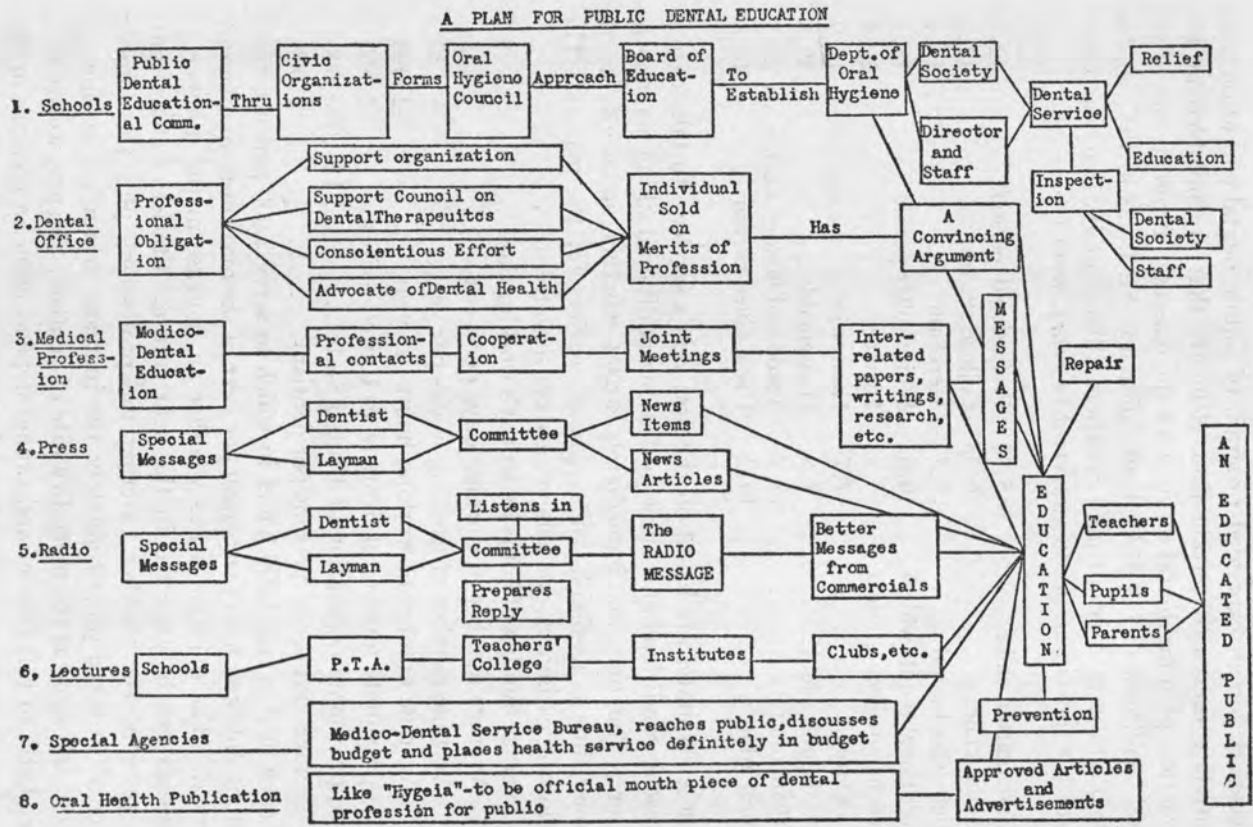


FIG. 2. PLAN FOR PUBLIC DENTAL EDUCATION

comes evident that our approach to the question of services for the masses must be directed toward a reduction of the practitioner-time

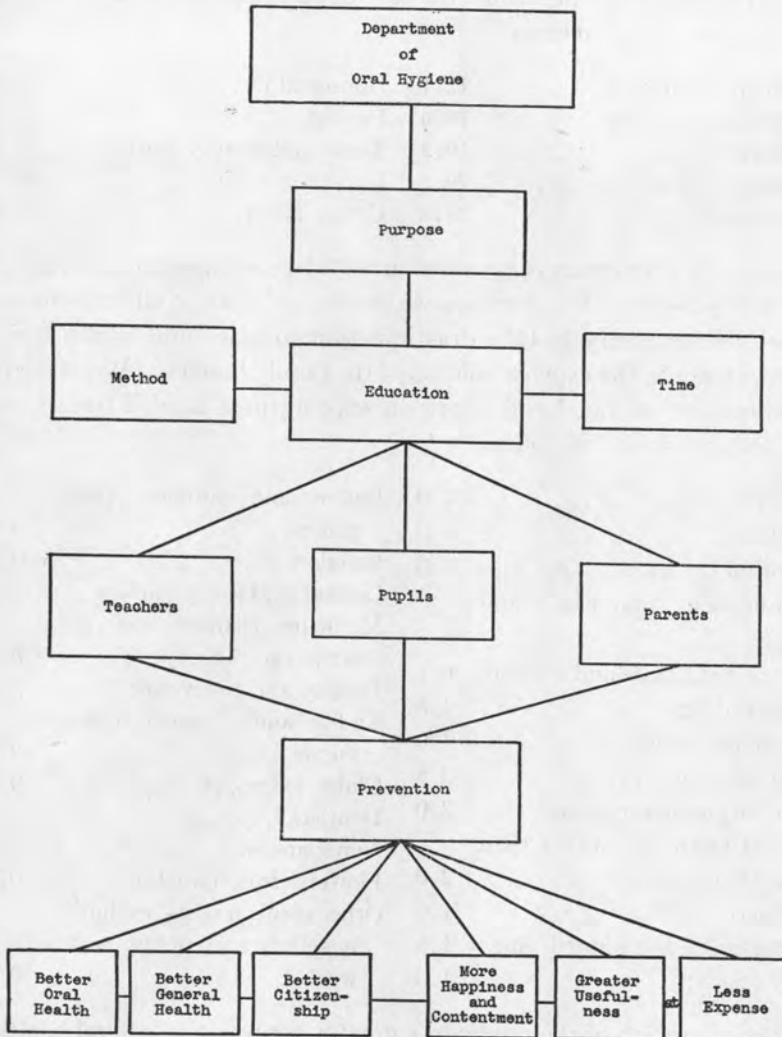


FIG. 3. PLAN FOR PUBLIC-SCHOOL EDUCATION FOR PREVENTION

needed. The only ray of hope in this relation is *prevention*; and a plan of prevention can be successful only if the profession and the public are properly educated.

Perhaps you think the public is already dental-health conscious. Statistics show that, despite all the urging to obtain *regular dental care*, the average time "since the last dental appointment" is as follows, *expressed in months*:

Professional person.....	12.1	Housemaid.....	21.0
White-collar person.....	16.6	Farmer.....	25.0
Merchant.....	19.5	Trade and factory worker....	25.8
College student.....	20.2	Rural adult.....	20.2
Housewife.....	21.0	Urban adult.....	21.6

Success for a program of prevention will depend upon more frequent attention to oral care. Perhaps we should add that, in all probability, it will be necessary to take drastic action to place oral health in its proper place in the expense column of the family budget. Woodyard's modification of the Lynd chart on expenditures is of interest—*expressed in billions of dollars*:

Food.....	17.0	Indoor and outdoor sports, games.....	0.9
Clothing.....	8.0	Religion.....	0.9
Rent on homes.....	8.0	Cosmetics, beauty parlors....	0.7
Automobile (purchase and use).....	6.5	Medicine (patent and pre- scription).....	0.7
Taxes, local, state and Federal.	6.4	Jewelry and silverware.....	0.6
Fuel and light.....	4.8	Radio and musical instru- ments.....	0.6
Home furnishings.....	4.0	Clubs, lodges, etc.....	0.4
Life insurance.....	3.5	Dentists.....	0.4
Motion pictures, concerts, etc.	2.0	Newspapers.....	0.4
Travel (recreation other than automobile).....	2.0	Flowers (from florists).....	0.2
Tobacco.....	1.6	Other medical costs, excluding hospitals and public-health work.....	0.2
Laundry, cleaning and dyeing.	1.5		
Physicians.....	1.0		

The education of the public to a greater appreciation of oral health-service is very necessary, regardless of the program that may be planned. Furthermore, the public should be convinced that our efforts must be directed to the dental care of the child. Our program must be a long-range program—one of prevention that will see the



fruits of its efforts in the next generation, rather than in this. To attain this objective, an extensive educational program must be executed, pointing *first* to the child as the basis for prevention; and, *secondly*, to the adult for coöperation and understanding of what is being done for the child and the children's children. Such a plan is suggested in *fig. 2*.<sup>3</sup> As programs for prevention are established, programs of repair must naturally run parallel. The efforts begun in single grades may ultimately involve an entire school system and develop enthusiastic efforts for better health. The relationships and outcome of such a plan are shown in *fig. 3*.

Where does the responsibility for all of this desirable achievement rest? The *profession*, through the American Dental Association and its various divisions, should assume supervision of any educational program, to assure reliability and uniformity of information and control. The *Dental Division of the Public Health Service of the U. S. Government* is logically an agency through which the profession might operate. The *dentist's office* should be the source of all service and of all coöperating influence in such a program. The *public schools*, as agencies to impart knowledge, should assume the responsibility of offering proper oral-health information under the guidance indicated above. The *press*, and *broadcasting* companies, should carry proper health messages to the public, as supplied by the profession.

### III. PREPARATION FOR PUBLIC SERVICE

Alvin W. Bryan, D.D.S., *Chairman*

*Committee on Education,*<sup>4</sup> *Iowa City, Ia.*

Your Committee realizes the tremendous import of the subject assigned to it in this symposium on "public relations," for in undergraduate education the future dentist comes into his first contact with professional problems of public service. Dental schools cannot disregard the responsibility to help to train their students to promote this objective. Preparation for "public service," interpreted in its

<sup>3</sup> *Fig. 2* was included in the Atlantic City report (1937) of the Committee on Public Relations: *J. Am. Col. Den.*, 4, 106; 1937, Sep.

<sup>4</sup> Members of the Committee on Education (1937-38): A. W. Bryan, *chairman*; L. M. S. Miner, J. B. Robinson, A. D. Black, R. S. Vinsant, A. H. Merritt, L. M. Waugh.

broadest terms, includes of course many aspects of the relationship of the professional man with society. Perhaps in the past the dental schools have concerned themselves too closely with considerations of the ethical relationship of the dentist with his patients and his fellow practitioners. This surely is a narrow and restricted outlook upon the subject of "public relations," but many young graduates accept the term "ethics" with this understanding of its significance for them. In a broad interpretation of "public relations" the responsibilities of the professional man to society as a whole must be considered. In the light of the serious attention that has been given during the past few years to health service, and ways and means of providing it for all groups of society—and especially because of very recent national activities—your Committee feels it was the intent of the Regents that this phase of "public relations" should receive special emphasis at this meeting.

A dental educator recently stated to some of his graduates that "today the health of the people is as much the concern of the dentist as it is the concern of the physician; and if dentistry is to make a vital contribution to the health of the nation, it must be instrumental in reducing the overwhelming incidence of dental disease, now so nearly universal. If dentistry is to render such a service, it seems clear that at least a part of the responsibility rests with dental education." Another dental educator has said that "the chief function of dental education is that of providing guidance in the understanding and application of the processes and sciences upon which prevention and treatment of oral diseases and disorders depend." At the meeting of the National Health Conference in July, this year, President Camalier of the American Dental Association said that the logical approach to *prevention* of dental disease, and therefore a step in the solution of the health-service problem, was through adequate pre-natal and post-natal nutrition and medical care, plus the detection of dental defects early in childhood, and that this must be brought about largely through education.

Granting that dental schools are adequately meeting their duty to their students in training them to do expert restorative work, and that the students are well-grounded in the principles of preventive medicine and dentistry when they enter practice, we feel that there

is still one important responsibility that must be met. Is everything possible being done to develop in our dental students a realization of the part they should play in the social order of their communities, their states, and the nation? In our training of students in professional ethics have we emphasized the relationships with their patients to the exclusion of their relationships with society as a whole? Have we stimulated in them thoughts of that ever-present question: "Am I my brother's keeper?" Do we lay claim to the distinction between a profession and a trade as expressed by President Faunce of Brown University when he said: "A trade is an occupation for livelihood while a profession is an occupation for service to the world?" And, laying claim to it, do we ignore the responsibility implied? These questions must all be included when dental schools consider the question of "public relations" in teaching dental students.

The question now arises as to what the dental schools can do to arouse the consciousness of the students, or at least to prepare them to think on this subject. In 1935 the final report of the study of dental education by the Curriculum Survey Committee of the American Association of Dental Schools included the recommendation that dental education should be based upon two years of cultural and scientific training. Increased time for preparation was intended to better fit the student for the responsible place in society which he, as a professional man, would be called upon to fill. The Committee recommended that dental schools interfere as little as possible with pre-professional students, so that the students might have broad choices in the cultural subjects. It seems logical to assume, then, that proper guidance by college advisers should lead the student to envision his responsibility and grasp the opportunity to prepare himself in subjects of sociology and economics. And having laid this foundation for a better understanding of social problems, dental schools could amplify their courses in ethics and correlate them with knowledge previously gained.

In an address before the American Association of Dental Schools in 1935, Dr. Michael M. Davis said:

"Professional men, among whom physicians and dentists are types, must understand the social structure and the forces which are moving it. They must acquire an appreciation of their own personal relationship and

responsibilities to society, and to the economic, legal, and political forces which are maintaining and are also progressively altering the social order. Happiness and success for future physicians and dentists will depend largely upon the possession of sufficient social outlook to forecast and adapt themselves to the social climate in which they must live. Their *teachers in the first place* and their professional organizations in the second place have a very large responsibility in aiding them to do this. . . . I beg to submit that the dentist is a practitioner as well as a technician; that he and his profession must practice *in society* as well as upon it; and that in preparation for a professional career in society he should be educated as well as informed."

#### IV. SAFEGUARDING THE PUBLIC THROUGH DENTAL LAWS

##### (A) GENERAL CONSIDERATIONS

W. N. Hodgkin, D.D.S., *Chairman*

*Committee on Legislation,*<sup>5</sup> *Warrenton, Va.*

If we concede the obvious fact that the remarkable development of the dental profession in America is a safeguard to the public health, a bit of logical reflection will elicit the truth that this happy accomplishment has been made possible largely through dental legislation. Though the processes of development have included an unusual professional spirit, aided by dental organization and supplemented by the gradual elevation of dental educational standards, in the end it has been dental laws which have lent force and finality to each successive advance.

Lest we imagine our subject today is a recent consideration, it is only fair to observe that safeguarding the public has been the intent of dental legislation from the beginning. A study of the background of dental conditions a century ago will disclose the necessity for such legislative safeguards. Until that time dentists in America, though small in number, had made normal progress under the leadership of several outstanding practitioners of true professional type, with the remainder for the most part seeking to emulate this leadership as their talents permitted. In 1835-36, there occurred one of those economic depressions to which our nation has ever been susceptible, and many who had been employed in other lines proclaimed themselves dentists

<sup>5</sup> Members of the Committee on Legislation (1937-38): W. N. Hodgkin, *chairman*; W. A. McCready, G. S. Vann, B. L. Brun, M. L. Ward.

overnight. With no legal barrier to prevent this influx, "it is a fact that the number of dentists in the United States was nearly doubled in the two years following 1836."<sup>6</sup> One leader voiced the plaint of all who were concerned with the reputation of the profession when he wrote, in 1842: "Too long has our favorite science been considered a mere mechanical trade into which every unprepared quack, acquainted with the use of small tools, might obtrude himself at pleasure."<sup>7</sup> This influx of an ill-prepared group was the catalyst which brought accomplishment of long discussed dental organization and dental legislation as well.

While it cannot be said that the early leaders were unmindful of the menace to prestige in a profession without barriers to untrained members, be it said to their eternal credit that they placed first the safeguarding of the public. This is witnessed by editorial comment in the single dental periodical of that time, when accomplishment in the states is greeted with pleased expressions and emphasized as designed in each instance "to protect its citizens against the impositions that are daily being practiced upon them by unprincipled charlatans. We hope the example will be followed by dentists in other states."<sup>8</sup> Thus for nearly a century since the earliest legislation, the dental profession has made its advances, has frozen each advance into law, and each law has lent immeasurable safeguards to the public. With the highly competitive system that has developed in this country one can well imagine the chaos and the abuses that have been averted by such safeguards.

The record of dental laws may be studied with much pride inasmuch as while requests for legislation have been presented from time to time with selfish motives from unthinking quarters, when bills were prepared and presented for enactment by the professional leaders they were drawn in conformance to this high original ideal. In its legislative history the profession has often faced delicate problems, when the ostensible motive of efforts to correct abuses was selfish but the actual motive, born of a knowledge of professional and technical requirements, was consistently in the interest of public

<sup>6</sup> *Amer. J. Den. Science*, 7, 207; 1846.

<sup>7</sup> *Ibid.*, 3, 227; 1842.

<sup>8</sup> *Ibid.*, 3, 145; 1842.

safety. To the forthright manner in which the profession addressed itself in these instances, the public is indebted for the safeguards which have been insured by the maintenance and elevation of professional standards.

Nor are we finished with such problems today. For instance, the uninformed doubtless believe that effort at control of the Mail Order Denture Racket, particularly when sought through an agency which has such a commercial sound as the Federal Trade Commission, is a selfish effort on the part of the dental profession. Actually it is not likely that the dangerous practice is an appreciable untoward factor in the average dental practice but, at the risk of appearing to act in a selfish capacity, it is the duty of the profession to seek control of what they know to be a cruel hoax on that unfortunate portion of the public who can least afford to be duped.

That the profession will continue to perform its duty in constructive professional betterment, and in combating all unprofessional schemes and practices which menace the public, seems assured. But it should be remembered that the only strong and lasting legislation which can be enacted is that which has as its prime consideration the import of our subject today.

(B) CERTIFICATION OF DENTAL SPECIALISTS

Carl O. Flagstad, D.D.S., *Chairman*

*Committee on Certification of Specialists,<sup>9</sup> Minneapolis, Minn.*

Your Committee stated, in previous reports, that certification through state laws is desirable and would be a protection to the public. The present arrangement—which makes it possible for any dentist, when the spirit moves him and regardless of his qualifications, to set himself up as a specialist—does not properly safeguard the public interest.

Your committee, during its five years of study, has endeavored to ascertain the essential facts in the following relationships: (A) What is the attitude of the profession toward certification? (B) What is the reaction of the various groups of specialists? (C) What is the opinion

<sup>9</sup> Members of the Committee on Certification of Specialists (1937-38): C. O. Flagstad, *chairman*; G. R. Lundquist, H. C. Fixott, E. W. Swinehart, L. M. S. Miner.

of the National Association of Dental Examiners? (D) What is the experience in places where certification has been tried? A discussion of these questions will indicate the present status of certification.

(A) *What is the attitude of the profession toward specialization?* The profession generally has manifested very little interest in certification, and considerable explanation is required to acquaint dentists with the import of the subject. Although our reports have been given annually to this College, and an endeavor has been made to secure discussion, only meagre comment has been aroused. It is the Committee's opinion that considerable education will be required before the profession can act.

(B) *What is the reaction of the various groups of specialists?* These groups are much better informed concerning the subject, and manifest a general sympathy with the purpose of certification. There are great differences of opinion among them as to how it should be accomplished and who should do it. Some believe in a certification within the group, others favor state regulation. It is significant that the American Academy of Periodontology recently took the initiative in calling an all-day conference of representatives from interested groups to discuss the subject of certification. The meeting will occur tomorrow (Oct. 24), in this (Statler) hotel. The preliminary program indicates that every phase of the subject will be thoroughly discussed. It is hoped that this conference will crystallize thoughts on certification; coördinate the endeavors of the various groups; and lay a foundation for the creation of an Advisory Board of Dental Specialties. The College has been invited to participate in the conference, and Dr. Swinehart and your Chairman have been appointed to represent the College.<sup>10</sup>

(C) *What is the opinion of the National Association of Dental Examiners?* Since the state boards are especially interested in legislation affecting dental laws, your Committee made a "survey" of this group. Dr. E. F. Bell, Chairman of the Association's Dental Specialties Committee, supplied much factual data for our annual report in 1936, indicating that a majority of the state boards favor special examination for specialists. Your Committee believes the state

<sup>10</sup> A plan for the creation of an Advisory Board for Dental Specialists was developed, and copies of it submitted to the various interested groups for their consideration.

boards would cooperate in the creation of satisfactory certification laws.

(D) *What is the experience in places where certification has been tried?* Three states have definite certification laws. In others there have been minor attempts to control the use of the word "specialist." The following reports have been received from two of the states in answer to a questionnaire:

*Oklahoma.*—(a) How many men have been certified under the law? A: A total of 26—orthodontia, 13; exodontia, 7; periodontia, 3; prosthodontia, 3. (b) Do you find difficulty in enforcing this law? If so, what are some of the difficulties? A: We have had no difficulty in enforcing this law. (c) Is it your opinion the law is accomplishing the worthy purposes for which it was created, or has it been a failure? A: The Board feels that the law is a good one, and a success. (d) What changes would you recommend to make it more effective? A: A few changes are contemplated in regard to certain sections, but they are minor in importance.

*Tennessee.*—"We have issued specialist's licenses to 16 men to date—5 exodontists, 10 orthodontists, and 1 prosthodontist. We have two applications pending now. We have found no particular difficulty in enforcing the law. Nearly all of the specialists in this state approve of it and are helpful. Only one man who has been practising a specialty exclusively has not complied with the law, and he, we understand, is now ill. It is our opinion that the law is accomplishing worthy purposes and that it is going to be a success. It has been in effect in Tennessee only two years, and we have had only one direct violation of the law, which we feel was due to lack of understanding by the man who did it. Until it has been put to a more thorough test, and we discover more weaknesses than have already appeared, we would not recommend any changes."

Your Committee has received unofficial reports that the enforcement of laws governing specialists is difficult, although reports from the two states where certification is in force indicate the opposite. It is not always possible to define clearly the field of a specialty. Some men would like to be known as specialists in a particular branch and yet do not wish to limit their practice to it. In states where certain regulations govern the use of the term "specialist," it has



been found that men will find a way to circumvent, and yet remain within the letter of, the law.

Your committee summarizes its five years of activities in the following statements:

(1) Certification of specialists is desirable as a safeguard to the public and an elevation of standards among the specialties.

(2) Much education on this subject will be required before the general profession will become interested and ready to act.

(3) The specialists are in sympathy with certification.

(4) The time is ripe for the framing of a sample law to be available for states that contemplate certification regulations.

(5) We recommend continuance of this study.

#### V. OUR SOCIO-ECONOMIC PROBLEMS

George W. Wilson, B.S., D.D.S., *Chairman*

*Committee on Socio-economics,<sup>11</sup> Milwaukee, Wis.*

The major socio-economic problem of dentistry is the development of ways and means to bring the benefits of our highly developed professional and scientific service to those who need it for the enjoyment of comfortable, healthful living—to establish improved or perhaps new methods of distribution, so that a broader and more adequate dental health-service at low cost may be provided for the low-income and borderline groups of our population. The problem is as complex as life itself. It involves economics, ethics, social relations and professional-service standards. Since the fundamental purpose of the College is to offer impartial and unbiased assistance in solving professional and related human problems—and in an advisory capacity to aid in guiding our profession's destiny—it was the obligation of your Committee to endeavor to be constructively helpful. Your Committee therefore, preparatory to the formulation of its chief objective in an advisory capacity, reaffirmed and adopted the following statements of principles, facts, recommendations and

<sup>11</sup> Members of the Committee on Socio-economics (1937-38): G. W. Wilson, *chairman*; C. E. Rudolph, Maurice William, E. H. Bruening, B. B. Palmer, M. W. Prince, W. R. Davis.

conclusions, which have been abstracted from the Committee's annual reports in 1935, 1936, and 1937:<sup>12</sup>

Dental disease commonly is the cause of serious systemic disease, and therefore dentistry is an essential part of any comprehensive health program.

Even in prosperous times a large proportion of the population is economically unable to meet the costs of adequate dental service.

Health-insurance legislation is being studied by the Federal and state governments.

Dentistry, conscious of its social obligations as a progressive health-service profession, must accept full responsibility for the development of the dental aspect of any sound system of health service that may be proposed.

The Committee recognized that health insurance may carry with it either high advantages to both the public and the profession, or dire consequences, depending entirely upon the provisions of the health-insurance system that may be adopted. We recognize the fact, also, that any health-insurance law that is detrimental to the profession is equally disadvantageous for the public. Consequently your Committee, after careful consideration, adopted the following thirteen points as stipulations that must be met by any acceptable health-insurance law:

- (1) Adequate health-service for all low-income groups in the population.
- (2) Maintenance of quality of service by placing responsibility for the quality on local professional organizations.
- (3) Limitation of the income-eligible group so that those able to pay proper fees of private practice will not be included.
- (4) Extent of services adjusted for various age-groups so that, although *adequate* dental care will be provided for all, special emphasis will be placed on the preventive phases for children and young adults.
- (5) Sufficient flexibility to permit services, beyond the minimum fixed as adequate, for those of the insured who are economically capable of expending additional funds for such purposes.
- (6) Adequate remuneration for all health-service practitioners.
- (7) Control and operation of the plan by the health-service professions, with complete elimination of political interference and commercial exploitation.
- (8) Free choice of practitioners by patients, and free choice of patients by practitioners.
- (9) Continuance of private practice of health-service as opposed to a general clinic-procedure.

<sup>12</sup> *J. Am. Col. Den.* 3, 76, 1936, Mar.-June; 3, 171, 1936, Sep.-Dec.; 4, 108, 1937, Sep.

(10) Elimination of cash payments to patients, benefits under health insurance to be strictly limited to professional services.

(11) Provision for periodic post-graduate courses, vacations, and pensions for practitioners.

(12) Maintenance of the attractiveness of health-service professions as careers, so that prospective practitioners possessing high coefficients of ability, character, intelligence, and ambition may, for the benefit of both the public and the professions, continue to enter and remain in the service.

(13) Retention of the fundamental American doctrine providing for rewards in compensation, prestige, and position to individuals in direct proportion to their ability, industriousness, conscientiousness, and personal attributes. To forsake this principle for regimentation would put a premium on indolence, indifference and inefficiency in health service.

*Social and economic forces of tremendous power have been, and are, in motion in the United States.*

*The health-service professions are not immune to the changes that may be produced by these forces.* If health insurance becomes an actuality in this country, its repercussions will affect all the health-service professions and every individual member of each of them. This is true regardless of whether the health-insurance laws that may be enacted are sound or illogical in their formulation, or beneficent or vicious in their effects. The Committee believes that it would be extremely short-sighted for dentistry to assume that it lives in a world apart, and that it is immune to such special and economic changes as now seem to be on the horizon.

*Only by intelligent and unemotional consideration of these problems can dentistry hope to secure the sympathetic understanding and cooperation of legislators, and of the political and social groups that are committed to a social-security program.* No one understands the problems of dentistry, or cares especially about them, excepting dentists. If the dental profession does not give intensive attention to these questions they will go by default and, as a result, the rôle of dentistry in any health-insurance system that may be evolved in this country will be that of a sort of fifth wheel to medicine. Dentistry must gather, from every available source, all data that it will require to present a strong and logical case before the country's legislators. To orate emotionally in opposition to health insurance will be of no avail—legislators orate emotionally so much themselves that they are not particularly impressed by it. Legislators demand facts and, in the last analysis, the dental profession will present a sorry spectacle if it should be unable to discuss intelligently the fundamental aspects of dental care for low-wage groups of the population. Dentistry must be prepared to present facts

regarding the present dental condition of various groups of industrial workers, and the costs of providing services to improve these dental conditions. Scientific data, not emotional opinions, must be presented in support of the contention that diseased teeth, carious teeth, and missing teeth are responsible for many human ailments. Facts must be presented to indicate that it is economically more practicable, and socially more desirable, to provide dental care for large masses of people than to provide medical treatment for the illnesses produced by neglected dental conditions. These and many other fundamental factors must be clearly understood, and capably formulated and presented by dentistry's spokesman. It must be emphasized that the best interests of the public are inevitably intertwined with the best interests of the health-service professions. What is bad for the public in a health-insurance law, is bad for the professions.

Your Committee has established the objective of *formulating, in an advisory capacity, a statement which it is hoped will represent a step forward, and also assist in clarifying the present uncertainty as to methods of distributing dental services to the low-income and borderline groups of our population.* \*The Committee has no complete plan to propose as a solution of our major socio-economic problem. It seems certain that no one plan could ever be formulated to fit successfully all localities and situations in the United States. Every locality has its own peculiar problem. The committee has assembled and evaluated several facts from its survey, and from other sources, from which opinions have been formulated and recommendations are offered. Any recommendations proposed by dental groups must be conservative enough to safeguard the interests of the public and profession, and liberal enough to be a practical solution of the general problem, or of a phase of the problem.

The Committee recognized that a marked evolutionary change has taken place in the social and economic order, especially during the past quarter century. In recent years the process has been quickened in the United States particularly, and is now reaching a climax because the present Federal administration has committed itself to a social-security program consisting of old-age insurance, unemployment insurance and health insurance. The first two legs of the tripod are well on their way to realization, and the third is approaching reality. The health-service professions, it is now certain, cannot escape being

drawn into a program of change. Current events point to important counter-activities by the medical profession, which is being backed to the wall by the wave of public questioning and the pressure of government proposals for plans of socialization.

Recent events point to a persistent effort by the Federal government to force some form of socialization upon the public and health-service professions. This will occur unless we ourselves solve our problems in the shortest possible time. If this is a fact, then a policy by the health-service professions of opposing all proposals without presenting constructive counter-proposals is useless and dangerous. The pressure of the present Federal administration, in all directions of social readjustment, is forceful, persistent and effective. A policy of submission to the plans of any third party, and ensuing surrender of our rights, would not accord with our professional ideals and objectives. We cite an example: In February 1938, a compulsory health-insurance law—the first in the United States, which provided health insurance for municipal employees of San Francisco—was adopted by vote of the citizens of San Francisco. No doubt its pattern will be copied by coöperatives, unions, and other groups throughout the United States. In the original statement of this plan, under "services prohibited" occurred the words "dental care" and "dental services," and only physicians were permitted to register for service. The dentists of California objected, *not because dentistry was excluded* but because, with these restrictions, the plan permitted physicians to treat fractured jaws, osteomyelitis of the jaws, Vincent infection, and a great group of injuries which are now included by our profession in oral surgery. The objections of the dental organizations finally resulted in the removal of these restrictions and the addition of dentists to the service.

For the following reasons your Committee looks with disfavor upon any plan of delivering dental service that injects a hostile or dominating third party or agency, and excludes professional administrative control:

(A) Dentistry, like all health service, is a personal service. Under a system of free and independent practice, the quality of service rendered and the welfare of the patient are paramount. The substitution of a service that is standardized as to methods of delivery

and inflexibility of fees and budget, for an independent type of service in which the patient is expected to *pay according to ability, is not in the best interests of patient, dentist or public.*

(B) The administration of any plans *other than private practice*, or those under professional control and auspices, necessitates the intervention of a third party, with attendant conflict of policies, personnel, and increased costs. The costs of such service are as great—usually greater—and the quality of service is inferior.

(C) Professional men and women are imbued with their age-old obligation and responsibility to serve, to the best of their ability and with freedom of choice of procedure, all who seek their services. This is *professional altruism*, and it should be preserved.

(D) Dental health-service cannot be considered in the same category with other human necessities, such as food, clothing, shelter, etc., which lend themselves to *merchandizing principles*. It is personal; dependent upon personal interest, enthusiasm, initiative, satisfaction in serving; and directly related to the health and well being of the patient.

The Committee believes an unbalance has occurred between scientific and socio-economic development in dentistry. Dentists have devoted by far the major portion of their time and effort to the improvement of the quality of their service, which is by no means a fault in itself. But we have neglected to develop satisfactory methods of distribution for a large section of our population, many of whom are unable to purchase dental service but who need it for health and comfort. The Committee recognizes that a system additional to the conventional methods of delivering dental service is on the way and, owing to the following particular factors, will be forced upon us unless early action is taken:

(a) The insistent demands of the Federal administration, state legislators, labor groups, social-service workers, and the general public, for more medical (including dental) care at lower cost. The report of the Interdepartmental Committee to Coördinate Health and Welfare Activities is convincing affirmative evidence, for those in this group, on the question: "Is there need for more medical care?" Dentistry, while not given great attention directly in the demands for more health service *now*, will eventually be included in any health

program. The Federal government is insistent upon including health service in its social-security program.

(b) A growing recognition of the value of dental service by the consumer public, medical profession, public-health agencies, and political leaders. This is the cumulative effect of our educational program and scientific advances.

(c) The dental profession itself is seeking a broader outlet for its services. Many members of the profession favor the extension of dental services, in the hope of obtaining a more substantial security for themselves and dependents.

The problems of the health-service professions differ greatly because of the nature of the services rendered by them. The dental profession has special problems because:

(1) Dental care is more frequently required.

(2) Many dental ills do not correct themselves; uncorrected they grow worse.

(3) Dental caries has not yet been successfully prevented.

(4) Dental ills cannot be successfully self-treated; only a dentist can successfully perform dental service.

(5) Dentistry is time-consuming and costly because of the extensive use of materials. There are no practical short cuts.

(6) Dental disorders are recurrent, and need frequent and regular attention.

(7) There is a great difference between the service for adults and that for children and adolescents.

(8) A wide variety of types of service, dependent upon dissimilar needs of patients, necessitates a great diversity of skills in the dentist.

In the light of information accumulated from your Committee's survey, we observe that several efforts have been and are now being made—though they have not yet proved to be effective, largely because of *lack of sufficient time for experimentation* by groups of medical, dental and government agencies—to provide more health care for the masses of our population. These may be designated as:

*Dental-hygiene programs* under the direction of Federal, state, county and city departments of health, in coöperation with the respective dental associations. These programs are essentially educational, serve children, and are a part of the general public-health program.

*Dental-association programs* operating independently, or in association with interested lay groups such as Kiwanis, Lions, Rotary and other civic associations; some also in coöperation with community funds.

*Resettlement projects* by government agencies, Federal and state, such as the Farm Security Administration now being experimented with; others will doubtless follow.

*Medico-dental society plans*, post payment plans, coöperatives, and the Health Finance Bill.

The Committee recommends that a comprehensive survey be attempted, by the various state societies, to determine more accurately the local need for dental care, in anticipation of experiments with new plans for the delivery of dental service. Data collected by the Economics Committee of the American Dental Association indicate the extent of the need for dental service. The survey of 1933-34 revealed that approximately 90 percent of American school children suffered from dental defects. There has been no improvement of dental conditions since that time. Data collected by that committee on the incidence of dental defects in adults, reported from several widely separated areas in the United States, revealed to some extent the need for service. Reports from the U. S. Department of Commerce, on national income for 1930-37, indicated the average income per person in the United States to be \$464. A further study of national income shows that

21% earn less than \$1000	9% earn \$2500 to \$3300
21% earn \$1000 to \$1500	10% earn \$3300 to \$4500
17% earn \$1500 to \$2000	10% earn more than \$4500
11% earn \$2000 to \$2500	

These reports reveal, to some extent, the need for health service and for increase in the purchasing power of our population.

#### *Conclusions and recommendations*

(A) There is a serious condition of uncertainty, bewilderment and inaction in the dental profession toward the insistent demands of lay and political groups under aggressive, and in some quarters unprincipled leadership, to obtain "greater medical benefits at less cost."



(B) If a compulsory health-insurance plan, or any other—which is now or in the future may be regarded as unsatisfactory by the health-service professions—is forced upon us, the professions and public will suffer from the effects of regimentation, bureaucracy, and consequent increase in *costs* and *reduction in the quality of service*.

(C) The dental profession must now endeavor to meet consumer need—and the demand by them and other groups already named in this report for dental care—in coöperation *with the medical profession if possible, independently if necessary*. Since recent events have put the medical profession against the wall, it will be fully occupied readjusting its own methods of distribution. Thus far in all discussions of general health care, dentistry has been almost entirely ignored by the medical profession. We must plan and develop our own formula, for dentistry's problems are notably different from those of medicine. Physicians cannot be expected to jeopardize the medical program by including adequate dental service. The high cost of adequate dental service will exclude dentistry from all health-insurance plans, at least at the beginning.

(D) It has not been conclusively established that a solution of our socio-economic problem can be found safely, substantially or permanently in (a) compulsory health-insurance plans; (b) coöperatives, which are controlled by any other than organized professional health-service groups; (c) state medicine; or (d) plans which require extensive expenditures of tax moneys to pay the health-service bill. We believe these should be opposed because they are susceptible to *bureaucratic direction, costly, and the best interests of the profession and public* cannot be served by their adoption. We reiterate our belief in all the thirteen stipulations reported by the committee in 1936 (page 244), and for emphasis repeat item 13: "(13) Retention of the fundamental American doctrine providing for rewards in compensation, prestige, and position to individuals in direct proportion to their ability, industriousness, conscientiousness, and personal attributes. To foresake this principle for regimentation would put a premium on indolence, indifference, and inefficiency in health service."

(E) There are excellent possibilities for successful solutions in the formulation of plans based upon the following conditions, in

principle, either singly or in combination, which, for early experimentation, are *recommended* to city, county and state dental societies:

(a) Because of the nature of dental service and the consequent problems, the most simple, effective, economical and desirable method of providing dental care to the whole population is to be found in preventive-dentistry programs, for children of preschool and school ages, based upon education and conducted by city, county, and state departments of health, under professional coöperation or control. The principal professional service which dentistry has to offer is preventive dentistry. This type of health-program is the most fundamental method of extending the usefulness of dentistry to the public. The extent of dental disease and its sequelae have been known for years. We recognize the impossibility of correcting the effects of local and systemic disturbances resulting from dental foci. It is surely more rational to prevent disease and conserve healthy tissue, than to permit invasion and attempt to cure. It is socially and economically practical and desirable to regard the establishment of mouth-hygiene programs that stress educational and preventive features—in every city, county, and state—as one of the most effective means of extending the usefulness of dentistry and solving our socio-economic problem. This will not be of much value to the adults of our population in this generation, but other plans will have to be developed for them.

(b) The principle of voluntary health-insurance (Committee's recommendation in 1936), applied either independently or in close coöperation with state medical organizations. The State Medical Society of Wisconsin has adopted a plan to organize within its own body a mutual voluntary insurance system, to be operated independently of *outside third parties*. Not all aspects of dental services are adaptable to a medical-service plan, where a stipulated amount is paid into the fund, because it would raise the premium so excessively that the low-income group could not participate. Some types of service which may be termed oral medicine, and possibly oral surgery, could be successfully included, from an *administrative point of view*, in medicine in a voluntary-insurance plan. But there would be a grave *danger to the autonomy of dentistry*, if adequate dental service were split into medical and restorative divisions and administered separately. This would encourage the hopes and aspirations of some

dental laboratories to serve the public directly with "mechanical dentistry."

(c) The plan now under experimentation by the Missouri State Dental Society. It applies the principles of professional altruism and sacrifice, rendering necessary service according to the patient's ability to pay a "contribution" instead of a "fee."

(d) Post-payment plans, or programs, of which the Kellogg Foundation and the Children's Fund of Michigan are typical examples. In many cases community funds could be used to assist in a preventive program.

(e) Miscellaneous charitable organizations and service clubs could be enrolled, in many communities, to assist in educational programs and in supplying corrective service.

(F) Your Committee regards dental care for the indigent as the responsibility of society. The state, as an instrument for the collection of funds by taxation, is obliged to meet this responsibility. Methods for the distribution of dental health service for the low-income group, and for the medically indigent, are responsibilities of the profession, because persons in these groups are not wards of the state but self-sustaining citizens, to a varying extent, and as such should have the privilege of free choice of dentists, with resultant health-service benefits.

(G) The Committee recommends, finally, that dental organizations fulfill their professional obligations and assume the responsibility of serving the self-supporting group with adequate dental service, at fees in keeping with this group's ability to pay. This attitude will assist immeasurably in solving our complex socio-economic problem. *To those in need, and who wish to be served, it will guarantee adequate service; and to dentistry, a rightful and secure place in the field of health service.*

#### VI. GUARDING FRONTIERS OF PUBLIC WELFARE

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

*Committee on Prosthetic Service,<sup>13</sup> Pittsburgh, Pa.*

The American College of Dentists, motivated by altruistic purposes, has dedicated its membership to the self-imposed task of elevating

<sup>13</sup> Members of the Committee on Prosthetic Service (1937-38): W. H. Wright, *chairman*; A. H. Paterson, C. H. Schuyler, W. H. Grant, A. P. O'Hare.

the dental profession to higher standards of oral health-service, and of creating a mutual understanding between the public and profession that will serve the best interests of both. No study, now on our roster, calls so urgently for the support of the College as that which you have placed in the hands of your Committee on Dental Prosthetic-service. None demands a more immediate solution in safeguarding frontiers of public welfare.

In the United States, the oral health of the public has been safeguarded, presumably, by the enactment of dental statutes that commit to the dental profession certain rights and responsibilities in the administration of an oral health-service. Such licensure of the dental profession imposes the expressed or implied responsibilities (a) to serve the public faithfully in maintaining a high-grade oral health-service, and (b) to prepare and examine properly those who seek admission to the practice of dentistry. Such legal recognition by the Commonwealth, while protecting the dentist in the performance of his professional duties, is designed primarily to protect the public. It bestows on the licentiate the privilege to do that which is in the best interests of the public, but it does not grant the liberty to gratify his own desires to the disadvantage of the public welfare.

Your Committee has repeatedly called attention to the responsibility resting upon the dental profession to maintain a high-grade prosthetic oral health-service. Notwithstanding these and other reminders, there are some who, continuing to enjoy the privileges of a profession, resort to practices typical of the quack. Among these, many unscrupulous dentists, having disavowed their professional rights and ideals, serve mainly as retailers of industrially made dental appliances, in the fabrication of which the dentist has no supervision and desires no part. Thus, during the past twenty years, there has developed a new group of assistants, in reality adjuncts of the dental profession, known as commercial dental-laboratory technicians. Some of these technicians—aware of the shortcomings of some members of the profession, the exploitation of the public, and the apparent discrimination in dental fees as compared with laboratory prices—now desire to elevate their status by securing statutory legislation. Your Committee has repeatedly expressed the opinion that statutory license of dental technicians under industrial

control does not offer a logical solution of this problem. In fact it would create new problems possessing far greater potential dangers to the public welfare than those now confronting the dental profession. The technicians who now clamor for license are, in the main, those who are acquainted with the abuses in prosthetic dentistry. They see how easy it is for the unscrupulous dentist to take advantage of the patient, and have come to regard the dentist as an unnecessary retailer of industrially made dental appliances who cheats them out of the fruits of their labors. Some are no doubt sincere in the belief that they could do the work equally well, and in addition save money for the patient. If it had not been for the conscientious dentists who maintained high standards, demanded a high-grade service, and honestly served the public, we might already have witnessed the licensure of dental technicians.

In supporting the dental technicians in their demands for license, the weekly *Dental Observer* for September 23, 1938, stated that "the majority of technicians now engaged in the trade have never made themselves worthy of advancement to almost-professional status." This editor makes little distinction between the dental profession and the laboratory technicians, and we are to blame for this. So long as dentists connive with technicians in rendering low-grade dental service to the public, the technicians will be envious of the fees the dentist collects for services rendered mostly by the technicians themselves; and they may be expected to make repeated attempts to eliminate the dentist who has shown himself unworthy of public trust and, in some instances, less capable than the unlicensed technician. The incapable, unscrupulous, or lazy dentist who would barter his professional birthright, and also the licensing of technicians, are serious problems, which must be studied by those members of our profession who are concerned about the welfare of the public. The potential threat to the oral health-service of the public from licensure of technicians will be of sufficient moment to unite the profession in opposing it, especially if we remember how the licensure of technicians in other countries finally led to their practice of prosthesis and later to their practice of other phases of dentistry—and the subsequent division of dental practitioners into medical and mechanical groups.

From your Committee's studies it becomes increasingly clear that dentistry has not measured up to its responsibilities in guarding the frontiers of public welfare. In fact we are responsible for allowing some of our profession to help tear down the frontier which can be guarded only by capable, honest, and public-minded dentists who are conscientious guardians of the public health. Dentistry must clean house! A definite stand must be taken by the College as to what constitutes a high-grade oral health-service in prosthesis, so that unscrupulous dentists will be deterred from dishonest practices and the public informed as to what it may expect from the profession.

The laboratory situation calls for action that will be fair and just to all concerned. All statements by the industry to the contrary, the dental technicians are adjuncts of the dental profession. It is by and through the dental profession that they make their living. Without the profession they would cease to exist. At the present time this fact is denied by some and affirmed by other members of the industry, indicating two entirely different views of the profession-technician relationship. There are those, the better class of technicians, who want the profession to step in and assume control of those who serve it and therefore belong under professional jurisdiction. On the other hand there are many, perhaps a majority, who secretly despise the profession as they know it, and insist on handling their own affairs and controlling their own destiny. Since a majority of the dental profession is convinced that the dental technicians are here to stay, and since we are directly responsible for their existence and maintenance, the dental profession must do something about it. The traditional "let alone" policy of the profession has done no good; on the contrary, it has resulted in much harm. Thousands of poorly trained, meagerly equipped technicians have entered the industry, cutting prices, demoralizing the better element in the industry, and contributing to the low-grade prosthetic service so common at the present time. It is this group that offers the potential threat to the public welfare, and the profession *must* face its responsibility.

If dentistry expects to be worthy of the trust involved in guarding the oral health of the public it must:

- (1) Appreciably improve the quality of its oral health-service in prosthetic dentistry.

(2) Insist on strict observance of ethical obligations by its members in serving the public.

(3) Intelligently study the need for—and, if desirable, plan ways and means of selecting, training, examining, and supervising—such adjuncts of the profession as may from time to time be indispensable to a high-grade and adequate oral health-service in prosthetic dentistry.

(4) Safeguard the oral-health interests of the public against the intrusion of any unqualified group into the oral phases of dental practice.

Only by assuming full responsibility for the practice of dentistry, and for the supervision of the necessary adjuncts, can the dental profession expect to render an increasingly effective oral health-service, and at the same time safeguard frontiers of public welfare.

#### VII. THE VALUE OF RESEARCH

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

*Committee on Research,<sup>14</sup> Providence, R. I.*

In its bearing upon dental research, the general theme for the year suggests a perspective that reaches from the ancient past to the distant future. The human species, created with the will to survive and to improve its status in the world, has observed, adapted, correlated, invented, until the phrase "knowledge is power" has become the axiom that best explains our present civilization—its complicated structure and interdependences, and especially its un-resting progress in the accumulation, correlation, and practical utilization of scientific facts. For professional groups, no less than for nations and individuals, *public relations* depend essentially upon the degree of enlightenment which has been and is being achieved. Writing in 1926, Dr. William John Gies gave clear expression to this fact when he opened his discussion of dental research with the words: "Systematic endeavor to extend the boundaries of knowledge is the mainspring of science, and the register of a profession's standing and achievement." In the intervening years, the American College of Dentists, by word and deed, has repeatedly endorsed this opinion

<sup>14</sup> Members of the Committee on Research (1937-38): A. L. Midgley, *chairman*; P. C. Kitchin, L. R. Main, P. J. Hanzlik, Howard C. Miller, A. B. Luckhardt, L. M. S. Miner, J. E. Gurley, W. D. Cutter.

and its Committee on Research is constantly striving to find the most direct and practical means of realizing the full values of a systematic and well-balanced program of dental research.

What are the educational ideals for which the College stands? *First*, a scholastic standard that should attract to the dental profession students able and worthy to assume the responsibilities of health-service in the spirit that has characterized the best representatives of the medical profession. But can such students be attracted to a profession that is self-complacent, or discouraged by lack of thorough effectiveness? New answers to old questions, new relations between old facts, keep student minds alive. *Second*, a quality of instruction that will inspire the more gifted of these students to devote their time and minds to the application of scientific inquiry to dental problems, stimulating a mental growth and enthusiasm which will profoundly influence the progress of dental science. But can teachers impart such inspiration if they themselves lack the spirit of inquiry and the quickening that comes with larger comprehension? *Third*, a professional attitude toward health-service, both private and public, which will assure to the dentist the breadth of opportunity, the public esteem and support, and the social recognition accorded only to such as are striving with all their might, and in the spirit of altruism, to further the public good. Can this ideal be achieved without immediate and financial encouragement to research workers, wide publicity for distinguished achievement in their field, and generous dissemination of the facts they bring to light?

The special knowledge and equipment of which dentistry already avails itself should never be disregarded. But much of this knowledge, though of great professional value, does not by itself tend to induce in practitioner or patient either deep concern for the general health or veneration for the basic or fundamental laws upon which health depends. Hence arises the pressing need for emphasizing the fact that *biological* inquiries belong as indubitably to dental research as to medical. Accordingly, your Committee on Research has deemed it desirable to follow up those efforts of the Dental Educational Council which have placed dentistry upon a basis of scholastic equality with medicine. It has vigorously initiated the establishment of an effective and mutually cordial medico-dental relationship,



as the most favorable condition to encourage the altruistic outlook, to promote biological dental-research (always its principal objective), and to enlarge opportunities for health-service by dentists, thus meriting for dentistry a stronger claim for public recognition, philanthropic endowment, and economic compensation than it is likely otherwise to receive.

Altruism may be defined in a variety of ways. For the dentist it means not only intelligent devotion to the duty of guarding, preserving, and restoring the health of the mouth and teeth of private patients, but also acceptance of responsibility for coöperating in all public health-services in which the oral tissues are or may be involved. It is obvious that unless dentistry supports constant activity in research its achievements cannot be thorough-going, because the relationships between oral and systemic health are still in process of determination, and problems of prevention and cure continue to present themselves. The spirit of dental research should permeate the everyday life of the experienced practitioner, stimulating the impulse to inquiry, and stirring the mind to vigorous efforts in the direction of complete and accurate diagnosis and a reasonable and scientific therapy. The same spirit should rouse young dentists to seek the largest possible opportunities for community service in hospitals and health centers; for conference with one another and with physicians and health officers; and, in general, for every contact, investigation and experiment which will broaden the field of their legitimate activities. Dental research in the clinic or the laboratory is the quickening, renovating agency which can vitalize the whole rank and file of the dental profession, and extend its relationships to the farthest bounds of professional usefulness.

To the general public the fruits of dental research must gradually but inevitably bring a new conception of the dentist's function. Already in enlightened communities free dental clinics for children are a welcome sign of public concern for private well-being. Foresight and timely guidance or correction already prevent the development of innumerable dental and oral abnormalities, and obviate remedial measures in later years. When dentistry demonstrates that its sincere endeavor is directed toward serving all humanity, that it purposes to foster in every way such studies as will cultivate under-

standing and the concentration of attention upon matters of oral health, and that nothing short of complete prevention of disease and the preservation of perfect dental and oral health *through dental research* is its ultimate goal, then and only then will the dental profession have attained its highest possible ideal—to meet generously all of its responsibilities and obligations to humanity.

VIII. THAT THE WORK MAY CONTINUE

John V. Conzett, D.D.S., Sc.D., *Chairman*  
*Committee on Endowment*,<sup>15</sup> *Dubuque, Iowa*

My subject naturally raises the question: What "work?" In trying to present the answer, we must visualize the ideals of the College, which was organized to honor men of the dental profession for meritorious achievement in the advancement of dentistry, or in the application of dental service to public welfare. To stimulate the members of the profession to greater and higher attainment in professional endeavor has been the first and most important function of the College. That there are other useful things for the College to do goes without saying. If the College is to continue to deserve the support of the leaders in the profession, there should be outstanding work for all of the members of the College. But the College was not organized to do the work that is already being done by other agencies. To help and to stimulate—not to supplant—should be our motto.

Research always holds a high place in professional endeavor. The College should do all in its power to stimulate research in every part of the dental field. In science, in techniques, in social advancement, and in economics, we should aim to be equal to the best and on a par with the highest. In the College are many men whose life ideals are those of research, and who have accomplished much along their special lines of endeavor, but realize that, despite earnest efforts, they have not yet attained their objectives. Knowing this, they continue to attempt to go forward, but are handicapped by lack of funds. Here is a useful function of the College—an important duty. Our aim should be to acquire, from within the profession and from

<sup>15</sup> Members of the Committee on Endowment (1937-38): J. V. Conzett, *chairman*; Herbert C. Miller, Abram Hoffman, D. U. Cameron, A. H. Merritt.

friends among the laity, a sufficient endowment to advance research effectively. We all know that money is a power, and that lack of funds prevents many men from accomplishing their best work. We should develop plans to enable workers to strengthen their efforts, and thus to bring credit to themselves, to the College, and to dentistry—and also benefits for the public.

#### IX. RELATED FIELDS AND OPPORTUNITIES

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

*Committee on Oral Surgery,<sup>16</sup> New York City*

Recent advances in science, particularly during the past fifteen years and especially from contributions of bacteriology, pathology and roentgenology, have extended enormously the usefulness of dentistry as an agent in health-service, and have had a signal influence upon the development of oral surgery as a specialty in dentistry. Progress in dental science, and the modern trend toward specialization, have brought about a comparatively complex interrelationship between dentistry and medicine. Oral surgery, because of the very nature of the work, and those who specialize in it occupy a pivotal position in this interrelationship.

Oral surgery was the first specialty to be evolved from dentistry. In 1867, under Garretson's leadership, the Philadelphia Dental College instituted the first course in oral surgery. In the writings of Garretson may be found the following expression relative to oral surgery: "Just where such a specialty shall begin, what it shall include, and where it will find its limitations, will depend, as in the practice of any other specialty, on the inclinations and capabilities of the man concerned." Garretson's reference to the capabilities of specialists implies the need for post-graduate study and, particularly, for years of clinical experience in hospital wards and clinics. Osler was one of the first to recognize the importance of close coöperation between teaching institutions and hospitals. Abernathy said that "the hospital is the only proper college in which to rear a true disciple

<sup>16</sup> Members of the Committee on Oral Surgery (1937-38): M. W. Carr, *chairman*; J. O. Goodsell, C. W. Freeman, J. R. Cameron, Harry Bear. In the absence of the Chairman, this report was presented by Dr. Freeman.

of Aesculapius." Thus, by clinical experience, one becomes capable (granting he has the aptitude) and proficient, and may even excel. Experience not only develops proficiency in technical ability, but teaches also the equally important lesson of judgment, which reveals the boundaries and limitations intimated in Garretson's statement.

Since Garretson's time, oral surgery has always been, and continues to be, recognized as a specialty of the practice of dentistry, recent sporadic pronouncements to the contrary notwithstanding. From the standpoint of pedagogy, oral surgery has been continuously a required major subject in the dental curriculum, but most medical schools continue to ignore the subject, or refer to it only casually or indifferently. The public will be best served in the future, as in the past, by continuance of oral surgery as a recognized specialty of *dentistry*—a division of health-service, the *equivalent* of an oral specialty of medical practice.

The dental-and-oral-surgical service has become a recognized constituent of the complex organization of the modern hospital. The department of dental-and-oral surgery in the hospital has assumed responsibilities commensurate with its importance, and in comparatively few years has become an indispensable part of hospital service, both in the out-patient dispensary and the in-patient ward-service. In this capacity, oral surgery is rendering its greatest service to the public health.

Research has shown conclusively that oral sepsis may constitute a primary focal infection and, by metastasis, may be the etiological factor directly responsible for secondary lesions elsewhere in the body. It therefore has been important to provide adequate oral health-service for the sick patient; and, in supplying this service, the oral surgical service is called upon to assist in diagnosis and treatment of systemic disease more frequently, probably, than any other service in the hospital. Gies has stated that the reality of such significant correlations forces the conclusion that dentistry is an important mode of health-service, and that the relation between medicine and dentistry, and their intimate mutual interest as servants of the public health, are obvious. This interdependence between medicine and dentistry is recognized in modern hospital organization. However, the responsibilities that the dental-and-oral surgical service assumes

in diagnosis, and in surgical eradication of oral infections incidental to systemic disease, are but extensions of health-service which have developed since the recognition of the causal relation between oral sepsis and systemic disease, and are *in addition* to the routine surgical work of the department. Therefore in addition to routine work in minor surgery accruing from the ward service of other departments, the dental-and-oral surgical service is responsible for the treatment of surgical diseases, injuries, and malformations of the mouth and associated parts. Surgical conditions of the mouth that come within the scope of the branch of surgery customarily conducted by the dental-and-oral surgical service include infections and inflammations of the mouth; acute septic infections—of the floor of the mouth and neck—of dental origin; sublingual abscess and cervico-facial cellulitis; cysts and inflammations of the maxillary bones; osteomyelitis and necrosis; traumatic injuries and complicating infections of the maxillary bones and soft tissues of the face; benign neoplasms of the mouth and maxillary bones; congenital malformations; cleft lip and cleft palate; affections of the salivary glands and their ducts; affections of the tongue and of the nerves of the face.

The dental-and-oral surgical service, as an integral part of modern hospital organization, is a comparatively recent development. Under current conditions of uncertainty, there has been considerable experimentation with several basic phases of management, with variable success and satisfaction. Thus, standardization of a systematic plan of management is needed. Consideration should be given first, however, to the minimum standard for the hospital dental service; secondly, to acceptance and maintenance of a systematic plan of management. Two decades of hospital standardization have been completed, and remarkable improvement has been recorded through a succession of surveys, but no official recognition has been given to the minimum standards of the dental-and-oral surgical service. Therefore, in addition to the need for standardization, there exists also the desirability of including minimum standards as well as an accepted plan of management of the dental-and-oral surgical service in the requirements of approved Class-A hospitals. Your Committee is giving consideration to this and many other related problems, and is making notable progress in the direction of standardization. Recently,

the New York Tuberculosis and Health Association, through its sub-committee on dental standards and services in hospitals and institutions, has been giving special attention to basic standards of hospital dental service as a fundamental requirement of approved Class-A hospitals. This sub-committee, and the report which is under preparation, are especially concerned with public relations and functions as a part of the work of the said Association's Committee on Community Dental Service.

Oral surgery has made many significant contributions to public health-service and is actively engaged in numerous projects concerning public relations. Advancement in science results from research, whether it is fundamental research that is conducted in the laboratory to establish basic scientific principles, or clinical research conducted in the infirmary and the operating room. Even a cursory review of what research in the field of oral surgery has accomplished in the past two decades stimulates the imagination to anticipate even greater advances in the future. This is so, particularly, when it is recognized that the fundamental inspiration that motivates man's endeavor within this field of science is the opportunity afforded to render service to a humanity suffering from disease and injury.

#### X. EXTENDING OUR SERVICES

Howard C. Miller, D.D.S., *Chairman*

*Committee on Hospital Dental-service,<sup>17</sup> Chicago, Ill.*

The dental profession has made great advances during the past few years. Scientific research and discovery have demonstrated that diseases of the teeth and their supporting tissues play an important part in health problems. Serious disease-conditions of the jaw frequently do not receive immediate attention, whereas a similar condition in another part of the body immediately suggests a positive diagnosis, the hospital, and appropriate treatment. When the teeth are involved, extensive specialized knowledge is essential for a correct diagnosis as well as for the care of the patient. Close coöperation between medicine and dentistry is imperative, if the patient is to

<sup>17</sup> Members of the Committee on Hospital Dental-service (1937-38): Howard C. Miller, *chairman*; J. E. Gurley, E. A. Charbonnel, C. W. Stuart, Leo Stern.

receive maximum benefit from modern health-service. It was the belief of those of our membership who first recommended the appointment of a Committee on Hospital Dental-service that this committee would facilitate working accord between both professions. They believed that, by extending our services into the hospital, a greater appreciation of the value of dental service (and of dentistry as a profession) would be impressed upon the medical profession, as well as upon the patients they serve.

Your Committee's annual report at the convocation in Atlantic City, last year, contained data compiled from a questionnaire survey of a selected group of hospitals in the United States, with the assistance of the American Medical Association. The next step was the development of a program from the data compiled, which was difficult because many factors required attention, some of which may seem to be very simple issues, but all of which are associated with change in rules, development of new plans, and removal of traditional barriers. Until a committee appointed to define "adequate and inadequate dental services" (a recommendation in the report of your Committee for 1937) makes an approved report of their findings, other committees will necessarily have to assume a definition for *adequate* service. Your Committee does not desire to infringe upon the duties of such a committee but, to avoid delay in its own work, has outlined what might be termed adequate service, so far as the needs of various types of hospitals are concerned.

Finding that the different hospitals that desire to install dental service are very uncertain as to just what and what not to do, your Committee has attempted to answer this important question by formulating the following working definition: *Adequate dental service is that dental care which eliminates pathologic conditions within the oral cavity; prescribes the most complete control of oral manifestations of constitutional diseases for the greatest length of time; tends to maintain the normal functions of the teeth to the highest degree of efficiency by means of dental operative procedures; all of which must be completed in a manner that is most satisfactory to the patient, from health and economic standpoints.* In analyzing hospital dental-service from the standpoints of the patient, the business executive of the hospital, the medical practitioner, and the dental attendant, your Committee offers the following views.

The reactions of the *patients* vary. Charity patients are usually unable to see why an oral examination is necessary when they report for the treatment of pain elsewhere in the body. They are frequently individuals who, when advised to have a number of infected teeth removed, are never satisfied with the most perfect restorations. Other patients are psychoneurotics who imagine they suffer from various illnesses, including more than their share of dental troubles, and therefore demand more service than other patients of the same social standing. Patients who come under the semi-pay, and most of those on private, service accept treatment by the dental staff of the hospital, but patients in the higher financial bracket insist upon seeing their own dentists, regardless of the type of service he is qualified to render or the number of days of delay before they can visit his office.

The *business executive of a hospital* has to consider the character of his hospital—whether the patients remain as wards of the hospital for an average stay of two days to three weeks or longer; the type of diseases being treated; and also whether the hospital is substantially funded by political administration—such as Federal, state, county or municipal—or whether funds are made available from private subscription and incoming hospital fees. With very few exceptions the executive administrator is anxious to offer the most effective services possible within his working budget—those that most nearly meet the ideals of the hospital staff, and have the approval of the lay-authorities to whom he is responsible (hospital board).

The *medical practitioner* usually demands that the dental associate render a service that will give the patient the greatest possible benefit and the most complete dental protection, with practical economy. He asks the dental profession to justify its claims that certain values are derived from dental service. He is skeptical about some of the theories concerning dentistry, until he is assured that the dentists on the staff are aware of their responsibilities.

*Dentists who affiliate themselves as staff members* of hospitals should have a knowledge of hospital routine and organization. They should be able to make a complete and thorough oral examination—including a consideration of radiographic findings, and their correlation with the history and the clinical signs and symptoms, as affected by other tests and aids now available to the dentist. They should be capable of discussing intelligently, with the physician,



the various laboratory reports and physical findings, and also all mouth conditions related to these findings. They should have a rational understanding of focal infections and their relation to general health; and must impress upon the medical attendant the fact that dental service frequently involves loss of teeth, with consequent impaired function, and that careful consideration should be given to the physical, mechanical and esthetic results.

There are many other phases that must be sponsored and accurately investigated, with conclusions based on scientific research, if dentistry is to occupy its rightful place in hospital organization. Your Committee's complete report for 1938, as presented at a session of the Regents on Friday (Oct. 21), contained a classification of hospitals, with the following recommendations as to the extent of the dental service that should be offered in each:

(1) The appointment of dentists to hospital staffs should be made according to their qualifications, training, and ability—on the merit of the individual, rather than on the basis of personal friendships or contacts, as has occurred often in the past.

(2) The American Dental Association should prepare and maintain a permanent record of its members, showing their scholastic training, special training, and other qualifications, so that hospitals seeking competent dental staff-members may obtain authentic and unbiased information regarding applicants. (For years the American Medical Association has maintained a similar service.)

(3) The American Medical Association and the various hospital organizations should be asked to amend their rules to the effect that only dentists who are members of the American Dental Association may be appointed to the dental staff of Class-A hospitals. (The present rules require that all medical staff-members of Class-A hospitals must be members of the American Medical Association.)

(4) Courses in oral pathology and oral hygiene should be given for student nurses.

(5) The dental staff should provide periodic dental examinations and prophylaxis for student nurses.

(6) Courses in oral pathology and gross dental diagnosis should be given for hospital interns and residents, where these groups would desire such courses.

(7) *Dental* radiographs should be made by the dental department.

(At present, as made by the general X-ray department of the hospital, the results are frequently unsatisfactory for *dental* purposes.)

(8) Weekly ward-walks should be provided for dental students in small groups, where possible, to assist prospective dentists to become well informed on hospital routine and organization.

(9) Dental students should be permitted to assist actively in oral operations where conditions are favorable.

(10) All hospitals having dental departments should be encouraged to develop one or more phases of dental research.

(11) The proper officials of the American Medical Association, American College of Surgeons, American College of Physicians, American Hospital Association—and of all other organizations actively interested in hospitals—should be asked to cooperate in the establishment of dental departments in hospitals.

(12) Distribute copies of this report to all who may desire information regarding hospital dental-service. (Requests for advice and assistance have greatly increased during the past year.)

(13) During the succeeding year your Committee should prepare a plan for minimum standards of hospital dental-service, to be used as a guide for hospitals that establish dental departments, and to include management; basic standards; staff organization, attending and visiting; appointment procedure, with proper rank and title; resident and intern staff-appointments, length of service, number of interns and their duties; minimum requirements in equipment; interdepartmental relations; record forms; rules and regulations; and other requirements that may be necessary for a proper and efficiently functioning dental department.

During the past two years great interest has been shown throughout the country, by hospital authorities, by members of the medical profession, and by a large number of dentists, in the establishment of dental departments in hospitals. Numerous requests for advice and assistance have been received by your Committee, as well as by the American Dental Association. The aid and assistance given to your Committee by the American Medical Association shows a definite interest in our efforts.

Your Committee realizes that it has a tremendous task to perform, and seeks advice and suggestions from the sections of the College,

and from each Fellow. Several sections of the College have discussed hospital dental-service, particularly from the standpoint of their own localities, and have sent recommendations and suggestions to the Committee. The dental profession realizes its obligation to the public, and desires to further every opportunity that will enable it to fulfill that obligation. Extension of dental services into the hospital will develop closer coöperation between medicine and dentistry, and will do much to bring about greater respect for dentistry as an important part of a complete health-service.

#### XI. OUR LITERATURE

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

*Commission on Journalism*,<sup>18</sup> *Chicago, Ill.*

Ninety-nine years ago an association of dentists was formed in New York for the purpose of publishing a dental journal. This association appointed, as its publishing committee, Eleazar Parmlly, Elisha Baker, and Solyman Brown. Their object was the dissemination of useful and practical knowledge among dentists, with the hope that the projected journal might aid the various dental societies which were being organized; that the practitioner might be brought to realize his responsibility to the public; and that the disgrace of quackery might be eliminated. With these avowed purposes, the *American Journal of Dental Science*, the first American dental periodical, was published. Edited by dentists for dentists, and uncontrolled and unaided by trade or business concerns, standards were set for creating a true profession. Beginning with the second volume, the newly organized American Association of Dental Surgeons took charge of the publication as part of their work.

Other periodicals soon followed, published chiefly under dental trade-house auspices, but masking under the semblance of professionalism. The editor of the *News Letter* was bold and frank enough to state that the object of this publication was "first, that the profession, both in the United States and Europe, may be informed of the improvements which have been, and are now being made, in the

<sup>18</sup> Members of the Commission on Journalism (1937-38): J. C. Black, *chairman*; J. T. O'Rourke, E. A. Johnson, Leland Barrett, G. M. Anderson, B. B. Palmer, U. G. Rickert, H. O. Lineberger, E. G. Meisel.

manufacture of artificial teeth; the various tools and aids for the workshop and instruments for the operating room; *second*, to bring to the profession all that is new in the theory and practice of dentistry, through the medium of original communications, essays from old and young practitioners, collations from authors, and items of news on all subjects relating to dentistry." They asked for the aid of the profession in furnishing contributions to their pages. As a further incentive, they agreed to put the subscription price so low as merely to defray the cost of publication—a small-price bid for the birthright of a profession, and smaller still when members of the profession aided them in accomplishing their object. All of this was a form of commercial advertisement, which, by its ostensible gratuities, eventually pauperized the professional journals. Many of these early journals were short lived; but, as the young profession grew in number and affluence, commercial dental literature entrenched itself more and more strongly as the mouthpiece of the profession.

Gradually, many dentists became dissatisfied with the control the trade-house journals were securing, with the result that efforts were repeatedly made to create non-proprietary publications. Prominent men, in discussion and printed articles, deplored the commercial influence that was throttling the advancement of the dental profession, and numerous dental organizations passed resolutions endeavoring to bring to the attention of their members their particular responsibility. In 1928, at the Minneapolis convocation of the American College of Dentists, a resolution was passed condemning the prevalence of trade-house periodicals, and creating a commission whose function should be to survey the existing situation in dental journalism. It is ten years since this commission was appointed. Let us look at some of the things which meanwhile have been accomplished.

Nine trade-house and corporate journals were designated as official organs of publication for *sixty-two* dental societies. Today only *one* carries transactions of societies.

Twelve dental schools advertised in trade-house periodicals. Today: *none*.

Two dental schools contributed to the support of a trade-house journal, one subscribing for their junior and senior students, the other for senior students only. Today *their* support has ceased.

The announcement of post-graduate courses in trade-house magazines has been discontinued, and *instruction for a price*, to private classes in dental offices, will soon be ancient history.

Lengthy articles setting forth the value of salesmanship in the dental office, and the best methods of exploiting the patient, are no longer published under the guise of "economics."

Many of the better supply houses have refused to assist in financing the distribution of corporate "throw-away" publications.

After years of laborious effort, the Council on Dental Therapeutics is now the accepted authority, with the result that most non-proprietary journals are accepting their findings and rejecting advertisements of nostrums. Remedies not acceptable to the Council are refused admission to our American Dental Association exhibits, as are also journals containing unacceptable advertising. Our official journal is now carrying, monthly, an authorized report from the Council.

The American Association of Dental Schools has passed resolutions condemning commercial dental journals and the distribution of "throw-away" magazines among their students. Nearly all of our dental schools have gone on record as disapproving the profession's lack of control of its own literature, and their teaching staffs are refusing to allow their papers to be published in proprietary journals.

Editorial staffs of commercial dental journals are continually changing. Men of prominence, who formerly served on their boards, have withdrawn.

The American Association of Dental Editors was organized, and a charter granted, in 1931 to promote the cause of *non-proprietary* journalism and the advancement of the professional ideals of dentistry. At their first meeting editors representing *twenty-one* non-proprietary journals became members—proprietary editors were not eligible. Today 86 publications are represented by their editors and by 233 individual members who are active in editorial work; and proprietary editors continue to be ineligible to membership.

Apparently, to further the interests of proprietary journals, a "Dental Editors Club" was organized some years ago, consisting of editors who were not eligible to membership in the American Association of Dental Editors, and also a few who were still willing to accept

such journals as true professional publications. The Club seems to be inactive, as no published report of its proceedings has been noticed for some time.

The owners of the least objectionable of the trade-house journals, recognizing that the profession was eventually going to control its periodicals, two years ago presented the journal to the American Dental Association. Other trade-house and corporate periodicals also recognized the right of a profession to control its literature, and have discontinued their publications.

These are some of the outstanding accomplishments which have taken place since the Commission on Journalism was appointed. But the Commission cannot take all the credit. From the inception of our organization, men of unusual ability and professional integrity have unselfishly labored to create a true profession. They eventually brought about the conversion of our schools from competitive, money-making institutions to university membership, where adequate standards of entrance requirements are upheld and professional ideals are instilled in the student. Stringent state laws have been enacted governing the admission and conduct of graduates who desire to practice, and state examining boards pass upon their qualifications and future conduct. The dental apprentice or the mentally unfit is no longer permitted to ply his trade. Were these changes brought about for any ulterior motive? Did these men count the cost and strive for any personal gain? Or were they accepting a professional responsibility for those in need?

Dental research is leading the way to higher standards in both preventive and curative dentistry. Many men are sacrificing time and money in the endeavor to present scientific knowledge to the profession. This knowledge *must be* presented through our journals. Literature and science go hand in hand; the spoken word is of little value unless it is recorded for future reference. Our pioneers realized the importance of literature and, in forming a professional organization, created a journal. From that small beginning our literature has developed, until today it has become the mouthpiece of a scientific profession dedicated to the conservation of the health of the people.

## SOME FACTS THAT SHOULD BE CONSIDERED IN ANY PLAN FOR DENTAL SERVICES FOR THE MASSES<sup>1</sup>

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The National Health Conference, in Washington, D. C., in July, 1938, brought the health-service professions to the full realization that the government is definitely interested in health services for the masses. Although dental health-service *per se* was not conspicuous at the conference, it may be logically assumed that dental services are included in any discussion of "medical care" under government auspices. Therefore, it behooves us, as dentists, to give serious thought to this matter and to reflect upon such questions as these: What kind of dental services would or should be included in an extensive health-service plan? Is a dental health-service plan for all the people feasible? If so, on what basis to the consumer? If not, what should we offer in its place? These and many other questions require consideration, and must be answered, if we expect intelligently to meet our responsibility. This article is published in the hope of presenting briefly a few outstanding facts. A study of basic data will enable the reader to supply many details. The question-and-answer method will be used to expedite and simplify direct discussion.

(1) *What are the actual needs for dental services in the various population groups?* The data in tables 1-11 answer this question.

(2) *What kinds of service should be rendered?* Perhaps the answer may be found by analysis of the kinds of available service:

(a) *Emergency service:* primarily relief of pain and giving comfort.

(b) *Minimum service:* emergency service plus removal of infection.

<sup>1</sup> The statistical material presented here was prepared from two major sources: Survey of Oral Conditions of the School Children in St. Louis, Mo., in 1932, and Report of the Socio-economics Committee of the Missouri State Dental Association, in 1936. The author was chairman of these committees during the progress of the studies therein described. Some of the data in this paper are included in the report on pages 229-235 of this issue of the *J. Am. Col. Den.*

(c) *Temporary service*: minimum service plus temporary service.

(d) *Adequate service*: minimum service plus clinical examination and radiographic survey; plus necessary repair, and replacement, of type to produce masticating efficiency of at least 65 percent, and instruction in preventive measures.

(e) *Maximum service*: highest type of dental service.

It is our belief that any program that does not provide *adequate* dental care is not in the interest of the public or the profession.

(3) *Does a dental health-service plan for all the people seem feasible?* Consideration of the need, the time element, and the population, may be enlightening. *Tables 9-11* present the data of an analysis of the element of time in various dental services. These data were compiled from reports submitted by good operators. They also include estimates by some who devote most or all of their time to certain branches of dentistry. This combination was sought so that the average would represent a high type of service.

(4) *On the basis of dental needs, what is the estimated time required to render the needed services in the various population groups?* *Tables 10 and 11* present related data, including indications of the way the estimates were made. The following summary shows the *average* time required, *in hours*, for each group in *tables 1-8*, presented (for *average person*) in the sequence of the tables:

Kindergarten child . . . . .	5.23	Professional person . . . . .	12.1
Grade child . . . . .	6.35	College student . . . . .	12.2
Vocational pupil (white) . . . . .	10.6	Farmer . . . . .	21.4
High-school pupil . . . . .	8.8	Housemaid . . . . .	20.8
Teachers-college student		Housewife . . . . .	18.9
(white) . . . . .	7.7	Trade and factory worker . . . . .	23.5
Rural grade-child . . . . .	7.8	Urban adult . . . . .	17.2
White-collar person . . . . .	15.7	Rural adult . . . . .	19.2
Merchant . . . . .	18.7	Unclassified person . . . . .	18.8

(5) *If all people were served, how much time (dentist's) would be immediately available per person?* The following tabulation presents relevant information:

Average number of hours in dentist's working day . . . . .	8
Average number of working days per week . . . . .	5



Average number of working weeks per year.....	50
Average number of working hours per year.....	2,000
Approximate number of dentists in United States..	62,500
Approximate population of United States.....	125,000,000
Average number of persons per dentist.....	2,000

Thus, 2000 hours per dentist, for treatment of 2000 persons, means *one hour* for each person per year, if all received dental service.

(6) *Would it be desirable to limit the services by the dentist to certain basic types and to distribute the major portion to other groups, such as technicians, assistants, hygienists, dental laboratories, etc.?* To obtain all possible assistance in rendering a maximum service is a noble purpose. Dentists owe it to themselves and to the public to do this; but it should be done only under the close supervision and direction of dentists. If we should disregard these responsibilities, dismemberment of the dental profession would follow. *The future of dentistry points to prevention.* The direction of preventive dentistry should be in the hands of dentists. All accessory groups must be adjuncts to the efforts of dentists—none of these groups should be permitted to replace dentists.

(7) *If "time needed" and "time available" are "out of proportion," what is a logical approach to the problem of services for the masses?* (A) The amount of "time available" might be increased. But statistics show that we are at a standstill, when judged on the basis of population increase. (B) The amount of "time needed" might be reduced. But this can be done only through a program of prevention.

(8) *What are the essentials in a program of prevention?* (A) A study into the causes of diseased conditions, and (B) an educational program to apply the findings—a program requiring (a) education of the profession, and (b) education of the public.

(9) *Is the dental profession making a study to determine the causes of dental and oral diseases?* Yes; many competent men are doing research, but many more should be put to work. To do research, to train men for research, and to gather and interpret the resultant information, require time and money. The profession needs financial help to carry on this program.

(10) *Why is an educational program necessary?* (A) The profession itself must be informed of the new developments, as they are

TABLE 1

*Indicated actual needs for dental services*

<i>Average Kindergarten Child</i> Based on 6,644 reports Age, 5 years	<i>Average Grade Child</i> Based on 95,427 reports Age, 5-14 years	<i>Average Vocational Pupil (White)</i> Based on 2,428 reports Age, 14-29 years
Has lost 0.24 deciduous teeth	Has lost 0.31 deciduous teeth	Has lost 0.64 permanent teeth
Has lost 0.01 permanent teeth	Has lost 0.17 permanent teeth	Has 3.28 teeth, filled
Has 0.27 teeth, filled	Has 0.73 teeth, filled	Has 3.93 cavities
Has 2.9 cavities	Has 3.2 cavities	
<i>In each 1000 of this population group:</i>	<i>In each 1000 of this population group:</i>	<i>In each 1000 of this population group:</i>
787 have good general health	774 have good general health	962 have good general health
492 have good oral health	349 have good oral health	513 have good oral health
962 have good gum condition	933 have good gum condition	762 have good gum condition
117 have had previous service	280 have had previous service	720 have had previous attention
836 need dental attention	937 need dental attention	964 need dental attention
86 need space maintainers	264 need space maintainers	642 have malocclusion
194 have malocclusion	486 have malocclusion	640 need bridgework
338 brush teeth regularly	314 brush teeth regularly	466 brush teeth regularly
724 need prophylactic care	869 need prophylactic care	892 need prophylactic care

TABLE 2

*Indicated actual needs for dental services*

<i>Average High-School Pupil</i>	<i>Average Teachers-College Student</i>	<i>Average Rural Grade-Child</i>
Based on 20,515 reports	Based on 573 reports	Based on approximately 300,000 reports
Age, 14-18 years	Age, 16-29 years	Age, 5-14 years
Has lost 0.52 permanent teeth	Has lost 0.375 teeth	Has 4.1 cavities
Has 2.53 teeth, filled	Has 5.59 teeth, filled	
Has 2.92 cavities	Has 2.61 cavities	
<i>In each 1000 of this population group:</i>	<i>In each 1000 of this population group:</i>	<i>In each 1000 of this population group:</i>
861 have good general health	945 have good general health	950 need prophylactic care
449 have good oral health	738 have good oral health	450 need space maintainers
905 have good gum condition	900 have good gum condition	
582 have had previous attention	924 have had previous service	
959 need dental attention	949 need dental attention	
654 have malocclusion	434 have malocclusion	
520 need bridgework	375 need bridgework	
557 brush teeth regularly	802 brush teeth regularly	
867 need prophylactic care	862 need prophylactic care	

TABLE 3  
Indicated actual needs for dental services

<i>Average White-collar Person</i>		<i>Average Merchant</i>	
Based on 1,235 reports		Based on 324 reports	
Age, 35.3 years		Age, 40.9 years	
Visits dentist every 16.6 months		Visits dentist every 19.5 months	
Has lost 4.24 teeth		Has lost 6.1 teeth	
Needs	2.00 teeth, extracted	Needs	3.2 teeth, extracted
Has	1.51 teeth, replaced	Has	2.1 teeth, replaced
Needs	2.5 teeth, replaced	Needs	3.9 teeth, replaced
Has	6.9 teeth, filled	Has	8.3 teeth, filled
Has	3.1 cavities	Has	2.8 cavities
<i>In each 1000 of this population group:</i>		<i>In each 1000 of this population group:</i>	
537 have good general health	34 have partial lower dentures	516 have good general health	33 have partial lower dentures
360 have good oral health	7 have full lower dentures	278 have good oral health	18 have full lower dentures
368 have good gum condition	300 crowns are needed	288 have good gum condition	230 crowns are needed
238 have pyorrhea	344 need bridgework	299 have pyorrhea	364 need bridgework
44 have Vincent infection	63 need partial upper dentures	40 have Vincent infection	64 need partial upper dentures
789 need prophylactic care	87 need full upper dentures	737 need prophylactic care	163 need full upper dentures
219 have bridgework	90 need partial lower dentures	250 have bridgework	86 need partial lower dentures
35 have partial upper dentures	69 need full lower dentures	34 have partial upper dentures	141 need full lower dentures
49 have full upper dentures		49 have full upper dentures	

TABLE 4  
Indicated actual needs for dental services

<i>Average Professional Person</i>		<i>Average College Student</i>	
Based on 284 reports		Based on 161 reports	
Age, 34.8 years		Age, 25.1 years	
Visits dentist every 12.1 months		Visits dentist every 20.2 months	
Has lost 3.97 teeth		Has lost 1.62 teeth	
Needs	1.34 teeth, extracted	Needs	0.99 teeth, extracted
Has	1.69 teeth, replaced	Has	0.29 teeth, replaced
Needs	1.97 teeth, replaced	Needs	1.17 teeth, replaced
Has	8.07 teeth, filled	Has	6.5 teeth, filled
Has	2.4 cavities	Has	3.8 cavities
<i>In each 1000 of this population group:</i>		<i>In each 1000 of this population group:</i>	
625 have good general health	35 have partial lower dentures	669 have good general health	60 have partial lower dentures
499 have good oral health	7 have full lower dentures	433 have good oral health	none have full lower dentures
646 have good gum condition	160 crowns are needed	448 have good gum condition	220 crowns are needed
147 have pyorrhea	281 need bridgework	117 have pyorrhea	229 need bridgework
28 have Vincent infection	56 need partial upper dentures	86 have Vincent infection	80 need partial upper dentures
623 need prophylactic care	59 need full upper dentures	813 need prophylactic care	31 need full upper dentures
126 have bridgework	91 need partial lower dentures	80 have bridgework	74 need partial lower dentures
80 have partial upper dentures	45 need full lower dentures	60 have partial upper dentures	6 need full lower dentures
35 have full upper dentures		none have full upper dentures	

TABLE 5  
Indicated actual needs for dental services

<i>Average Farmer</i>		<i>Average Housemaid</i>	
Based on 713 reports		Based on 131 reports	
Age, 39.7 years		Age, 33.1 years	
Visits dentist every 25.0 months		Visits dentist every 21 months	
Has lost 6.76 teeth		Has lost 7.5 teeth	
Needs	4.19 teeth, extracted	Needs	3.2 teeth, extracted
Has	0.94 teeth, replaced	Has	2.3 teeth, replaced
Needs	4.8 teeth, replaced	Needs	4.2 teeth, replaced
Has	5.03 teeth, filled	Has	4.7 teeth, filled
Has	3.3 cavities	Has	3.9 cavities
<i>In each 1000 of this population group:</i>		<i>In each 1000 of this population group:</i>	
377 have good general health	16 have partial lower dentures	320 have good general health	30 have partial lower dentures
235 have good oral health	13 have full lower dentures	218 have good oral health	7 have full lower dentures
259 have good gum condition	320 crowns are needed	237 have good gum condition	480 crowns are needed
227 have pyorrhea	325 need bridgework	206 have pyorrhea	366 need bridgework
40 have Vincent infection	75 need partial upper dentures	38 have Vincent infection	99 need partial upper dentures
718 need prophylactic care	276 need full upper dentures	648 need prophylactic care	98 need full upper dentures
57 have bridgework	88 need partial lower dentures	99 have bridgework	106 need partial lower dentures
15 have partial upper dentures	245 need full lower dentures	30 have partial upper dentures	206 need full lower dentures
36 have full upper dentures		45 have full upper dentures	

TABLE 6

*Indicated actual needs for dental services*

<p><i>Average Housewife</i> Based on 1,125 reports Age, 38 years</p>		<p><i>Average Trade and Factory Worker</i> Based on 683 reports Age, 35.9 years</p>	
<p>Visits dentist every 21 months</p>		<p>Visits dentist every 25.8 months</p>	
<p>Has lost 6.5 teeth</p>		<p>Has lost 6.2 teeth</p>	
<p>Needs 3.09 teeth, extracted</p>		<p>Needs 5.09 teeth, extracted</p>	
<p>Has 1.6 teeth, replaced</p>		<p>Has 1.04 teeth, replaced</p>	
<p>Needs 4.2 teeth, replaced</p>		<p>Needs 4.4 teeth, replaced</p>	
<p>Has 6.3 teeth, filled</p>		<p>Has 4.2 teeth, filled</p>	
<p>Has 2.8 cavities</p>		<p>Has 3.9 cavities</p>	
<p><i>In each 1000 of this population group:</i></p>			
386 have good general health	32 have partial lower dentures	383 have good general health	16 have partial lower dentures
241 have good oral health	15 have full lower dentures	197 have good oral health	11 have full lower dentures
296 have good gum condition	280 crowns are needed	212 have good gum condition	430 crowns are needed
242 have pyorrhea	320 need bridgework	291 have pyorrhea	317 need bridgework
20 have Vincent infection	82 need partial upper dentures	91 have Vincent infection	74 need partial upper dentures
712 need prophylactic care	196 need full upper dentures	724 need prophylactic care	276 need full upper dentures
176 have bridgework	128 need partial lower dentures	83 have bridgework	92 need partial lower dentures
48 have partial upper dentures	158 need full lower dentures	19 have partial upper dentures	224 need full lower dentures
45 have full upper dentures		21 have full upper dentures	

TABLE 7  
Indicated actual needs for dental services

<i>Average Urban Adult</i> Based on 1,158 reports Age, 37.8 years Visits dentist every 21.6 months Has lost 4.8 teeth		<i>Average Rural Adult</i> Based on 4,194 reports Age, 36.3 years Visits dentist every 20.2 months Has lost 5.7 teeth	
Needs	1.9 teeth, extracted	Needs	3.4 teeth, extracted
Has	1.7 teeth, replaced	Has	1.3 teeth, replaced
Needs	2.5 teeth, replaced	Needs	3.8 teeth, replaced
Has	6.7 teeth, filled	Has	5.6 teeth, filled
Has	3.6 cavities	Has	3.1 cavities
<i>In each 1000 of this population group:</i>		<i>In each 1000 of this population group:</i>	
448 have good general health	38 have partial lower dentures	435 have good general health	24 have partial lower dentures
234 have good oral health	6 have full lower dentures	295 have good oral health	16 have full lower dentures
266 have good gum condition	410 crowns are needed	298 have good gum condition	280 crowns are needed
253 have pyorrhea	296 need bridgework	236 have pyorrhea	324 need bridgework
35 have Vincent infection	85 need partial upper dentures	45 have Vincent infection	71 need partial upper dentures
784 need prophylactic care	113 need full upper dentures	715 need prophylactic care	196 need full upper dentures
233 have bridgework	102 need partial lower dentures	126 have bridgework	98 need partial lower dentures
52 have partial upper dentures	78 need full lower dentures	27 have partial upper dentures	166 need full lower dentures
38 have full upper dentures		42 have full upper dentures	



brought out, and instructed in the applications. (B) The public must be informed of means for prevention.

(11) *Is not the public already informed of preventive measures as we know them today?* Our present methods of public dental education do not seem to be effective. They all stress regular and frequent visits, but results are shown by the following data for average time, *in months*,

TABLE 8

*Indicated actual needs for dental services*

*Average Unclassified Person*

Based on 696 reports

Age, 36.4 years

Visits dentist every 22.5 months

Has lost 5.62 teeth

Needs 3.77 teeth, extracted

Has 1.5 teeth, replaced

Needs 3.5 teeth, replaced

Has 4.9 teeth, filled

Has 3.6 cavities

*In each 1000 of this population group:*

409 have good general health	25 have partial lower dentures
272 have good oral health	33 have full lower dentures
278 have good gum condition	330 crowns are needed
247 have pyorrhea	268 need bridgework
33 have Vincent infection	90 need partial upper dentures
709 need prophylactic care	178 need full upper dentures
129 have bridgework	99 need partial lower dentures
22 have partial upper dentures	160 need full lower dentures
54 have full upper dentures	

that has elapsed "since the last visit" (by the average person, in various population groups):

Professional person . . . . .	12.1	Housemaid . . . . .	21.0
White-collar person . . . . .	16.6	Farmer . . . . .	25.0
Merchant . . . . .	19.5	Trade and factory worker . .	25.8
College student . . . . .	20.2	Rural adult . . . . .	20.2
Housewife . . . . .	21.0	Urban adult . . . . .	21.6

(12) *How can we account for this apparent indifference?* Apparently the dental profession has not made a convincing presentation. Perhaps we depended upon the automobile salesman to indicate to the prospective buyer the importance of good health as necessary for the enjoyment of the automobile. The following summary (Woodyard's

TABLE 9  
Average time required for dental services; in minutes

		NO. REPORT- ING	CHAIR		LABORATORY		TOTAL
			Range	Ave.	Range	Ave.	Ave.
Examination of oral cavity		8		25			25
Radiographs	Single	6	3-30	12	10-60	27	39
	Full set	6	15-45	28	20-60	37	65
Prophylaxis	(Children) 20 min.	8	40-60	52			52
Extractions	Simple	8	10-30	18			18
	Difficult	8	30-90	50			50
	Average	8	15-45	27			27
Anesthesia	Local	9	5-10	9			9
	Conductive	9	10-30	17			17
	General	6	5-60	27			27
Amalgam fillings	One surface	8	15-40	25			25
	Two surfaces	8	25-60	49			49
	More than two sur- faces	8	35-90	77			77
Gold fillings	Anterior teeth	7	40-90	62			62
	Posterior "	5	60-120	81			81
Gold inlays	Anterior "	8	30-105	59		51	110
	Bicuspid "	8	30-105	62		51	113
	Molar "	8	30-120	73		51	124
Silicate fillings	Anterior "	8	25-45	40			40
	Posterior "	3	40-60	50			50
Root-canal treat. (ave. total)	Single-rooted "	6	10-180	80			80
	Multi-rooted "	6	20-300	140			140
Crowns (porcelain)	Anterior "	8	60-170	100	20-180	115	225
	Bicuspid "	7	60-170	102	20-180	100	202
	Molar "	5	60-180	95	60-180	144	239
Crowns (gold)	Anterior "	5	45-90	69	30-60	42	111
	Bicuspid "	8	45-135	82	30-70	45	127
	Molar "	8	45-135	103	25-70	47	150
Bridgework (fixed)	Abutments	8	60-180	105	20-120	59	164
	Pontics	7	20-30	25	30-180	85	110
Bridgework (removable)		8	20-245	101	0-300	200	301
Dentures (vulcanite)	Partial	7	30-180	95	100-720	277	372
	Full (single)	7	50-180	107	120-720	290	397
	Full (upper and lower)	8	60-240	166	180-1560	480	646
Repairs (average)	Crowns	6	30-60	38	15-45	30	68
	Bridges	5	40-60	49	30-60	50	99
	Dentures	8	20-45	31	30-360	240	271
Space maintainers				60		120	180

modification of the Lynd chart), showing *expenditures in billions of dollars*, suggests that the automobile salesman sold the machine, collected the money—and the dentist and the newspaper publisher “split” what was left:

Food.....	17.0	Indoor and outdoor sports,	
Clothing.....	8.0	games.....	0.9
Rent on homes.....	8.0	Religion.....	0.9
Automobile (purchase and		Cosmetics, beauty parlors....	0.7
use).....	6.5	Medicine (patent and pre-	
Taxes, local, state and Federal.	6.4	scription).....	0.7
Fuel and light.....	4.8	Jewelry and silverware.....	0.6
Home furnishings.....	4.0	Radio and musical instru-	
Life insurance.....	3.5	ments.....	0.6
Motion pictures, concerts, etc..	2.0	Clubs, lodges, etc.....	0.4
Travel (recreation other than		<i>Dentists</i> .....	0.4
automobile).....	2.0	<i>Newspapers</i> .....	0.4
Tobacco.....	1.6	Flowers (from florists).....	0.2
Laundry, cleaning and dyeing.	1.5	Other medical costs, exclud-	
<i>Physicians</i> .....	1.0	ing hospitals and public-	
		health work.....	0.2

These conditions indicate that the education of the public, to a better appreciation of our services, is a major problem. We must find a way to write dental-health services more nearly at the top of the list in the schedule for a more abundant life. But, through an enlarged program of dental research, we must first find further ways and means to combat dental disease.

(13) *Should all of this be the concern of the government?* Yes, indeed! Every government should be interested in the health of its citizens. It does not follow, however, that the services should be rendered by the government. Its chief interest, and its main effort, must be prevention.

(14) *Can a “preventive” program be conducted without a “repair” program?* Our present knowledge on “caries” indicates that the answer to this question is No.

(15) *How then shall we proceed?* Through coöperation among all concerned, each meeting his responsibility in this matter.

(16) *Which individuals or groups have a responsibility?* (A) Pro-



TABLE 11

Estimated time required for needed dental services by various population groups

Total urban district: based on 1,158 reports; average age, 37.8 years

Life years registered: 43,197 years. Ave. time between office visits: 21.6 months

<i>Health</i>	<i>Oral</i>	<i>General</i>	<i>Gum condition</i>	<i>Ave. no. teeth per person</i>	<i>Filled</i>	<i>6.7</i>	<i>Percentage having:</i>	<i>Bridgework</i>	<i>23.3%</i>
Good	23.4%	44.8%	Good 26.6%	Lost	4.8		Partial upper	5.2%	
Fair	49.8%	43.8%	Fair 50.4%	Replaced	1.7		Full upper	3.8%	
Poor	26.7%	11.3%	Poor 22.9%	Not replaced	2.5		Partial lower	3.8%	
							Full lower	0.06%	

	Percentage or average need			Need per 1000	Average time, per unit service minutes	Time required; initial time minutes	Additional time in year minutes	Total yearly time, per 1000 minutes	Yearly time, per person minutes
	Male	Female	All						
Examination . . . . .			All	1000	25	25,000	25,000	50,000	50
Radiographic examination . . . . .			All	1000	65	65,000		65,000	65
Prophylaxis . . . . .	77.2%	79.5%	78.4%	784	52	40,768	40,768	81,536	81.5
Pyorrhea treatment . . . . .	26.5%	24.3%	25.3%	253	180	45,540	22,770	68,310	68.3
Vincent-infection treatment . . . . .	5.4%	2.8%	3.5%	35	180	6,300	3,150	9,450	9.5
Carious teeth per person . . . . .	3.2%	3.9	3.6	3600	50	180,000	50,000	230,000	230.0
Extractions indicated per person . . . . .	2.2	1.9	2.07	2070	27	55,890		55,890	55.8
Crowns per person . . . . .	.39	4.3	.41	410	176	72,160		72,160	72.1
Bridgework—persons needing . . . . .	28.8%	30.0%	29.6%	296	878	259,888		259,888	259.9
Partial upper—persons needing . . . . .	8.2%	9.1%	8.5%	85	372	31,620		31,620	31.6
Full upper—persons needing . . . . .	11.4%	11.3%	11.3%	113	397	44,861		44,861	44.9
Partial lower—persons needing . . . . .	10.3%	10.1%	10.2%	102	372	37,944		37,944	37.9
Full lower—persons needing . . . . .	8.9%	6.8%	7.8%	78	397	30,966		30,966	30.9
Total yearly minutes per person . . . . .									1037.4
Total yearly hours per person . . . . .									17.2

*profession.* (a) It must initiate, carry on, and supervise, all research on oral conditions. (b) Through the American Dental Association and its various divisions, the profession—for the sake of truthfulness, uniformity and control—should assume full supervision of any educational program.

(B) *Government.* (a) Its interest in the health of its citizens should induce wholehearted coöperation in all research, with liberal financial support. (b) Through the Dental Division of the U. S. Public Health Service, it should carry, to all persons, the dental health-message supplied by the American Dental Association.

(C) *Private practitioner.* (a) The dental office should be the source of all services, and should coöperate fully in all preventive programs. (b) Every practising dentist should do his proportionate share in caring for the needs of the indigent and semi-indigent.

(D) *Educational institutions.* As the agencies for imparting knowledge, these institutions should assume the responsibility of offering proper oral-health information, under the above guidance.

(E) *Publicity agencies.* The press and broadcasting stations should feel duty bound to carry proper health-messages to the public, as supplied by the profession.

(17) *In the light of our present knowledge of effective preventive measures, where can we now take hold to do the most good?* The preventive program must be started in the early life of the child, even before birth. Since education is often a slow process, our effort should be directed toward the children of this generation, in the expectation that this service would bear fruit in the generations to come.

These statements are submitted in the hope that they will make the reader more conscious of these problems, and arouse his will and desire for further study.

## EDITORIALS

### ST. LOUIS CONVOCATION<sup>1</sup>

Words are of real significance in the thoughts and actions of men. Many words are entitled to no small consideration, and also to care and discrimination in their use. Nouns frequently carry with them principles which, if adopted, may go a long way in determining the lot of him who uses them. Adjectives and especially adverbs, both of which modify words, should be used with even greater caution, for too often they point to views quite different from those that actually obtain. Then again, words may be used in different degrees—positive, comparative, or superlative. Here, too, care must be exercised. One should speak positively, but without offense. He must be careful in the use of the comparative, for comparisons often are odious. But, in the use of the superlative, the finest discrimination is required.

Thought on the recent convocation of the American College of Dentists, in St. Louis, causes one to weigh ideas carefully before committing any of them to "black and white." The sessions individually, and all of them as a group, were so significant and so effectively carried out that one can speak only in positive terms. But the very positiveness of these terms implies the comparative—it was better than any preceding convocation. This being so, we find ourselves immediately in the superlative—it was the best. This, however, is as it should be. Our membership is steadily increasing; our activities and interests are rapidly multiplying and enlarging; and, concomitantly, our responsibilities have become manifold. A few years ago, all our affairs could be conducted annually at a short session of the Regents and a dinner-meeting of the College. In 1933, morning and afternoon sessions were required by the Regents for the completion of this work. In 1934, we took a whole day, including

<sup>1</sup> See an abstract of the minutes: Brandhorst, *J. Am. Col. Den.*, 5, 220; 1938, Dec. (this issue).

the usual dinner-session, for the meeting of the College. Meanwhile the sessions of the Regents increased in number, through one or more days, until in 1938, at St. Louis, the Board was in session the equal of nearly three days. Nor does this include the mid-winter meeting of the Regents nor the several meetings of the Board of Censors.

Well, what is the use of the College and what does it accomplish? Looking back over the years, we find a small group of men who, taking the College pledge, labored together in words and thought to bring out the finer aspects of professionalism and of men constituting its personnel. As time went on, and as they added to their members, their idealism increased and manifested itself in expanding realistic action. The College has counseled, and financed to no small degree, a study of the national health problem. Through the Commission on Journalism, a detailed study of our periodical literature has been made, resulting in raising journalistic standards within the limits of financial possibility, and in the organization of the Association of American Dental Editors. Year by year, studies have increased until now the following standing committees are engaged in constructive work: Certification of Specialists, Education, Prosthetic Service, Research, Hospital Dental-service, Journalism, Legislation, Oral Surgery, Public Relations, and Socio-economics. Studies are being carried out by these committees, not as for other dental organizations, but rather in professional, ethical or social aspects. An old toast to "woman" states, among several deserved laudations, that she adds sweetness to our lives. So it is with the College and its studies: the College desires and aims to develop the finer aspects of the professional conditions studied—for the dentist who serves, and for the people who receive dentistry's ministrations. This is not an expression of egotism, nor of an ideal too far removed from the real. It is rather, realistic idealism, like the leaven added to dough to make a palatable product. All these standing committees—and also special committees—report both to the Regents and to the College. This takes time and labor; provides knowledge and entertainment; and means much in accomplishment for dentistry.

There were three outstanding features of this most recent convocation. The Committee on Dental Research, Dr. Albert L. Midgley, Chairman—the last to be created (Atlantic City, 1937)—



has made exceptional progress. The success of this Committee will mean much to all concerned, and go far in promoting intimate medicodental relationships. The ceremonial relating to the admissions to fellowship was further advanced and, under the direction of a committee of which Dr. C. W. Koch is chairman, was conducted with added decorum and great dignity. Fellowship was conferred upon an exceptionally large group of able and earnest colleagues.

The "1938 Convocation" will go down in our history as epoch making—the work of the College is better known, and more fellows are active. As President Rudolph stated in his "Greetings" on the first page of the printed program: "There are no entanglements of any kind in this organization to obstruct free thought and action, for each one of us has reached the highest honor in the organization when he has had fellowship conferred. May this unique position give us the zest and determination to lend our unselfish and wholehearted aid to the end that dentistry shall not only hold its present position in the social fabric of this country, but shall stride forward in its service to mankind."—J. E. G.

[The next convocation will be held in Milwaukee, Wis., on July 16, 1939. Active preparations are in progress. Committees for the current year are listed on cover page iii of this issue.—*Ed.*]

#### OUR PRESIDENT

We enter a new year under the leadership of Dr. Arthur H. Merritt, of New York City. At St. Louis a unique situation developed—another office sought a man. A President-elect of the American Dental Association was to be selected, and Dr. Merritt was asked to accept the post. What an exceptional honor to occupy simultaneously both of these high positions—President of the American College of Dentists, and President-elect of the American Dental Association! But what an honor to the positions to have a professional gentleman like Dr. Merritt to occupy them! The years 1939 and 1940—centennial years in the history of dentistry—will be great years for our profession. It is our duty, and it will be our pleasure, to hold up the hands of this man. He did not seek nor want either office—we sought him and placed the burden on him. We salute Dr. Merritt, and proffer whatever help we may give.—J. E. G.

## DENTISTRY AND GENERAL SCIENCE

Dentistry was well represented at the successful annual winter meeting of the American Association for the Advancement of Science during the last week in December, at Richmond, Va., where, on December 28, the Subsection on Dentistry held an all-day symposium on the cause and control of dental caries. The attendance at each of the dental sessions was approximately 100 members and guests, consisting of groups from Baltimore, Boston, Chicago, New York, Philadelphia, Petersburg (Va.), Pittsburgh, Richmond, Washington, and of individual members or guests from such widely separated places as Beloit, Wis., East Lansing, Mich., Gadsden, Ala., Lancaster, Pa., and Rochester, N. Y. The dental members of the Association were the guests of the Richmond Dental Society at a delightful informal dinner, at the Hotel Richmond, during the interval between the afternoon and evening sessions of the dental section; and also were free to attend, throughout the week, all of the sessions of each section and sub-section of the A.A.A.S. and of the many affiliated or associated societies that met with the Association. The plans for the dental meeting were in charge of Secretary Thomas J. Hill of the Subsection on Dentistry, aided by the Committee on Local Arrangements: Dean Harry Bear, chairman; and Drs. Harry Lyons and J. Frank Hall. An outline of the sessions of the Sub-section on Dentistry, all of which were held in the W. H. Taylor Room, Clinic Building, Medical College of Virginia, follows:

(1) *Morning session* (9-12:40): Chairman, William J. Gies, representing the International Association for Dental Research. *Papers presented:* by J. J. Reed, Beloit (Wis.); R. H. Brodsky, New York City; Mrs. A. de P. Bowes, Philadelphia; P. E. Boyle, Boston; Meyer Klatsky, New York City; G. J. Cox, Pittsburgh; L. M. Waugh, New York City; W. A. Cotton, New York City. The scientific session was followed by an informal group-luncheon at the Hotel Rueger, which was concluded by brief executive proceedings.

(2) *Afternoon session* (2:00-6:00): Chairman, Harry Bear, representing the American Association of Dental Schools. *Papers presented:* by J. R. Blayney, Chicago; E. H. Hatton, Chicago; T. J. Hill, Cleveland; Alfred Walker, New York City; Henry Klein, Washington; H. R. Hunt, East

Lansing (Mich.); Mary M. Moore, Philadelphia; J. A. Salzmann, New York City; F. S. McKay, New York City. The scientific session was followed by brief executive proceedings, which included the selection of Paul C. Kitchin to be Secretary, and Chairman of the Executive Committee, of the Subsection on Dentistry; and of his associates in this Committee, Thomas J. Hill and J. L. T. Appleton. [Followed by the dinner of the Richmond Dental Society, at the Hotel Richmond, as stated above.]

(3) *Evening session* (8:15-10:45): Chairman, Daniel F. Lynch, representing the Research Commission of the American Dental Association. *Papers presented:* by J. C. Forbes, Richmond; H. C. Trimble, Boston; C. L. Gunn, Gadsden (Ala.); L. S. Fosdick, Chicago; H. T. Dean, Washington; H. C. Hodge, Rochester (N. Y.); C. C. Vogt, Lancaster (Pa.). At the concluding executive session a hearty expression of appreciation of the hospitality enjoyed by all in attendance was extended, by a rising vote, to Dean Bear and his associates of the Dental Faculty, and to the President, of the Medical College of Virginia; and to the members of the Richmond Dental Society.

Abstracts of the presentations will be published, in a report by Secretary Hill, in the next issue of this *Journal*. The Executive Committee of the Sub-section on Dentistry presented, to the Council of the A.A.A.S., the following nominations of *dental members of the Association* for Fellowship in the A.A.A.S., all of whom were elected:

*Harry Bear*, Richmond, Va. *B. G. Bibby*, Rochester, N. Y. *O. W. Brandhorst*, St. Louis, Mo. *B. H. Broadbent*, Cleveland, Ohio. *A. W. Bryan*, Iowa City, Iowa. *Carrie K. Bryant*, Philadelphia, Pa. *M. W. Carr*, New York, N. Y. *E. D. Coolidge*, Chicago, Ill. *L. I. Grossman*, Philadelphia, Pa. *H. L. Hansen*, Chicago, Ill. *Philip Jay*, Ann Arbor, Mich. *P. C. Kitchin*, Columbus, Ohio. *A. H. Merritt*, New York, N. Y. *L. M. S. Miner*, Boston, Mass. *F. B. Noyes*, Chicago, Ill. *L. M. Waugh*, New York, N. Y.

We are happy to call attention to the growing importance of the relationship between the dental profession and the American Association for the Advancement of Science. The ensuing opportunity of dentists to participate effectively in the activities of this national organization of men of science, and to coöperate in the promotion of public support for all phases of scientific effort and progress, prompts

us to indicate below the steps that have already been taken in a development that should gain steadily in significance for dentistry:

Since 1932, dentistry has been well represented, in special scientific sessions, at the annual winter meetings of the American Association for the Advancement of Science. In 1932, 1933, and 1934, the dental programs were conducted by the American College of Dentists, with the coöperation of members of the International Association for Dental Research, of the American Dental Association, and of the American Association of Dental Schools. In 1931 and 1932, the A.C.D., A.A.D.S. and A.D.A. were admitted, in this sequence, to the "associate" relationship with the A.A.A.S. In April, 1935, the A.A.A.S. admitted the American Division of the I.A.D.R. to the *affiliate* relationship; gave this dental *affiliate* a representative in the Council; and created in Section N (Medical Sciences) the *Subsection on Dentistry*, to consist of the official representatives of the said four dental organizations and all other dental members of the A.A.A.S. A record of the seven consecutive annual meetings and of the publication of their proceedings follows: (I) Three meetings *under the leadership of the A.C.D.*: (1) Atlantic City, N. J., Dec. 30, 1932: *J. Den. Res.*, 1933, 13, 135-172. (2) Boston, Mass., Dec. 29, 1933: *J. Am. Col. Den.*, 1934, 1, 44-62. (3) Pittsburgh, Pa., Dec. 29, 1934: *J. Am. Col. Den.*, 1935, 2, 106-120. (II) Meetings of the *Subsection on Dentistry*: (4) fourth successive annual dental meeting, and *the first of the Subsection*; St. Louis, Mo., Jan. 4, 1936: *J. Am. Col. Den.*, 1936, 3, 79-95. (5) Atlantic City, N. J., Dec. 28, 1936: *J. Am. Den. Assoc. and D. Cos.*, 1937, 24, 1130-38. (6) Indianapolis, Ind., Dec. 27, 1937: *J. Am. Col. Den.*, 1938, 5, 73-77. (7) Richmond, Va., Dec. 28, 1938.

*Fellows of the American College of Dentists are eligible for election to membership in the American Association for the Advancement of Science.* All who are interested in becoming members of the Association, but who have not yet indicated that desire, are requested to communicate with any member of the following special Committee (of the American College of Dentists, for 1938-39) on Relationship with the American Association for the Advancement of Science: William J. Gies, Chairman; Thomas J. Hill, Cleveland; G. D. Timmons, Indianapolis; H. E. Kelsey, Baltimore; H. J. Burkhart, Rochester (N. Y.). This Committee will probably suggest to the Executive Committee of the Subsection on Dentistry that, at the next winter meeting of the Association, to be held in Columbus, Ohio, next December, the dental pro-

gram be devoted chiefly—as another step forward—to a symposium on a subject of intimate interest to both physicians and dentists, at joint sessions of the two groups.

#### HIGHER STANDARDS FOR DENTAL GRADUATE-EDUCATION

About a year ago a member of the College raised the question whether, by giving “courses of instruction in dentistry” in his private dental office, he had automatically forfeited his membership in accordance with the following provision in Article II of the constitution of the College (*J. Am. Col. Den.*, 5, 6; 1938, Mar.–June):

“*Section 5: Forfeiture of membership.* Sub-section A. Membership in the College shall be automatically forfeited by members who

[Clause] (a) give courses of instruction in dentistry under any auspices other than those of a dental society, dental school, or other recognized professional or educational agency; or . . .”

After due consideration the Regents, recognizing the ambiguous quality of the phrase, “under any auspices other than,” and aiming to protect all personal rights of membership, concluded that the appellant member had not forfeited his membership. It was held that the said “courses of instruction in dentistry” to which he alluded were given by the dentist himself in his private office, and not under “auspices” in the sense in which that word was obviously used in the constitution. The Regents also concluded, however, that, when the provision quoted above was originally adopted, the College failed to indicate exactly its evident intention. Accordingly, the following addition to the pledge of membership was voted as a step toward rectification of this omission (*J. Am. Col. Den.*, 5, 69; 1938, Mar.–June):

“*Membership pledge:* Changes in membership pledge made to include assertions that member-elect . . . (b) will be ready at all times to give freely to dental colleagues, privately or publicly, benefit of any knowledge of, or experience in, dentistry he may have that would be useful to them; but will give courses of instruction in dentistry, *for remuneration, only as an appointed teacher* serving under auspices of a dental school, dental society, hospital, or other accredited professional or educational agency.”

At the meeting of the Regents on February 13, 1938, at which the foregoing decisions were voted, the Committee on By-laws was in-

structed to prepare related provisions for early consideration. At the convocation in St. Louis the Committee recommended the following amendments (*J. Am. Col. Den.*, 5, 222; 1938, Dec.; this issue):

“(a) *Proposed amendment of the By-laws: To amend ‘Section A: Members,’ by adding a new sub-section: 5. Interpretation of a constitutional provision.* Article II (membership), Section 5 (forfeiture of membership), Sub-section A, *Clause (a)*—which provides for automatic forfeiture of membership by any member who would give a ‘course of instruction in dentistry under any auspices other than’ those there specified—is hereby interpreted to mean that, in accord with the designated and implied obligations of membership in the College for the attainment of the stated objectives of the College, each member will be fraternally ready at all times to give to dental colleagues, privately or publicly, the benefit of any knowledge of, or experience in, dental practice he may have that would be useful to them; but will give ‘courses of instruction in dentistry,’ *for remuneration, only as an appointed teacher serving publicly* under the auspices of a dental school, dental society, hospital, or other accredited professional or educational agency.

“(b) *Proposed amendment of the Constitution: To amend Clause (a), specified above, and in accord with the proposed by-law, to read by substitution as follows:*

[Clause] (a) give courses of instruction in dentistry, *for remuneration, under any conditions other than those of an appointed teacher serving publicly under the auspices of a dental school, dental society, hospital, or other accredited professional or educational agency.*”

After unanimous approval by the Board of Regents, these proposed amendments were formally presented as such at the morning session of the College on October 23, 1938. At the afternoon session, the by-law was adopted without dissent and is now in effect. The proposed amendment of the constitution was automatically laid on the table, as a prescribed constitutional procedure, until “the succeeding annual meeting.”

To recapitulate: When a member appealed for an indication of his status, under an ambiguous constitutional provision, the member's personal rights were protected by a decision that also recognized the need for a more precise statement of the position of the College on *irresponsibility and commercialism in dental graduate-education*. The pledge of membership was changed, an interpretative by-law adopted,

and a constitutional amendment proposed, to achieve this important purpose. It is now the judgment of the College, in accord with the College's long-standing aim to promote graduate work, that courses of instruction in dentistry, *for remuneration*, should *not* be given "under any conditions other than those of an appointed teacher serving *publicly* under the auspices of a dental school, dental society, hospital, or other accredited *professional or educational agency*." Shall the proposed amendment of the constitution, making this principle a basic consideration for membership in the College, be adopted at the convocation in Milwaukee next July? Each member of the College will be given an opportunity to cast a ballot on this important question.

#### DENTISTRY A PRIVILEGE, NOT A BUSINESS

The recent indictment of the American Medical Association, on a charge of violating the Sherman Anti-trust Act (p. 302), appears to be predicated on the conclusion that the practice of a health-service profession is "trade." A few weeks earlier, however, the New Jersey Supreme Court ruled, in a different relation, that such practice is "*not a business but a privilege*." The following editorial on this subject, in the *New York Sun*, on October 22, 1938, presents a layman's discussion of this decision that is both interesting and informative:

"The Supreme Court of New Jersey has upheld in a test case the constitutionality of a statute enacted by the Legislature prohibiting dentists from advertising prices and the character of their services. Its decision is interesting in that it gives emphasis to judicial interpretations of differences between business and privileges. Dentistry, it says in effect, is not a business in which any one may engage but is a privilege, the exercise whereof is properly subject to regulation by the State.

"The State Board of Registration and Examination in Dentistry suspended a certain dentist's license for thirty days on the ground he had violated the statute in question. It was argued on his behalf that the law deprived the practitioner of constitutional rights and vested the board with an improper exercise of the State's police power. In overruling this contention the Supreme Court says: 'The practice of dentistry is not a business but a privilege, and the practice thereof is subject to State regulation in the interest of the public. . . . It is not necessary for it [the board] to investi-

gate the truth or falsity of the advertisements adduced, since they admittedly offend against the legislative concept of proper dental practice. It is clear that the Legislature . . . was enacting a law necessary to protect the public from the wiles and artifices of charlatans.<sup>7</sup>

"This appears to mean that in New Jersey an honorable dentist, however fair his prices, however ethical and skillful his practice, may not advertise those prices or the nature of that practice because any law permitting him so to do would also enable quacks to advertise prices that might be obtained through unethical or unskillful practice. If this seems hard on the honorable dentist, the law suggests that there may be compensation even for him, in that this arrangement protects his patients, actual or putative, from exploitation by charlatans.

"The central argument here is that in return for certain privileges given to dentists in the practice of their profession, dentists must give up certain rights they could clearly claim if engaged in ordinary business. Protection of the public health falls within the police power of the State. The State may, and does, prohibit injurious medical practices. The notion that this power of prohibition extends to the regulation of medical advertising regarding practice otherwise legitimate may to laymen seem a bit far-fetched. Not so to the New Jersey Supreme Court. It holds that the Legislature is fully authorized to make that extension. In the determination of details of a policy the Legislature is not required to be wise; it is required only to have the power to make such determination."

#### OPEN DISCUSSION OF JOURNALS CONTROLLED BY DENTAL SOCIETIES

In an editorial on the above subject in our last previous issue (p. 172), we stated that, "to avoid the possible appearance of endeavoring to anticipate conclusions" in the prospective report of the Survey Committee of the American Association of Dental Editors, our further discussion would be postponed and "conducted in the light of the findings in that report." At the annual meeting of the Association in St. Louis, on October 22, 1938, the Survey Committee presented a voluminous report, which was so well received that the Association, besides commending the scope and quality of the study, instructed the Committee to continue the work—"not only to obtain additional information, but mainly to study the full import of the findings" reported—and to present further data and recommendations at the general meeting next July. Meanwhile the complete report will be published by the Association. The continuance of the work of this



Committee induces us again to postpone our prospective further "open discussion of journals controlled by dental societies."

We congratulate the American Association of Dental Editors on the cumulative success of its annual meetings. On January 18, 1932, the Association's first general meeting—a single short session held in Chicago—was attended by 13 in a total of 49 members, representing 48 *non-proprietary* journals.<sup>1</sup> At the general meeting on October 22, 1938—less than seven years later—the attendance at three sessions ranged from 45 to nearly 100, in a total personal membership of 233 editors representing 86 *non-proprietary* publications. The Association was established "for the purpose of engaging broadly in all those activities that will tend to promote, directly or indirectly, the advancement of all phases of *non-proprietary* dental journalism and dental literature." This enthusiastic meeting indicated that the original purpose has not been weakened, and that the Association's activities are being directed with increasing success to the attainment of this professional objective. The officers for 1938-39 are: *President*, Thomas F. McBride, D.D.S., F.A.C.D., Pittsburgh, Pa.; *Vice-president*, Harold J. Noyes, Ph.B., B.S., D.D.S., M.D., F.A.C.D., Chicago, Ill.; *Secretary*, Otto W. Brandhorst, D.D.S., F.A.C.D., St. Louis, Mo.; *Editor*, Grace R. Spalding, D.D.S., F.A.A.P., Birmingham, Mich. Dr. Walter Hyde, President of the Association in 1937-38, and Dr. McBride, President in 1938-39, have been elected contributing editors of this *Journal*, for five-year terms beginning in October, 1938. Past-president Hyde, President McBride, and Vice-president Noyes, have been made members of the A.C.D. Commission on Journalism.

#### EDITORIAL VALEDICTORY

With this issue the present writer discontinues his editorship of this *Journal*. He does so with very deep personal regret, but in full accord with a conviction that the editorial leadership of a journal that represents a growing professional society, containing many men of eminent editorial ability, should be changed, at stated intervals, to keep the journal fully responsive to that organization's development. The first volume of this *Journal* was published in 1934. The writer served

<sup>1</sup>O'Rourke: *J. Den. Res.*, 12, 223; 1932, Apr.

as "executive officer" of the Board of Editors of the first three quarterly issues preceding the St. Paul convocation in August of that year. Secretary Midgley's abstract of the minutes of the sessions of the Regents at that meeting contains this comment (*J. Am. Col. Den.*, 1, 121 and 122; 1934, Oct.):

"(7) Voted that, at suggestion of executive officer of board of editors of *Journal*, officers of Editor, Associate Editor, and Assistant Editor be created, no person to serve more than five years in any one position. . . . (24) Elections to active editorship of *J. Am. Col. Den.*, pursuant to previous action: *Editor*, William J. Gies; *Associate Editor*, John E. Gurley; *Assistant Editor*, Otto W. Brandhorst."

Although the present writer did not become "editor" until August, 1934, he was "editor" *in fact*—as "executive officer of the board of editors"—from January to August, 1934. Secretary Brandhorst's abstract of the minutes of the sessions of the Regents at the St. Louis convocation (1938) contain this note (*J. Am. Col. Den.*, 5, 221; 1938, Dec.; this issue):

"(26) Editor having called attention to precedent established, at his suggestion at St. Paul convocation, whereby no one will serve in same position on editorial staff of *J.A.C.D.* for more than five years—and to fact that his term, in harmony with *spirit* of that action, will expire in December—elections to active editorial staff followed: *Editor*, J. E. Gurley; *Associate Editor*, O. W. Brandhorst; *Assistant Editor*, W. J. Gies."

The present writer appreciates the opportunity to cooperate, in a formal assistantship, with the new Editor. Dr. Gurley will bring to his service extended editorial experience, outstanding devotion to the College, exceptional fidelity to the ideals of dentistry, and hearty accord with the best aspirations of the dental profession. We are confident that, under his leadership, this *Journal* will grow steadily in value to the College and in usefulness to dentistry.

#### NOTES

##### CORRESPONDENCE BETWEEN DENTIST AND UNIVERSITY PRESIDENT

Below we present copies of recent private correspondence that reveals an intellectual influence, by a dental practitioner, which a

university president has indicated and which we believe our readers will be glad to note. We have seen the original correspondence but, in order to present it impersonally, have deleted all identifications from the following copies:

(A) *Dentist to University President*

"I hope you will not think me presumptuous, but I do find it impossible to constrain myself in the desire to send you a little note of appreciation. I have just read the current issue of . . . and wish to express my appreciation of the address of . . ., but more particularly, of your own, presented at the . . . banquet. It may be quite an easy matter for one to express appreciation to another, particularly when their thoughts are in such complete agreement; and yet I am trying to say to you, even in spite of that, just how much I appreciate your good offices in your position.

"As one goes in and out among men he finds them desperately in need of understanding what life is and how to live it. I am reading a little book, 'Men of Power' by Fred Eastman, Professor of Biography, Literature and Drama at Chicago Theological Seminary, in which he has taken different men through history and presented a brief biographical sketch. Among them he has included Charles Dickens. He makes a brief statement in comparison concerning a number of our literateurs, finally referring to Byron, who uttered a 'wail of despair over a worthless world;' then concerning Dickens, who says 'the world is not worthless. Life is pleasant, challenging, something to be enjoyed, not endured.' How truly it seems to me Dickens did live out just that principle, and how much more perhaps we need to bring it to people today in the complexities of modern life. Yet all who enjoy life must also be prepared to take a few jolts in the region of the solar plexus. Dickens did that too.

"The years through which we have just gone have seen great development—as I like to put it—within the inanimate sciences. Man can make almost anything that is to be made, with the result that he has become exultant in his own power. Now, we are coming into a similar era in the development of the life sciences and unless we get a proper vision and perspective, it will be difficult. This, the universities, to no small degree, must provide.

"I wonder, too, if our educational scheme must not in some way be broader than in the past. What I mean briefly is this: a man completing his education in my own profession [dentistry] needs to be so trained fundamentally that he might accomplish more, if need be, than solely the practice of dentistry. I would hate to feel that the study of dentistry fitted me for

its practice exclusively. Now any other line of education might exclude one from practising dentistry, but a man educated in dentistry ought to be able, should necessity arise, to make his living by other means, and that training which he had should be of no small value in its accomplishment. The ideas which you have suggested in this more recent address, and which I have heard you suggest before, answer this very thought if students would comprehend.

"I have said on numerous occasions that the one attribute in which we are most lacking is that of appreciation. Appreciation to me is close kin to vision, with which a man sees a thing to be done, and for the accomplishment of which he can find a way.

"Well, I did not intend to go into a lengthy dissertation, but merely to express to you my appreciation of you personally and of your labors in your high office. Will you please accept my compliments and very best wishes."

(B) *University President to Dentist*

"Your letter of . . . pleased me greatly, not only because of the kind things you had to say about my remarks at the . . . banquet, but also because of what you had to say about education and life. Somehow, it made me feel good to find a graduate of a professional college with such a broad philosophy and such facility in its expression. I shall hope some day to talk to you more about these things."

PLANS FOR GENERAL EXTENSION OF HEALTH SERVICE: ILLUSTRATIVE  
QUOTATIONS OF RESPONSIBLE LAY OPINION

(A) "*The A.M.A. on trial.* At long last the times have caught up with the American Medical Association. Last week's indictment of it, together with the Medical Society of the District of Columbia, the Washington Academy of Surgery, and twenty-one physicians of Chicago and Washington, by a District of Columbia grand jury on the charge of violating the Sherman Anti-Trust Act marks the end of an era. For years the medical profession, as represented by the A.M.A., has been above the law. It has assumed that it had the right to decide for itself not only matters directly affecting medical care but [also] the economic arrangements under which such care is given.

"That these arrangements, however satisfactory they may be to physicians, do not provide adequate medical service to the American people has become increasingly evident. The recent National Health Survey showed that one-fourth of the 8,000,000 cases of illness which are disabling for a week or longer each year receive no care from a physician. Among

families on relief 30 percent of cases of this character are untended. For families with incomes of less than \$1,000, the proportion is 28 percent. Cases of illness, disabling for a week or more, in families with incomes of over \$3,000 receive, on the average, 46 percent more medical attention than similar cases in families on relief.

"When several doctors in Washington, D. C., agreed a year ago to provide full medical care to a group of government employees, on a prepayment plan, such care to be based on health requirements rather than income, the Medical Society of the District instituted a virtual boycott against these doctors. In the past it would have doubtless succeeded, as other A.M.A. branches have succeeded in ruining many enlightened physicians. But in this case the employees of a government agency were involved, and the Department of Justice has taken the position that the A.M.A., when it enters the economic field, is no more sacred than any other organization of profit-makers. If a combination of steel-makers for the restraint of trade is against the interest of society, what about a combination of physicians which threatens the health of the community?

"Signs that the times are catching up with the A.M.A. may be found within the organization as well as without. The first important break within the ranks occurred in mid-December when the California Medical Association approved a plan for prepaid medical care on a voluntary insurance basis. The plan is similar, except in minor detail, to the Washington plan: California residents will be able to have full medical, surgical, and hospital services for approximately \$2.50 a month for each person. Some type of voluntary prepaid medical service is expected to be offered in New York State within the next few months, probably as a supplement to the present 3-cents-a-day hospital insurance.

"All these moves are hopeful ones. None of them, however, meet the fundamental problem. Few, if any, families whose incomes are less than \$1,100 a year—half the total number of American families—will be attracted by a voluntary plan necessitating payments of \$10 to \$36 a year per person. Yet this is the group which the National Health Survey shows to be sick the most frequently and to have the least medical care. Their needs can be met only by compulsory health insurance or the development of a system of state medicine. Toward either plan the A.M.A. remains unalterably opposed. Doubtless it will continue its opposition as long as the small clique headed by Dr. Fishbein dominates A.M.A. policies. But conviction of Fishbein and his associates by the courts should put an end to their influence, and the government's action must add fuel to the revolt against the A.M.A. politicians already under way within the medical profession."—Editorial, *New Republic*, 1938, Dec. 31, p. 4.

(B) *"You boys better get together. Doctors debate.* At last we've seen a report of an argument between doctors over socialized, collectivized or what-you-call-it medicine which made sense to us as laymen; a debate in which the debating doctors left the \$2 words lay and talked plain English. The event took place one night last week at a meeting of the Bronx County Medical Society. The speakers were Dr. Charles Gordon Heyd, past president of the American Medical Association, and Dr. Kingsley Roberts, medical director of the Bureau of Co-operative Medicine. Dr. Heyd upheld the so-called medical indemnity insurance plan for spreading medical service around more satisfactorily. This plan is approved by the A.M.A., and the New York State Medical Society hopes the 1939 legislature will O.K. it for New York State. Dr. Roberts spoke for what is called group medical practice—a type of service which the A.M.A. has just been charged with illegally obstructing, in an antitrust indictment procured in Washington by the Federal Government. *Two plans:* Here are brief summaries of the two plans—

*"Medical indemnity insurance.*—You buy a straight insurance policy, which guarantees that your physician's bill will be paid up to the policy's face value if you need a physician's services during life of the policy. Smallest policy to be sold under present plans, \$150; premium, \$1 a month. You choose your own doctor. These policies not to be sold to persons with incomes of less than \$1,200 a year. Such persons to be furnished medical care and physicians' services at public expense. This plan not to be confused with the now popular '3-cents-a-day' hospital insurance policies, which pay ordinary hospital expenses but do not pay doctors' fees.

*"Group medical practice.*—Several doctors, including various kinds of specialists, get together, and as a group offer unlimited medical service to their subscribers. The service is both preventive and curative. There are some 2,000 of these groups now in business. Costs of the service average out to about \$2.20 a month per person, or \$4.50 a month per family of four persons. You cannot choose your own doctor, but must use the service of whatever doctor in the group is best suited to treat whatever ails you. Anybody who can put up the money can subscribe. The doctors are paid fixed salaries.

*"Neither plan is perfect.* Well, there we have two forms of collectivized medicine, both invented by doctors themselves rather than by politicians or social service workers. What interested us most about the Heyd-Roberts debate was that each of the two doctors picked flaws in the other's favorite plan—and as laymen we thought both of them were probably right. Dr. Heyd complained that group medical practice stops the free choice of a

patient's own physician, which most doctors hold to be a very precious privilege; that the fixed-salary feature cuts out competition and thereby is likely to mean a lower quality of medical care; that the coöperative is open to the temptation to make more and more money, and therefore to hire more and more mediocre doctors. Dr. Roberts retorted that medical indemnity insurance has these flaws, among others: It stimulates the 'get something back' desire on the part of the patient; it encourages excessive treatment by the physician; it flashes a red light on medical progress; it provides incomplete coverage; it disregards the necessity for preventive medicine.

*"Better agree on something.* As remarked, both of these doctors seem to us to be right. There are bound to be defects in any form of collectivized medicine, as in any other human institution. But what all the doctors had better bear heavily in mind, we think, is this: That if they don't get together and agree to support one or more forms of doctor-controlled collectivized medicine, the politicians may take the whole play away from them.

"The President is expected to lay a huge national health scheme before the coming Congress. It is a fact that too many Americans get too little of the medical service that is now available or could be made available; and that more and more people are coming to demand adequate medical care as a right.

"It looks as if the only choice left to the doctors is whether to run some expanded public health system intelligently and expertly, or to be themselves run by a lot of politicians and social service workers trying clumsily and ignorantly to make an expanded public health system work."—Editorial: *Daily News*, 1938, Dec. 27, p. 21 ("New York's Picture Newspaper").

#### QUOTATIONS FROM REPLIES TO LETTERS FROM CORRESPONDENTS

*Freedom of the press and some consequences.*—"One of the most serious responsibilities of an editor is the decision to accept or reject a contribution proffered for publication. In conformity with the journalistic ideal of 'freedom of the press,' and within economic limitations, the editor of a worthy professional journal aims to restrict its contents to contributions that may be usefully published therein, and bases inevitable rejections chiefly on lack of literary, scientific or professional merit—not on conditions that would disregard any of the criteria of 'free speech.' Thus, a responsible colleague wishing to express dissenting opinion in a respectable way has a right to be heard. However, in according to contributors ample opportunity to express, and be responsible for, their views in a 'free press,' the best professional journals in this way often unknowingly give currency to untruth or error. Fortunately, any such unreliability is usually detected

promptly by informed colleagues, and misstatement—when important—is soon publicly discussed. Under these conditions of journalistic give-and-take, in the desirable exercise of individual and professional liberty, ensuing rectifications correct all important error and the net result is the advancement of truth.”—(6).

*Conditions under which professional control of (responsibility for) a proprietary journal might be established.*—In response to a request from an editor of a proprietary journal, for comment on the conditions under which professional control of his journal might be established—control by an ethical dental society—the following four coordinated opinions were expressed:

“(1) The *widest possible freedom of choice* of details of agreement between owner and professional organization, to accord with personal, professional, local and other conditions, under the principle of professional control (responsibility), should pertain for the individual journal.

“(2) The agreement between the contracting parties should give the owner full financial *responsibility* and *decision* as to the total amount to be expended, on each volume, for each budgeted item. Professional control should be within the boundaries of prescribed financial limitations.

“(3) The agreement should give the professional organization full control over, and responsibility for, the *admission* of everything to be published within each volume, including all statements in all advertisements.

“(4) The agreement should provide for a prompt, equitable and effective mode of adjustment—such as the appointment of arbiters—of all disharmony that might arise from conflicts of authority, understanding or interpretation, under unforeseen conditions.”—(7).



## SUPPLEMENT

It has been our custom to reprint, in a Supplement in the terminal issue of each volume, various matters of permanent interest on the covers of the successive issues in the volume. In this volume, having discontinued a former policy of using the third and fourth cover-pages for the publication of comment on current conditions, we reprint in this Supplement only the schedules of meetings of sections, and the register of standing committees, of the American College of Dentists, for 1937-38.

### AMERICAN COLLEGE OF DENTISTS

#### (A) Sections

*Dates of meetings in 1937-38.*<sup>1</sup>—(1) *Kentucky*, June 14, '38. (2) *Northern California*: Oct. 27, '37; Mar. 25, '38. (3) *Maryland*: June 17, '38. (4) *New York*: Feb. 11, '38; May 20, '38. (5) *Minnesota*: Feb. 1, '38; Feb. 24, '38; May 6, '38; Oct. 6, '38. (6) *New England*: Nov. 23, '37; Apr. 27, '38. (7) *Wisconsin*: Apr. 25, '38. (8) *Colorado*: June 20, '38. (9) *Pittsburgh*: Nov. 17, '37; Jan. 12, '38; Apr. 13, '38; June 29, '38. (10) *Iowa*: May 4, '38. (11) *Illinois*: Dec. 6, '37; Feb. 13, '38. (12) *St. Louis*: Sep. 27, '37; Jan. 18, '38; Oct. 10, '38. (13) *Oregon*: Feb. 24, '38; June 25, '38. (14) *Texas*: Apr. 27, '38.

#### (B) Standing Committees (1937-38)

*By-laws*—W. J. Gies (39), *chairman*; A. L. Midgley (40), J. B. Robinson (41).

*Centennial Celebration* (establishment of dentistry as a separately organized profession—1939-40)—H. S. Smith (41), *chairman*; Harry Bear (38), J. H. Ferguson (39), Howard C. Miller (40), E. A. Charbonnel (42).

*Certification of Specialists in Dentistry*—C. O. Flagstad (41), *chairman*; G. R. Lundquist (38), H. C. Fixott (39), E. W. Swinehart (40), L. M. S. Miner (42).

<sup>1</sup>Between convocations of the College: Atlantic City, July 11, 1937 and St. Louis, Oct. 23, 1938.

*Dental Education*—A. W. Bryan (43), *chairman*; L. M. S. Miner (38), J. B. Robinson (39), A. D. Black (40), R. S. Vinsant (41), A. H. Merritt (42), L. M. Waugh (42).

*Dental Prosthetic Service*—W. H. Wright (38), *chairman*; A. H. Paterson (39), C. H. Schuyler (40), W. H. Grant (41), A. P. O'Hare (42).

*Dental Research*—A. L. Midgley (42), *chairman*; P. C. Kitchin (38), L. R. Main (39), P. J. Hanzlik (40), Howard C. Miller (40), A. B. Luckhardt (41), L. M. S. Miner (41), J. E. Gurley (42), W. D. Cutter (43).

*Endowment*—J. V. Conzett (38), *chairman*; Herbert C. Miller (39), Abram Hoffman (40), D. U. Cameron (41), A. H. Merritt (42).

*Finance and Budget*—O. W. Brandhorst (38), *chairman*; H. S. Smith (38), G. W. Wilson (38).

*Gies Testimonial*—H. E. Friesell (40), *chairman*; A. R. McDowell (38), H. S. Smith (39), O. W. Brandhorst (41), B. B. Palmer (42).

*Hospital Dental Service*—Howard C. Miller (38), *chairman*; J. E. Gurley (39), E. A. Charbonnel (40), C. W. Stuart (41), Leo Stern (42).

*Journalism*—J. C. Black (40), *chairman*; J. T. O'Rourke (38), E. A. Johnson (39), Leland Barrett (39), G. M. Anderson (40), B. B. Palmer (41), U. G. Rickert (41), H. O. Lineberger (42), E. G. Meisel (42).

*Legislation*—W. N. Hodgkin (41), *chairman*; W. A. McCready (38), G. S. Vann (39), B. L. Brun (40), M. L. Ward (42).

*Necrology*—J. B. Robinson (40), *chairman*; B. B. Palmer (38), J. E. Gurley (39), Howard C. Miller (41), U. G. Rickert (42).

*Oral Surgery*—M. W. Carr (41), *chairman*; J. O. Goodsell (38), C. W. Freeman (39), J. R. Cameron (40), Harry Bear (42).

*Public Relations*—O. W. Brandhorst (41), *chairman*; C. W. Camalier (38), F. H. Cushman (39), H. V. McParland (40), T. J. Hill (42).

*Socio-economics*—G. W. Wilson (42), *chairman*; C. E. Rudolph (38), Maurice William (39), E. H. Bruening (39), B. B. Palmer (40), M. W. Prince (40), W. R. Davis (41).

(C) *Officers, Regents, and Editors*

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

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

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

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

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

II. An advertisement, to be accepted or repeated, not only must conform with the said "minimum requirements," but also *must meet the special test applied through a questionnaire* that will be repeatedly exchanged confiden-

tially with numerous referees in all parts of the United States, and which contains the following inquiries:

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

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

## NEW BOOKS

**Fundamentals of dentistry in medicine and public health.** By JOHN OPPIE MCCALL, D.D.S., F.A.C.D., Director of the Murry and Leonie Guggenheim Dental Clinic, New York; with a foreword by Wilson G. Smillie, M.D., Professor of Public Health and Preventive Medicine, Cornell University College of Medicine. 1938: Pp. 161—6¼ x 4 in.; 50 illustrations; \$2.75. Macmillan Co., New York City.

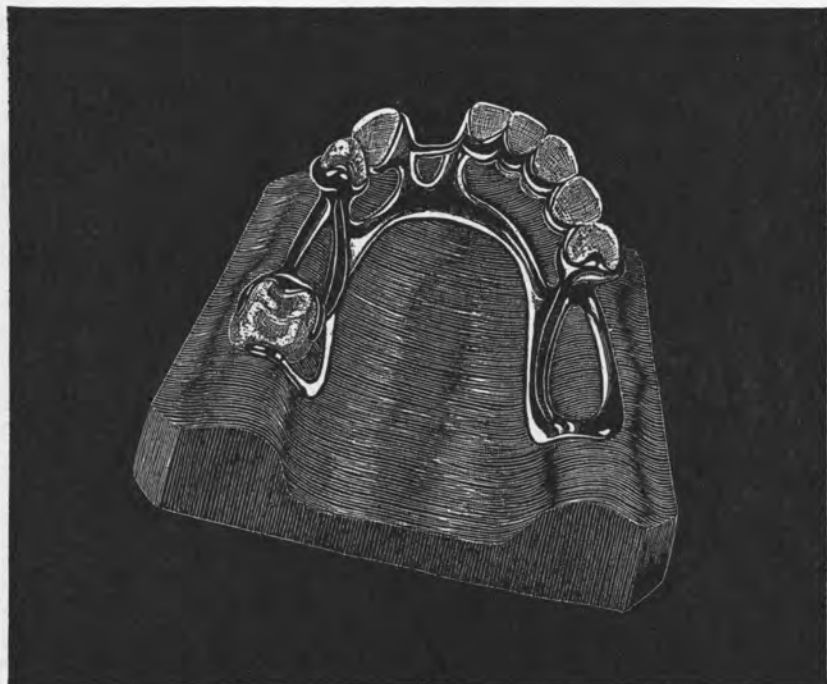
**Manual for dental technicians.** By J. A. SALZMANN, D.D.S., Chairman, Committee on Courses for Dental Technicians and Head of Dental Service, New York City Vocational Schools. 1938: Pp. 346—7½ x 4¼ in.; 286 illustrations; \$4.00. Pitman Publishing Corp., New York City.

**Dental science and dental art.** Edited by SAMUEL M. GORDON, Ph.D., Ex-Director, American Dental Association's Bureau of Chemistry, and Ex-Secretary of the Council on Dental Therapeutics of the American Dental Association; aided by 18 contributors. 1938: Pp. 731—7¼ x 4 in.; 224 illustrations; \$9.50. Lea and Febiger, Philadelphia, Pa.

**The treatment of clinical and laboratory data.** An introduction to statistical ideas and methods for medical and dental workers. By DONALD MAINLAND, M.B., Ch.B., D.Sc. (Edin.), Professor of Anatomy, Dalhousie University, Halifax, Nova Scotia, Canada. 1938: Pp. 340—6¾ x 3¾ in.; 23 illustrations; 15 shillings net. Oliver and Boyd, London, England.

**The history of dentistry in Missouri.** Compiled and published under the direction of the HISTORY COMMITTEE OF THE MISSOURI STATE DENTAL ASSOCIATION. 1938: Pp. 600—7¼ x 4½ in.; cloth, \$6.00. Ovid Bell Press, Inc., Fulton, Mo. [Address: Dr. W. B. Spotts, Chairman of the Central History Committee, University Club Bldg., St. Louis, Mo.]

**Fractures of the jaws.** By ROBERT H. IVY, M.D., D.D.S., F.A.C.S., Professor of Maxillo-facial Surgery, School of Medicine and Graduate School of Medicine—and of Clinical Maxillo-facial Surgery, School of Dentistry—University of Pennsylvania, and LAWRENCE CURTIS, A.B., M.D., D.D.S., F.A.C.S., Assistant Professor of Maxillo-facial Surgery, Graduate School of Medicine—and School of Dentistry—University of Pennsylvania. *Second edition.* 1938: Pp. 192—7½ x 4½ in.; 199 illustrations; cloth, \$4.50. Lea and Febiger, Philadelphia.



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## ADVERTISEMENTS

### NEW BOOKS (con.)

**The 1937 year book of dentistry.** Diseases of the mouth, pathology and research; operative dentistry; oral surgery; prosthetics; orthodontics. Edited, respectively, by CHARLES G. DARLINGTON, M.D., GEORGE W. WILSON, D.D.S., F.A.C.D., HOWARD C. MILLER, D.D.S., F.A.C.D., CHARLES LANE, D.D.S., F.A.C.D., GEORGE M. ANDERSON, D.D.S., F.A.C.D. 1937: Pp. 808—6 $\frac{1}{8}$  × 3 $\frac{1}{2}$  in.; 574 illustrations; \$3.00. Year Book Publishers, Inc., Chicago, Ill.

**Principles and practice of public health dentistry.** By J. A. SALZMANN, D.D.S., Editor, *New York Journal of Dentistry*; Head, Dental Service, New York City Vocational Schools; Member, New York Society of Orthodontists, American Public Health Association; etc. Foreword by ALFRED WALKER, D.D.S., F.A.C.D., Member, New York State Board of Dental Examiners; Associate Professor, New York University College of Dentistry; Formerly Chairman, Committee on Community Dentistry, New York Tuberculosis and Health Association. With a special chapter by JOHN OPPIE McCALL, A.B., D.D.S., F.A.C.D., F.A.A.P., Director, Murry and Leonie Guggenheim Dental Clinic; Chairman, Dental Advisory Committee of Committee on Neighborhood Health Development, New York City, and HARRY STRUSSER, D.D.S., Chief, Dental Division, New York City Department of Health; Lecturer on Dentistry, Columbia University College of Dental and Oral Surgery. 1937: Pp. 584—6 $\frac{1}{2}$  × 3 $\frac{3}{4}$  in.; 15 illustrations; \$4.00. Stratford Company, Boston, Mass.

**Accepted dental remedies—1938.** Containing a list of official drugs selected to promote a rational dental materia medica, and descriptions of acceptable nonofficial articles. COUNCIL ON DENTAL THERAPEUTICS. Pp. 284—6 $\frac{1}{2}$  × 3 $\frac{5}{8}$  in.; cloth, \$1.00. American Dental Association, Chicago, Ill.

**Alfred Owre: dentistry's militant educator.** By NETTA W. WILSON. Foreword: GUY STANTON FORD; pp. vii—viii. Acknowledgments: N.W.W.; pp. ix—xi. Part I: *The Life of Alfred Owre*: Pp. 3—198. Chapters—(1) A boy from Norway. (2) The making of a dentist. (3) Dean at Minnesota. (4) At home and abroad, 1905—1915. (5) The war years. (6) The Carnegie Survey. (7) The last Minnesota years. (8) Dean at Columbia. (9) The Columbia Clinic under fire. (10) Dean Owre versus the dental societies. (11) The future of dentistry. (12) "Red medicine." (13) The last year. (14) "This living record." Part II: *Selected writings of Alfred Owre*: Pp. 201—304. Bibliography and index: Pp. 307—331. 1937 (Dec. 10): Pp. 331—6 $\frac{3}{4}$  × 4 in.; 11 illustrations (half-tone); cloth (purple, gold); \$4.00. University of Minnesota Press, Minneapolis, Minn.

## AMERICAN COLLEGE OF DENTISTS

### STANDING COMMITTEES (1938-39)

*By-laws*—W. J. Gies (39), *chairman*; H. M. Semans (41), M. S. Aisenberg (40).  
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*Socio-economics*—C. E. Rudolph (43), *chairman*; G. W. Wilson (42), W. R. Davis (41), B. B. Palmer (40), M. W. Prince (40), E. H. Bruening (39), Maurice William (39).

### *Announcements*

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

*Next sessions of the Regents of the College:* Chicago, Ill., February 12, 1939; Hotel Stevens.

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

### JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS

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