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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; (25) *Milwaukee*, July 16, '39; (26) *Baltimore*, March 17, '40; (27) *Cleveland*, Sep. 8, '40; (28) *Houston*, Oct. 26, '41. [Next Convocation, Boston, Mass., Sunday, Aug. 23, 1942.]

Sections and dates of meetings in College year of 1941-42 (between convocations):— (1) *Kentucky:* June 4, '42. (2) *Northern California:* Feb. 4, '42. (3) *Maryland:* June 9, '42. (4) *New York City:* Nov. 14, '41; Feb. 16, '42. (5) *Minnesota:* Mar. 5, June 1, '42. (6) *New England:* Nov. 26, '41. (7) *Wisconsin:* Mar. 22, '42. (8) *Colorado:* Jan. 26, June 19, '42. (9) *Pittsburgh:* Dec. 3, '41; Jan. 28, Feb. 18, '42. (10) *Iowa:* May 5, '42. (11) *Illinois:* Dec. 8, '41; Feb. 9, 22, '42. (12) *St. Louis:* ..... (13) *Oregon:* Dec. 12, '41; Mar. 14, June 13, '42. (14) *Texas:* Apr. 28, '42. (15) *Florida:* Dec. 9, '41. (16) *Indiana:* Jan. 12, '42. (17) *Southwestern:* ..... (18) *Washington (D. C.):* Jan. 29, '42. (19) *New Jersey:* Nov. 25, '41; Feb. 10, Apr. 28, '42. [Revised as of February 20, 1942.]

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

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

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

NITROUS OXIDE AND OXYGEN ANALGESIA IN THE GENERAL PRACTICE OF DENTISTRY

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Induced analgesia—absence of sensibility to pain—can be made an important asset in dental practice. It is not difficult to establish, if attempted as for local anesthesia, gold-inlay technique, or other operative procedure. For success in these techniques, the dentist receives good basic training in his undergraduate course in the dental school, but nitrous-oxide-and-oxygen analgesia is not included. Why should the great opportunity in this important field in dental service be lost? Dentistry needs analgesia, as well as local anesthesia, to relieve pain and discomfort in the patient. To assure the success of analgesia, the following conditions must be eliminated: (*1*) Use of atmospheric air instead of oxygen; (*2*) patient's control of his own analgesia; (*3*) inadequate or improper educational approach to analgesia.

1 Use of atmospheric air instead of oxygen. One who is familiar with anesthetics knows that oxygen assures the necessary latitude and safety in working with nitrous oxide. Oxygen prevents such trouble as asphyxiation, which results from de-oxygenation of the tissues. In asphyxiation, oxygen, not atmospheric air, must be supplied immediately and in sufficient quantity. Tissue asphyxiation is one of the most serious complications that impede the progress of analgesia as a technical procedure. It is now well known that de-oxygenation occurs in analgesia—the first stage of anesthesia. In the past, most observers believed that dropping the patient into deep anesthesia was the greatest danger. But this is erroneous for, if deep anesthesia is induced, the patient can be brought immediately into analgesia by increase of oxygen and decrease of nitrous oxide. In tissue asphyxiation the body part that is affected plays the important rôle, and hours or days may pass before the patient returns to normal. The greater safety afforded by oxygen as compared with atmospheric air cannot be overemphasized.

Gwathmey, Hewitt, Kemp, Priestley, Demarquay, and others, have devoted their lives to research in the field of anesthesia. Their experiments and findings on the true value of oxygen in analgesia are particularly useful. On the value of oxygen, Hewitt wrote in part as follows: "It is now established beyond all doubt, that by employing certain percentages of atmospheric air with nitrous oxide, a better form of anesthesia can be obtained than with undiluted gas, and that by using oxygen instead of atmospheric air, a still better form of anesthesia is obtainable." When Hewitt used the word *anesthesia* in this quotation, he evidently meant *analgesia*—the first stage of anesthesia. A few years ago, the present author submitted to Professor Yandell Henderson of Yale University the manuscript of a paper on analgesia and asked for his opinion concerning the use of oxygen with nitrous oxide. He replied: "I agree fully with your position that nitrous oxide should never be used without the addition of oxygen. Any prolonged use of less than 15 percent of oxygen is liable to induce asphyxial effects." Note the word "prolonged." In the preparation of teeth for porcelain jacket-crowns, pin or three-quarter inlays, analgesia is *prolonged* as a rule.

2 *Patient's control of his own analgesia.* Little reasoning is needed to show that a patient's control of his own analgesia is seriously unreliable. During analgesia the patient, under the influence of nitrous oxide, is incompetent to determine the proper amount of nitrous oxide to be administered. The control and judgment of the anesthetic, in dental practice, are included among the dentist's responsibilities. The law pertaining to the administration of an anesthetic demands possession of the requisite knowledge, skill and experience. A patient's "control" of his own analgesia is neither a scientific nor a workable procedure, because the best effect obtainable in this way is intermittent analgesia—an in-and-out result—which is satisfactory neither to the patient nor to the dentist. It is unsatisfactory because the gases are not supplied constantly, and the patient is never "levelled off" in the stage of analgesia, "levelling off" being absolutely essential for good operative dentistry.

In the Year Book of 1915 on Anesthesia and Analgesia, McMeehan pointedly remarked: "Unfortunately, the initial revival of interest in

nitrous oxide anesthesia and analgesia was wrecked by the stubborn ignorance of many administrators, who thought that an automatic apparatus solved all the problems of administration and who were too slothful to study the theory and practice of narcosis."

3 Inadequate or improper educational approach to analgesia. When a dentist, lacking knowledge of anesthesia, "puts the cart before the horse" by purchasing a gas machine, he meets innumerable difficulties. Such a dentist is then apt to make his second mistake in this relation by expectantly taking a "postgraduate" course in analgesia, from which he derives little benefit because, owing to his ignorance of anesthesia, much of the teacher's terminology and comment is beyond his understanding and therefore vague and meaningless. Some dentists in this predicament, realizing their deficiency in knowledge of anesthesia as the cause of failure, proceed to study anesthesia and thereafter, by this long and circuitous route, become successful in the administration of analgesia.

The best educational approach to successful analgesia is through initial study of anesthesia, which does not imply that the student should aspire to become an expert anesthesist. He needs the knowledge of its signs and symptoms, and the ability to recognize them on appearance. Then should follow the "postgraduate" course in analgesia—the first stage of anesthesia—which, owing to his acquired knowledge of anesthesia, is soon easily mastered. When he has acquired this knowledge, he can then wisely buy and successfully use a gas machine. This is the simplest, easiest, most logical and shortest route to successful analgesia—the route that all of the author's students, in graduate courses under the auspices of various official dental societies, have been advised to take. Those who have followed this advice have become successful.

Types of patients in analgesia differ greatly from those in anesthesia. Those who are noisy or troublesome, or who "go down" quickly, in anesthesia, are not bothersome in analgesia, where, owing to the combination of small amount of nitrous oxide and large amount of oxygen, there is greater latitude for work. The types to be studied in analgesia are (*a*) the melodramatic or emotional person, who, busy playing the part, refuses to cooperate; (*b*) the person who

has taken many anesthetics and has been made seriously sick by them; (*c*) the person who "*will not*" take the anesthetic—the worst type. The first and second types can be taught to be good analgesia patients, but the third is next to impossible. For a general classification, analgesia patients may be arranged in three groups: those who take analgesia well; those who will have to be taught to take it; those who refuse to try, or who have a mortal fear of all general anesthetics. The effects of analgesia, as noted by the patient, are a tingling sensation or feeling of exhilaration; numbness in hands and feet. At times he tries to analyze some particular thought in his mind. A change in his voice, usually to a guttural tone, is noted. He is conscious that he is undergoing treatment; feels pressure but no pain.

REQUIREMENTS FOR SAFE AND EFFECTIVE PRODUCTION OF ANALGESIA

Oxygen is administered at all times with nitrous oxide. The amount of oxygen in the gaseous mixture should be at least one-fifth that of the nitrous oxide, and increased as the time of operation is extended. The amount of oxygen required to carry patients safely for hours, as is sometimes necessary, cannot be obtained from the atmosphere. At least 500 c.c. of oxygen are given with 2.5 liters of nitrous oxide. The rebreathing valve is closed, and the air-valve on the nose-piece is half open to give the volume necessary for respiration. A few cases may require 3 liters of nitrous oxide and 600 c.c. of oxygen. It is impossible to give more than 3 liters without causing patients to slip into the stage of excitement, or to develop nausea, either of which would interfere with proper operative procedure. The difficulty in inducing analgesia arises not from the patient's going too deeply into anesthesia, but from a lack of sufficient oxygen even in the first stage. This is the reason for the use of oxygen instead of air to obtain analgesia with nitrous oxide.

FAVORABLE FACTORS FOR THE MAINTENANCE OF ANALGESIA

In operative dentistry, anesthesia must be leveled off in the first stage, as it is for the third stage in general surgery. The maintenance of this level, in the stage of analgesia for operative dentistry, depends on five factors: (1) psychological treatment, (2) proper breathing, (3) overcoming tendency to sleep, (4) increased sensitivity during operation, and (5) use of instruments.

1 Psychological treatment. There are four important considerations in the dentist's psychological treatment of the patient: (*a*) confidence in himself, (*b*) calmness in actual operation, (*c*) avoidance of conversation, except with the patient, and (*d*) initial operation restricted to a simple cavity.

a The operator must have *confidence* in himself. This applies also to the dental assistant. This confidence is more important than many believe, for it is undoubtedly transmitted to the patient, just as fear and uncertainty are conveyed.

b Haste must be avoided. Burs and instruments should be ready. It is best to wait at the chair and have the patient say, "I feel it" or "I think you may begin." A remark from the dental assistant, "When you feel as if you had one cocktail too many, let us know," breaks the tension.

c There should be little or no *conversation* between the dentist and assistant. Such conversation has a tendency to upset the patient, who might imagine both are talking about him. All comment should be addressed directly to the patient, to whom the dentist or assistant should speak occasionally. The patient's replies and tone of voice will indicate how far he is under the anesthetic. The most nervous woman usually finds relief in proper attention from an alert and well-trained assistant. A short pleasant remark of encouragement, or a laugh, seems all that is necessary. Fear and nervousness, in different degrees, are present in all human beings. For good analgesia, both must be overcome.

d It is best to *treat only a simple cavity* during the first visit, and thus to allow the patient to accustom himself to the "feel" of the gas and its sensations. This is especially true when dealing with children. To many patients inclined to be nervous, the sensations and subjective symptoms are at first disturbing. Conditions are more favorable on their return visits, and good "gas cases" are developed in this way. A patient cannot know how deep the analgesia should be, or the amount of the gases he should take to eliminate pain or the discomfort of drilling. Children take analgesia better than adults, because they make no effort to decide how much gas they should inhale—they accept what they are given because they have confi-

dence in the dentist. Some adults worry about prospective silly behavior by them, but children have no such thoughts. A child should never be forced to take analgesia. He should first be permitted to see an older brother or sister do so, if possible. As a general rule, a child properly instructed by parent and dentist takes analgesia very willingly.

2 *Proper breathing.* The patient must be taught to breathe correctly—to inhale and exhale through the nose. His cooperation is most important. He should be closely watched, because oral breathing would be against an empty bag, and would create respiratory difficulties. Oral breathing causes loss of gases that continue to flow from the machine, and which should pass into the reservoir for use during the succeeding inhalations. There is also loss of carbon dioxide, which normally is increased in the bag by the rebreathings of the patient and helps to maintain the body heat. Carbon dioxide is the stabilizer of respiration. It governs the depth of breathing and also its frequency. Without an adequate amount of carbon dioxide steady breathing becomes very difficult.

3 *Overcoming tendency to sleep.* There is no occasion for alarm if the patient falls asleep, for he is then far from the danger zone. A fixed or regulated dose is being given; that is to say, percentage and volume are under control. A fixed dose is given purposely so that the dentist has full control at all times. Some patients may take less than the amount that is offered, but under these conditions they cannot take more than the fixed dose. If the patient feels that he is falling asleep, he should be advised to take a few breaths through the mouth. After one or two administrations of analgesia he will regulate this condition of his own accord. This is not to say that he is expected to press a bulb, thus shutting off the oxygen, or to change the dose in any manner or degree, or to give himself "straight" nitrous oxide. The dentist, *the only one to change the dose,* must retain full control. He must keep in mind the fact that the patient—*the subject, and under the influence of nitrous oxide*—is unable to state or to govern the proper amount of gas to be taken, which is wholly under the dentist's jurisdiction. A gadget for this purpose, for the patient's use, might readily "sell" analgesia to him; but experience

proves that a few words on the safety of administration does more to gain the patient's confidence.

4 Increased sensitivity during operation. When the patient becomes more sensitive to pain after the treatment has progressed, he should be given less gas, *not more,* because he is slipping into the second stage. By "more sensitive" is meant not the patient who has been breathing orally and has become too "light," but the patient who has become more sensitive while breathing correctly through his nose. If, at this time, he should be given more nitrous oxide, or if he had a bulb in his hand with which free nitrous oxide could be self-administered, he would place himself further down in the stage of excitement. This condition must be avoided, for it may be very disturbing. Here again the dentist's control of percentage and volume is essential. This factor of hypersensitiveness in the administration of nitrous-oxide analgesia has been the stumbling block for most dentists. Guedel, writing in 1915 on this particular phase of the subject, called this a "painful stage" and remarked that, if it occurred, it was accidental—and any operative treatment at this stage would not be painless for the patient. This condition *can be corrected* by keeping a close watch over the patient, for in this stage he will flinch even from the touch of cotton and it is quite obvious that he is becoming hypersensitive.

5 Use of instruments. New burs, or at least sharp ones, are necessary. Old burs create heat. Cold and heat cannot be tolerated in analgesia. When a new drill is used and the patient is under analgesia, the drill should not be allowed to run at top speed nor be pressed down in order to cut rapidly, for heat would result and the analgesia would be destroyed. When the engine is allowed to move at half-speed only, the blades of the bur cut with the smallest amount of pressure and create little or no heat.

Close adherence to the foregoing procedures and conditions facilitates five times the amount of work, without shock to the patient or to the pulp of the tooth. The dentist's complete confidence in the safety of analgesia, and in himself, will result in good analgesia and more and better work in less time.

"DENTAL AUTONOMY: A POLICY OF ISOLATION"

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A recent paper bearing the above title[1] endorses the new dental program at Harvard University as a step toward termination of the autonomy of the dental profession. The author of the said paper bases his statements on the concepts that "*autonomy* and *isolation* are *synonymous*" (p. 1671), and that "*cooperation* is essential and autonomy is impractical" (p. 1672). There are no definitions in the said paper, but the above italicized words have these accepted meanings: "*Autonomy*"—the power or right of a nation, community, profession, association, etc., to make its own laws, regulations, rules, etc., and to elect its own officials for its self-government. "*Isolation*"—the act, or state, of being detached from others of a like kind; placed alone. "*Synonymous*" terms—equivalent in meaning; express the same ideas. "*Cooperation*"—the act of two or more persons or groups, etc., working together to one end or for a certain purpose, *without loss of individuality or identity in so doing.*

The author of the said paper seems to have intended to say in effect that the dental profession, by its autonomy, has been isolated and in this impractical position is unable to cooperate, cooperation being essential. If these premises and this conclusion were sound, it would be equally true to say that the medical profession, by its autonomy, has been isolated and in this impractical position is unable to cooperate, cooperation being essential. But that would be an obvious absurdity, equivalent to saying that the medical profession has been isolated from—to illustrate—the professions of zoology and chemistry, and on that account cannot cooperate with zoologists or chemists for the application of either zoological or chemical science in medicine. In other fields this absurdity is also self-evident. Thus, the autonomy of Britain and of the United

[1]Kazanjian: *J. Am. Den. Assoc.*, *28*, 1671; 1941, Oct. The original paper contains in a footnote the explanation that its author is "Professor of Plastic Surgery, Harvard School of Dental Medicine."

States does not restrict either of them to impractical conditions that prevent their active cooperation. In their autonomy and isolation they are now closely associated, and voluntarily cooperating very effectually, in accord with their highest independent national interests. Would their cooperation be more effective if their autonomy (isolation) were terminated by their union? But can any country or any profession cooperate with itself? The writer of the said article seems to assume that the kind of cooperation that commonly occurs between a cat and a canary, when the cat terminates the canary's autonomy (isolation), is the kind of cooperation that will be promoted *within the Medical School* at Harvard by the new "pioneer" dental program at that University.

The latter deduction may need qualification, however, because the reader cannot be confident that the writer of the said paper means all of the contradictory things he states. The reader's predicament is illustrated by the following quotations, arranged in groups A and B (italic not in original):

A. (1) "Much of its [dentistry's] *progress* as a profession has been independent of *outside* influences, and its efforts have been *exceptionally* creative of means to meet its own problems" (p. 1671).

(2) "It would be wise for dentistry to remember that it has *earned an identity* which it is prepared to *defend* should the occasion arise" (p. 1671).

(3) [Dentistry] "merits an *independence* of thought and action, and as an entity *could not be absorbed by medicine*, even if either dentistry or medicine so desired" (p. 1671).

(4) [Dentistry's] "modern *progress*, crystallized into really *noteworthy accomplishments*, started late in the nineteenth century, and has *continued without interruption*" (p. 1672).

(5) "Dentistry has amply *earned* its place in the *professional sun*" (p. 1672).

(6) "Dentistry has largely *risen above* its early failures, and has carved out of the rocks of [medical] opposition an *honorable standing* in the educational fields" (p. 1673).

(7) "Dentistry is far *too strong to be absorbed* by any other profession, and this *very strength guarantees* its position in the future" (p. 1673).

B. (8) "With neither profession advocating such a policy [absorption of dentistry into medicine], both should realize—and dentistry in particular —that *autonomy and isolation are synonymous* and *selfish* in thought as well as *impractical* in the long run" (p. 1671).

(9) "The Harvard School [of Dental Medicine] will endeavor to train specially qualified young men for broad opportunities in dental medicine, and this *cannot be accomplished by isolation*" (p. 1671).

(10) "Harvard is upholding its belief that *cooperation* is essential and that *autonomy* [for dentistry] is *impractical*" (p. 1672).

(11) "The prospect [for the dental profession] is for *union* [with the medical profession] and not for *submergence or absorption* . . . . [but] for a *unified government*" (p. 1673).

The last quotation serves conveniently as a basis for further direct discussion. What, in the light of the foregoing quotations, is meant by "union?" If "submergence or absorption" is not "the prospect" in a "union" of the dental profession with the medical profession, what other relation is implied by the proposed "unified government?" How would the dental profession, after the proposed "union," "defend" the "identity" which the dental profession has "earned?" (quotation 2, above).

In the said paper "dentistry" and "dental profession" are used interchangeably without due regard for the distinction between them, and with consequent confusion. It seems obvious that there can be neither autonomy nor isolation for the *knowledge* of any science or art. It is also self-evident that no *knowledge* of any science or art can cooperate with any other knowledge. Therefore it follows that the author of the said paper used "autonomy," "isolation" and "cooperation" to refer to the dental *profession* (persons), not to dentistry as a science or art. But this again requires qualification, because in the said paper there are such allusions as this:

> "A complete review of the [dental] curriculum . . . . would but add proof that isolation is vanishing and that it would even require a struggle to maintain it" (p. 1671).

Does the author of this quoted statement mean that the "isolation" of dental knowledge is "vanishing;" or that professional requirements in medical and dental schools are becoming identical; or that dental students are being taught to yield, when they become dentists, the "earned" professional "identity" which "it would even require a struggle to maintain" and which the dental profession is said (quotation 2, above) to be "prepared to defend should the occasion arise?"

The uncertain import of much in the said paper is further illustrated by the following quotations (A-F), to which are appended comment by the present writer:

(*A*) "The increasing attention to the cultural and scientific background of the dental student as expressed in the dental school entrance requirements is but a tacit confession that broader fields lie ahead" (p. 1671).

This statement does not indicate that its author understands that if, for the word "dental" in the two places in which it occurs, he had substituted "medical," "law," "engineering," or any other indicating a professional group, his statement would have been equally applicable to any profession as progressive as dentistry (see quotations 1, 4, 5, and 6, above).

(*B*) "The doors of medicine, dentistry and all sciences must be thrown open in equipping the student to meet his responsibility to society" (pp. 1671–2).

Where in the United States have "the doors" been closed to any student competent to pass through them? Will the new dental program at Harvard open any closed "doors" at that University?

(*C*) "The techniques of cooperative scholarship are continually discovering new areas for exploration between the old boundaries"—quoted approvingly twice, in the said paper, from an article by MacLeish (p. 1673).

MacLeish referred to new areas for exploration between the old boundaries—not to removal of "old boundaries"—the exploration to be done "by *experts* in *different fields* to work *together*" on problems common to them all," without loss of their professional identities and interests. He referred to "cooperation" between representatives of "autonomous" and "isolated" groups, the new acquisitions in knowledge to be available to each group. MacLeish also evidently used the word "expert" in its accustomed sense—a person skilled or thoroughly informed in any *particular department* of knowledge or art, such as dentistry, medicine, economics, psychology, etc. His comment does not support the idea that cooperative scholarship could be achieved more effectively within the scope of any two professions by uniting them, or converting all professions into one. MacLeish did not intimate that—with the rapid extension of knowledge in all directions, and the concomitant multiplication of details and in-

creasing need for precision in their use—the "different fields" of knowledge (*each more than any mind can master*) should be delimited, specialization discontinued, and professions combined. He did not suggest that the growth of a tree would be promoted, if a way were found to keep the branches in the trunk and the trunk in the roots.

(*D*) "The [dental] profession has become vulnerable; for self-sufficiency blurs the possibility of cooperation, while domination stifles initiative and independent thought" (p. 1671).

In what sense may "self-sufficiency" be ascribed to the dental profession that does not apply in the same degree to any of the many professions in the whole range from astronomical to zoological? Is not the existence of the various professions based upon the principle that separate organization assures intensive and sustained attention to objectives, interests, or causes that would not be effectively furthered without such special collective effort? The author, in this quoted use of "self-sufficiency," evidently made another inadvertent choice of terms and also disregarded the many current evidences of the desire, readiness and ability of the dental profession to cooperate in all aspects of health care in which dental science and art may be of service. The word "domination" suggests that, when the author used it, he confused "dental profession" with "medical profession."

(*E*) Conditions imposed by the medical profession "during the second and third decades of this century"—mass extractions [having been terminated by] . . . . "a union of thinking minds," [now there can] "be a [medical and dental] union of objectives, as well as of thought . . . . In truth, dentistry has been admitted to the company of educated men" (p. 1673).

Were not the adverse "conditions imposed by the medical profession during the second and third decades of this century" forced upon dentistry by "thinking minds" that were in "the company of educated men?" Has the traditional medical indifference to dental health-care been abated? Was not the dental profession "admitted to the company of educated men" many years ago, as in 1867, when, according to the said author, "the first dental school connected with a university" was founded at Harvard University? Harvard had been so eager through so many years to perpetuate the claim for this distinction that its representatives customarily ignored the fact that "the first dental school connected with a university" was

founded—seventeen years earlier—in 1850, in Transylvania University, a "company of educated men" in Lexington, Ky.

(*F*) "Harvard . . . . undertakes this plan [School of Dental Medicine] with *no idea of being universally followed*" (p. 1672).

If this quoted statement is true, why did its author devote his paper chiefly to advocacy of the establishment of "union" and "unified government," and concomitant discontinuance of "autonomy" and "isolation," etc., instead of restricting the said paper to a discussion of the virtues of the new dental program at Harvard as such? There was no indication in his paper that any statement therein was made by approval or authorization of Harvard University. Therefore this question arises: When and where did a representative of Harvard announce officially that the University, in its new dental program, is not enacting the following formal declaration, in a Harvard publication, by the present Dean of the Harvard Medical School, who was chairman of the Committee that formulated the new dental program, and now is also Chairman of the Committee on Instruction of the Harvard School of Dental Medicine *within the Medical School?:*

"Harvard University realizes both the need and the opportunity to establish dentistry as an integral branch of medicine . . . . This kind of a dental school must develop as a part of the . . . . medical school." (*Harvard Den. Rec.*, 1937, July 26, pp. 3 and 4).

The Harvard Dental School evidently stood in the way of attainment of this definitely stated "pioneer" objective; the Harvard School of Dental Medicine has obviously been created to "lead the way to it."

The author of the said paper does not present any opinions or evidence that would answer pertinent related questions such as those that follow (a-f):

(a) If "the prospect is for union [of the dental and medical professions], not for submergence or absorption" [of the dental profession in the medical], why was the Harvard Dental School discontinued, and the Harvard School of Dental Medicine created—*within the Harvard Medical School*—to succeed it?

(b) If "the prospect is . . . . for a unified government" [of the dental and medical professions], how would this government be organized without "submergence or absorption" of the dental profession in the medical?

(c) Has any other pair of professions been "united" without submergence or absorption of one in the other?

(d) Since none of the science or art upon which a profession is founded is the exclusive possession of that profession, why have not the faculties of the Dental and Medical Schools at Harvard been able —in effective cooperation—to provide the instruction their students should have received, and also to conduct "cooperative scholarship" (research) for discoveries in "new areas for exploration between the old boundaries?"

(e) Why should it be necessary or desirable to discontinue "the first dental school connected with a university" (in its 77th year) and to transfer to a succeeding School of Dental Medicine *within* that University's Medical School, the function of attaining the objectives stated in question (d), above? This inquiry is particularly pertinent in the light of the import of the following comment in the said paper:

> [The medical profession not only has given the dental] "scant welcome, [but also] with a strange absence of logic, created an educational no man's land around the mouth and the teeth, and it was medicine's ignorance of oral conditions which was responsible for the ruthless years of mass extractions during the second and third decades of this century" (p. 1673).

Has human nature changed so completely anywhere that the advancement of a cause, or the welfare of anything, should be entrusted *preferably* to those who have been traditionally indifferent to it?

(f) What is the evidence indicating that at Harvard the objectives stated in question (d), above, could not have been attained most effectively, without discontinuance of the Dental School, if the University had provided supplementary adequate opportunities in combined undergraduate curricula and in graduate work for qualified students, dentists, and physicians, *in accord with accepted university procedures?*

It is very surprising that the proponents of the new dental program at Harvard do not discuss their plans in a way to anticipate

such natural questions as those stated above. The author of the said paper seems to have expected its readers to understand, regardless of the numerous contradictions and ensuing uncertainties, that he meant to present these ideas:

> I should like to see dentistry united with medicine and the dental profession discontinued. The new dental program at Harvard will initiate a movement to bring about these changes. Therefore, I endorse the new dental program at Harvard.

These three direct assertions seem to measure the scope and to express the intent of the paper under review.

THE NATIONAL DENTAL HYGIENE ASSOCIATION

RANDOLPH G. BISHOP, *Executive Secretary*,
Washington, D. C.

The National Dental Hygiene Association was established in June, 1940, by the Martha M. Hall Foundation, to provide a national philanthropic agency for the advancement of dental health for the American people through the promotion of research, education and treatment programs. The Foundation had carefully investigated the dental health field and discovered that, despite efforts up to that time, there were still vitally important gaps between these dental health efforts and the common national objectives.

The Association seeks to encourage social and civic minded laymen and women to become actively interested in the field of dental health, to the end that they will give support to such worthwhile community programs under way or contemplated as will aid in the advancement of dental health for all the people, and to stimulate all citizens to seek adequate dental care for themselves and for their children. The Association seeks to better the dental health of the American people by working in cooperation with the dental and medical professions, public and private health and welfare agencies, and lay organizations, to promote dental research; encourage the formation of community committees for dental health; develop public appreciation of the importance of dental health and the need for more adequate public support for dental health programs; increase and improve dental health education and treatment programs for children; provide factual literature for lay groups; integrate dental health as a part of and in proper relationship to the general health programs of existing organizations; and carry out educational campaigns and conferences.

The Association prepares and distributes approved educational material designed to promote individual and group dental health action. It cooperates with public and private agencies, both na-

tional and local, in stimulating dental health education and treatment programs throughout the country. It works in cooperation with other groups in the development of plans and programs which may serve as a guide to state and local groups. The Association acts as a clearing house for the distribution of information concerning dental health programs, and in the production and distribution of various types of printed matter, films, transcriptions, exhibit material and other items of value in general education programs. The bulletin of the National Dental Hygiene Association is *Dental Health*, a quarterly publication.

The basic needs of the Association, for an initial period of years, have been provided through a financial grant from the Martha M. Hall Foundation. It is anticipated that its membership plan will provide an opportunity for others, who may so desire, to support and participate in the work of the Association. The governing body of the Association consists of a Board of Trustees, a majority of whom are members of the Board of the Martha M. Hall Foundation. The members of its National Advisory Board serve as consultants on programs and policies. The members of the National Advisory Board represent a composite of professional, health, welfare and lay individuals, all of whom are authorities in their specific fields of activity.

It has been the policy and objective of the Association, from the date of incorporation, to work in complete cooperation with other organizations concerned with health and welfare, and to take its proper place in the health field in relation to other organizations concerned with dental health and other phases of health work and those related to all phases of health work. Dentists, health and welfare workers, and some laymen fully know the seriousness of the American dental health problem. It would be possible to speak at great length of it and of the comprehensive ends the National Dental Hygiene Association hopes to achieve in its eventual solution. Instead, let us forget for the moment the magnitude of the national dental problem and think in terms of our own communities. The whole national picture is simply a composite, a statistical compila-

tion, while the individual county or community is the basic unit in any dental health program.

Every dentist thinks of himself in connection with his local society and in relation to his own community and his own practice. Working with his local society, he must benefit both himself and his community if he is to succeed. The dentist is deeply concerned with his community's people. To a greater extent than the average citizen he has obligations toward the civic and social aspects of his community, towards its schools and its health and welfare organizations. If these organizations are to play the part they should in the community's dental health efforts, the dentist must work with them and they with the dentist. In this respect the National Dental Hygiene Association and the dentist work upon common ground. The Association will try to enlist civic groups to get together to promote a professionally sound type of action in their own communities. To function, these groups must enjoy the counsel and confidence of their local dentists and he must enjoy theirs. Therefore, the Association should be thought of as an organization seeking to encourage the formation of community-wide dental health programs. It will function increasingly as a clearing house, dispensing information concerning various localized programs and as an agency supplying public educational material. The Association will serve to bring to the benefit of all the experience gained in individual communities.

From the broad national viewpoint, the Association's program is one of education and organization. A part of the problem of course, has to do with providing dental treatment for the poor. But a much greater part has to do with creating among our people who can afford at least some, but who seek no dental treatment, a deeper and more conscientious concern with the health of their mouths. Either from the standpoint of social improvement or the promotion of individual happiness this objective is worthy. Every community has problems in common with other communities and at the same time problems which are special to it. To encourage individual and community initiative, rather than to attempt to superimpose the plan of any one group or school of thought upon any particular community, is the basis of the Association's program. Fundamen-

tally the Association advocates an adequate, sound, and permanent community-wide program which brings together and coordinates all forces concerned with dental health. Such programs would in time constitute the working units of the national effort for better dental health. These programs should consolidate the efforts of all community groups, inspired, guided and encouraged by the experience of the country as a whole.

It is not the desire of the National Dental Hygiene Association to create branches or to set up chapters. It does not plan to initiate new organizations subject to its control or committed to its policies. It is felt that such a plan would militate against the actual difference of resources and facilities and conditions which exist in every individual community across the land. It is rather the Association's hope to inspire action for dental health within the programs of organizations already in existence, and in this way to help bring about the coordination of all groups through dental health councils in each community. Thereby can be put into effect the multiple force of the entire community—a power largely unobtainable by any single organization. Since dental health, in the final analysis, is the concern of all the people, the greater the number of interested groups who can help tackle it the greater the probability of the problem's final solution.

Many dentists have long asked why there has been relatively little public interest in the profession and in the problems before it. Perhaps one of the reasons for this is that dentists and civic groups have heretofore had limited facilities for working together and interchanging views on local dental problems. In the long run the effect of the present pioneering activity of the National Dental Hygiene Association will be to vitalize general recognition of the dental profession as an integral part of the community. The Association feels that the enhancement of public appreciation of the profession as a social asset, deserving of public interest and support, is a matter of vital concern not only to the profession but to the dental health of the nation as well. The public is interested solely in the contribution the profession can make toward the health and happiness of the populace.

Let us consider the question of charitable work. There are few dentists who do not do charity work as individuals, and many justly wonder why their contribution is not more fully recognized and appreciated. Others often harbor grave doubts about the economic justification for treating many charity patients about whose real needs they have not time to check. Here community dental councils can function to advantage. Well deserved public gratitude for dentists' charitable services, and the assurance of the economic status of charity patients, become possible under the community plan. In many cases civic groups can set up workable systems of controls and checks for indigent dental work. Likewise, in the promotion of better dental health education, community groups can be of inestimable value. There are limitations upon the effectiveness and extent of educational programs of dental societies or their oral hygiene committees alone. There are natural and well known limits to the resources of the profession in moulding public opinion. Dental councils, since they draw membership from the public, can partake of the full resources of the public.

Participation in the community plan, therefore, not only makes possible more active and effective educational work by the profession, but it brings to the profession a grateful public appreciation of its cooperation in a community problem. It gives the necessary professional guidance and direction to the many participating health, welfare and lay groups. It commands consideration because it is a program useful and broad enough in scope to grasp the imagination of the public. It convinces the public that the dental profession is vitally concerned with the public problem of dental health for all citizens.

What, then, this Association fundamentally seeks is the attainment, by the local dental society, of confidence in, and the coordination of its actions with, health, welfare, school and lay organizations in its own community. At the same time, the Association asks those organizations to join hands with the local dental society. The Association is vitally concerned that its own actions and activities be fully in accord with the highest ethics and standards of

the dental profession. It does not contemplate engaging in, or otherwise encouraging, programs or plans contrary to these standards. Programs will assuredly vary in individual communities, not because the professional problem is different but because the size of the community, the number and type of organizations in the community, existing dental health facilities which must be taken into account, existing programs of health departments, schools and other organizations, all vary from one community to the next.

Nearly six hundred communities in the United States now have health councils, usually as a part of the Community Chest and Council of Social Agencies. These Councils usually constitute the coordinating medium for both public and private health activities, not only for the indigent but also for the people as a whole. Where such a Council exists it provides a permanently financed and logical medium for the coordination and development of dental health activity. Basic community groups which should participate in the formation of such a Committee include the local dental society, health officials, nutritionists, nurses, Parent-Teacher Association groups, the schools, local health and welfare organizations and lay organizations concerned with dental health. In the more rural areas, with fewer organized health and welfare groups, it may be found advisable to develop Dental Lay Health Committees working with the county health officers as auxiliaries, formed as an independent agency or in cooperation with the public school system.

While the widespread publicity given to draft rejections for dental causes has served to dramatize the astonishingly bad dental health situation in the whole country, and to point to the basic problem known to all workers in the field of dental health, the amelioration of this problem will only be arrived at through a long-range program of education and service carried out in every community, until research demonstrates the cause and more effective methods of prevention of dental caries.

The dentist who in the past has found it somewhat difficult or even disheartening to talk to his patients about dental health and who could not exactly tell them how they could help, will find in the program of the work of the National Dental Hygiene Association

an opportunity to be of specific service to his profession, to the public, and to himself. He will be able to point to his community's Dental Health Committee as an organ of public expression and tell how the Dental Society is working with this Committee. He will be able to urge without hesitation that his patients take an active interest in their own dental health program. He can explain that he and his society are working directly for the benefit of the city and county of which the patient is a member.

Perhaps no profession is better equipped to work with influential members of their communities than are the members of the dental profession. To forego an opportunity to aid in this constructive work, which will be increasingly important and better known among the people with whom he resides and works, would be for every dentist to neglect his real responsibilities. To this end the National Dental Hygiene Association can perform valuable and long needed promotional and assisting services. Such services must eventually play a significant part in conquering the dental maladies of the American people.

DENTISTRY IN FINLAND

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From the middle of the 19th century there have been dentists in Finland, the earliest of whom came from other countries and practised in Finland only a short time. The first dentists to remain in Finland permanently arrived in 1870. About the same time a few Finns who had studied dentistry in foreign countries began dental practice in their native country. In 1882 a Finnish physician, Prof. Matti Äyräpää, began dental practice. He has been called "the father of Finnish dentistry," having been chiefly responsible for institutional dental education in Finland, which was begun in 1892.

Dental education in Finland is included, in part, in medical education—at the University of Helsinki. The premedical requirement includes examinations in botany, zoology, physics and chemistry—the so-called "medicophil-examination" for admission to the Medical School. This premedical preparation is usually completed in one and one-half to two years. In the Medical School the dental students are given, in anatomy, physiology and bacteriology, shorter courses than those prescribed for the medical students. The studies in the Medical School for dental students can be passed in one year. The dental candidates then do two years of practical work in the Dental School in the University. This practical work includes courses in general surgery, syphilology and pharmacology.

The Dental School—Institute of Odontology—is situated in a modern building in the center of Helsinki, the capital of Finland. The School admits a maximum of 120 students (60 for each of two years). It has separate departments for each branch of odontology: oral surgery, prosthetic and operative dentistry, with the corresponding laboratories and facilities, and a laboratory for research. After completion of the two-year course in the Dental School the students are examined in surgery, dental surgery, operative and prosthetic dentistry, orthodontia, and pharmacology, and if success-

ful are graduated as dentists, graduation including a license to practise dentistry. The official name of "a graduated dentist is odontologian lisensiaatti—licentiate in odontology."

Before 1910 dentists who graduated in foreign countries were licensed after passing examinations in the University of Helsinki. Since 1910, however, only dentists graduated from the Dental School of the University of Helsinki have been licensed to practise dentistry in Finland. The number of licensed dentists at present (1941) is 880—1 dentist per 4400 of the whole population. Of the total number, 60 percent are women. About 40 percent of the whole number of dentists practise in Helsinki, a city having a population of nearly 400,000—about 1 dentist per 1000 of population.

Dental research has been conducted actively. In 1892 a society was established to interest the members in research, and to spread the knowledge of the results of science. This society, Suomen Hammaslääkäriseura (Finnish Dental Society) publishes its own journal, Suomen Hammaslääkäriseuran Toimituksia—Finska Tandläkaresällskapets Förhandlingar, which, since 1904, has been issued about twice a year; the last issue was No. LXX (1941). It includes original articles in Finnish and Swedish; sometimes also in English and German. The Finnish articles usually include summaries in English and German. Besides the Finnish Dental Society there is also an association for the promotion of dental economic interests (established in 1924). In addition to these national organizations there are also some district societies in the largest centers of population.

In 1917 the Medical Faculty decided to award the degree of Doctor of Odontology for successful achievement in dental research. Thus far this degree has been awarded to thirteen dentists. Three dentists, who had been licentiates in medicine and conducted research in odontology, have been awarded the degree of Doctor of Medicine *and* Surgery (Doctor medicinae et chirurgiae).

Organized dentistry in Finland, despite its youth, has attained notable progress. In its efforts it has had the examples of dentistry in other countries, especially in the United States, Germany, France, England, Denmark and Sweden. Institutional dental education had been begun in the United States half a century before its inaug-

uration in Finland, and the dental profession in this country profited greatly from the evolution of dental education in the United States. The fact that our country has always had contact with Germany has also had a great effect upon the development of dentistry in Finland. In Germany, Finnish dentists became acquainted with such American leaders as Black, Angle and others. Many American dentists have been visitors in Finland, and it is hoped that in the years to come their visits will increase in number and duration. In recent years there has been a growth of interest in English among Finnish dentists, to facilitate reading of American journals.

During the year, 1942, the fiftieth anniversary of the establishment in Finland of institutional dental education and of the Finnish Dental Society will be celebrated. We hope that many dentists from other countries, including the United States, will participate in the festivities.

AMERICAN COLLEGE OF DENTISTS

Dental Caries: Prophylactic Needs in Regard to Environmental Conditions of Normal and Carious Teeth[1]

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Prophylactic considerations with regard to dental caries embrace those conditions that have to do with factors external to the tooth surface, including accretions of all kinds but excluding saliva and buccal secretions. In other words, I shall consider those conditions that constitute or affect what we may call the immediate environment of the teeth. Under this heading fall the bacterial or mucinous plaque, adherent deposits of other kinds, adherent undissolved food particles, possibly films of foods such as sugars in solution and bacterial colonies not necessarily associated with bacterial plaque.

It is difficult to exclude from this paper mention of the salivary factors which are antecedent to the formation of the bacterial plaque. Of one thing we can be quite sure—without salivary condition favorable to its formation, bacterial plaques will be either nonexistent or present in very small amount. I assume, however, that this phase belongs in the paper on salivary conditions.

I start then with acceptance of the generally held thesis that the active agent in the initiation of dental caries is the bacterial plaque, an adherent film within which acid of a pH capable of dissolving calcium salts is evolved.

From the prophylactic standpoint the problem centers around the conditions that permit the formation and particularly the continued adherence of the plaque. I have mentioned salivary factors. In addition to these, however, there are strictly localized conditions which influence plaque formation.

Plaque formation apparently takes place through the juxtaposition of sufficiently concentrated mucin, aciduric micro-organisms and fermentable carbohydrate, all attached to the tooth surface through

[1]Read at the Convocation of the College, Houston, Texas, Oct. 26, 1941.

the adhesive qualities of the mucin. Given suitable proportions of the above ingredients, the consummation of plaque formation depends on the presence of stagnation areas on the enamel, areas where the forming plaque is not disturbed by mechanical cleansing factors.

Efforts to prevent plaque formation, from this standpoint, have been carried on under two headings: one, oral prophylactic treatment as advocated by D. D. Smith, plus home use of tooth brush, floss silk, etc.; the other, eliminating carious areas by filling or, if necessary, by extraction. To this should be added prophylactic odontotomy or the elimination of pre-carious areas, also by filling. These measures have been practiced more or less faithfully and more or less efficiently for nearly forty years. The present inquiry into dental caries is evidence that they have failed to meet the needs of the public for an effective caries preventive.

A certain amount of attention has been given to self-cleansing of the tooth surface by the scouring effect of so-called detergent foods. For instance, it is commonly advised that the food intake should include foods which, while being masticated, will presumably remove bacterial plaque from the tooth surface by their slightly abrasive action. There is an implication in such advice which has escaped attention, but which should be carefully considered. The implication is that such food scouring will prevent dental caries. It is a fact that tooth surfaces, accessible for food scouring, are by that cleansing process protected from caries. What must be kept in mind, in considering this matter of food scouring, is that it operates only on accessible surfaces and cannot give protection to inaccessible surfaces such as approximal surfaces of contacting teeth. If these surfaces escape caries they escape it by some other means than food scouring. However, food scouring is a highly efficient caries-preventive on certain surfaces. This even includes surfaces on which caries has originated but which by accident or design are later made self-cleansing, another way of saying "accessible to food scouring." Anderson[2] has called attention to this method of arresting as well as preventing caries and it has been practiced with uniform success at the Guggenheim Dental Clinic for years.

[2]Anderson, B. G.: Dental Caries, 2nd Edition, American Dental Association, 1941, p. 36.

Occlusal surfaces of molars, both deciduous and permanent, are sometimes attacked by caries over a wide area, due apparently to general enamel defect such as hypoplasia. To obtain adequate retention for fillings in these teeth for the child would often jeopardize the pulps. In such cases enamel margins standing above the general level of the cavity are reduced, all carious dentine is removed and the tooth surface in general made smooth. Silver nitrate may be applied if desired, but if the surface is made truly self-cleansing this is not necessary. Attention should be directed to the fact that this procedure has a decided shortcoming, viz., it alters tooth form.

It is obvious that complete and frequent removal of bacterial film from accessible surfaces by food scouring is the secret of their immunity. Unfortunately the only surfaces that can be thus protected are those exposed to the most direct and vigorous cleansing action of foods during mastication.

D. D. Smith taught prophylactic treatment as a combined cleaning and polishing of the tooth surface for the prevention of caries. He claimed that this procedure must be repeated at monthly intervals to provide for frequent as well as thorough removal of the bacterial plaque. Most of the so-called prophylactic treatment of today falls short of his standard both in frequency of application and in thoroughness. Fortunately dental hygienists have been and are being trained to perform thorough and complete prophylactic treatment and can be depended on not to cut corners unless compelled to do so by employers who do not understand the meticulous care and attention to detail required in this operation. It is my experience that dental schools in general do not teach this work adequately to their students nor do they impress sufficiently the importance and value of thoroughness in oral prophylaxis.

A thorough prophylactic treatment is not in itself adequate for the prevention of dental caries unless repeated with sufficient frequency to break up bacterial plaques which tend to form again after having been removed. D. D. Smith advocated prophylactic treatment at monthly intervals and practiced what he preached. His records, and the testimony of his patients bore witness to the success of the system when conscientiously followed. The expense of such a program plus

lack of conviction as to its value in the rank and file of the profession have militated against its widespread adoption. It must be said, too, that it has one shortcoming—it will not protect pits and fissures. This is because of their inaccessibility to tooth-cleaning instruments. Any surface that cannot be reached by the dentist or dental hygienist for thorough cleansing may be attacked by caries.

Let me repeat that prophylactic treatment, to be effective in preventing caries, must be given at monthly intervals as advocated by D. D. Smith. Semi-annual prophylactic treatment is not sufficient. This is not to say that semi-annual treatment is without value, since it is essential for complete mouth examination for the detection of caries. Also, the prophylactic appointment may be utilized for educational purposes. Furthermore, prophylactic treatment is very helpful in the prevention and control of periodontal disease; here the frequency of appointments varies with the nature of the case.

While on the subject of oral hygiene mention of the tooth brush is in order. The tooth brush, like prophylactic treatment, fails to accomplish all that is desired of it, although it makes a valuable contribution in the field of mouth health. The tooth brush has, in fact, been a disappointment in the prevention of caries. As in the case of food scouring, it is only effective on surfaces which it can effectively cleanse and on which it is conscientiously used. Much can be accomplished under careful instruction but under the best of circumstances it still misses many important and vulnerable areas, particularly those areas immediately adjacent to the contact points of the posterior teeth. I am thinking here of these areas in the mouths of children and young adults for whom, because their gingivae usually fill the interdental spaces, interproximal brushing cannot safely be advised. As in the case of prophylactic treatment, emphasis in the use of the tooth brush has shifted in the last quarter century to the field of periodontoclasia. Conscientious and intelligent use of the tooth brush confers a very remarkable immunity to gingival infection.

Elimination of carious areas by filling has been recommended on the assumption that the presence of untreated caries tends to promote development of new caries and that their elimination is a means of

preventing formation of new cavities. While the presence of caries in one tooth surface may tend to promote caries formation in the contiguous surface of the next tooth, it does not by any means follow that such caries will always develop if the first cavity is not filled. Bodecker[3] has called attention to this latter phenomenon, and observation at the Guggenheim Clinic confirms his statement.

Filling carious teeth has an undoubted value in terms of oral health but this procedure has been disappointing as a preventive of new caries, either in adjoining teeth or in other surfaces of the teeth that have been filled. One of the procedures I have in mind in this latter connection is prophylactic odontotomy. Teeth so treated are protected as far as the surfaces having the enamel defect are concerned, but in the case of molars and bicuspids approximal caries is found so frequently as to make it evident that prophylactic odontotomy is only a partial answer to the problem of caries prevention. Its function is to promote cleanliness of the surfaces to which it is applied and it cannot be expected to be a panacea.

Figures gathered at the Guggenheim Dental Clinic for some years past indicate that the preventive program as summed up in the procedures enumerated above is not an effective means of preventing dental caries. The average number of cavities in recalled patients ranged from 2.4 in 1933 up to 4.5 in 1939 with a drop to 3.3 in 1940. The eight-year average is 3.8. Many of these cavities were in the notably vulnerable occlusal surfaces of posterior teeth, but an unfortunately large number each year are found in approximal surfaces.

Summing up the prophylactic needs for normal and carious teeth it can be said that prophylactic odontotomy, prophylactic treatment, use of the tooth brush, and filling of carious surfaces as caries occur, is to be recommended in spite of their disclosed shortcomings in prevention. They will probably continue to be needed for the value they have and the contribution they can make to the preventive program of the future.

[3]Bodecker, C. F.: *Ibid.*, p. 59.

AMERICAN COLLEGE OF DENTISTS

Nutritional and Dietary Considerations in the Control of Dental Caries[1]

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Much of the material in this presentation is taken from a paper[2] by the author read at the annual meeting of the American Public Health Association a year ago in Detroit. The writer is not and never has been a research investigator. But, being engaged in dental public health promotion, he must take the results of research and attempt to interpret these for the public benefit. It is in this capacity he appears before you today.

Nowhere in the dental field has there been such a wide divergence of opinion as in the relation of nutrition and diet to dental caries. Nutrition as generally understood pertains to the process by which food is used in the living organism to repair wasted tissues or promote growth and development. Diet pertains to the intake of food which may be important for the nutritional process or more important for other reasons as we shall see. The relation of nutrition to dental caries first came prominently to the attention of health workers and research investigators with the work of Percy Howe in Boston and May Mellanby in England some twenty years or more ago. Howe's experiments on rats, guinea pigs, and monkeys, and Mellanby's on dogs seemed to show a distinct relationship. Experiments in this direction were soon being carried out in a number of places. Research workers grasped this lead with avidity in the hope that here at last in the field of nutrition might be found the solution to the long-hoped-for prevention of the ravages of dental decay which is so universal among civilized men and which so vitally affects health, appearance, and comfort.

[1]Read at the Convocation of the College, Houston, Texas, Oct. 26, 1941.

[2]Davis, William R.: What Can the Dental Health Worker Teach Regarding Nutrition and Diet? *A. J. P. H.*, *31*, 715; 1941, July.

We have not time and neither is it necessary in this paper to give in detail the results of these investigations over the past few years. We shall select only a few from those most often quoted and which are typical of the wide divergence of opinion. Howe[3] stresses the importance of a well-balanced diet rich in inorganic elements and vitamins A, C, and D. Mellanby[4] believes vitamins D and A and mineral salts, especially calcium and phosphorus, most important along with a reduction of carbohydrates. Hawkins[5] of Los Angeles reports arrest of caries with an adequate diet well fortified with fruits and green vegetables but low in cereals and sugar. He believes this due to increase in alkaline elements in the saliva and that the acid/base and calcium/phosphorus balances are most important. Martha Jones[6] of San Francisco agrees with Hawkins and believes that excess of alkali elements over acid is the controlling factor. Boyd[7] of Iowa University believes "that complete and optimum nutrition offers the teeth full opportunity to resist destructive agencies." The Michigan group[8] (Bunting, Jay, and coworkers) emphasizes the role of lactobacillus acidophilus. This group claims that an accurate diagnostic relationship exists between oral lactobacilli and dental caries activity and that the consumption of carbohydrate, particularly refined sugar, favors the growth of lactobacilli in susceptible individuals thereby stimulating caries activity.

We have thus listed briefly the theories that are being advanced today as to the role of nutrition or diet in the cause or control of dental decay. It will be seen that these emphasize the following various items as most important: vitamin C; vitamins D and A; calcium/phosphorus balance; alkali/acid balance; complete and optimum nutrition; and reduction of the carbohydrate intake, especially sugars.

[3]Howe, Percy R.; Bessey, Otto A.; White, Ruth L.: Practical Nutritional Suggestions for Dentists. *J. Am. Den. A.*, *28*, 1089; 1941, July.

[4]Mellanby, May: Dental Caries, Findings and Conclusions on Its Cause and Control. *Ibid.*, 26, 121; 1939, Jan.

[5]Hawkins, Harold F.: *Ibid.*, 74.

[6]Jones, Martha R.: *Ibid.*, 86.

[7]Boyd, Julian D.: The Role of Diet in the Control of Dentinal Caries. *Ibid.*, *27*, 750; 1940, May.

[8]Jay, Philip: The Role of Sugar in the Etiology of Dental Caries. *Ibid.*, *27*, 393; 1940, Mar.

Now at first glance this looks like a very confusing picture, but we believe that there are some important points upon which there is real unanimity of opinion and which it is important from the practical standpoint to stress. In the first place we can say that there is very general agreement today as to the nature and course of dental caries as set forth more than forty years ago by Miller, an American dentist in Berlin working in the laboratory of the renowned Koch. It was his conclusion that acid formed by the action of certain organisms on carbohydrate dissolves the mineral content of the enamel and dentine to cause decay.

For the purposes of this paper, we can omit the discussion as to which organisms are the most important in this process. It is interesting to note, however, that Becks and Wainwright[9] of the University of California report experiments made last year upon a large group of students to test the theories of the University of Michigan group and report complete confirmation as to the role of lactobacilli and carbohydrate. Waugh[10] of Columbia University, who has made many trips to Labrador and Alaska to examine the teeth of Eskimos, reports decay unknown as long as the Eskimo subsisted on the native diet, but when he eats "civilized" food, decay soon becomes rampant. He gives the three exciting causes as refined wheat flour, sugar, and molasses. The researches of Price[11] on native peoples would also bear out Waugh's conclusions. Fosdick[12] of Northwestern University reports the rapid production of acid on susceptible tooth surfaces within ten minutes after the ingestion of a candy bar. He concluded from this observation that the acids of caries were produced almost as soon as the candy was taken into the mouth.

We find too that in the experiments carried on by those claiming vitamins A, C, and D, calcium/phosphorus balance, alkaline base, and optimum diet as the important factors there has been in every

[9]Becks, Herman, and Wainwright, William W.: From presentation before California State Dent. Assn., 1940, and Am. Den. Assn., 1940. Not yet published.

[10]Waugh, L. M.: An Unsweetened Tooth Cannot Decay! *J. Am. Den. A.*, *27*, 1124; 1940, July.

[11]Price, Weston A.: Race Decline and Race Degeneration. *Ibid.*, *28*, 548; 1941, Apr.

[12]Fosdick, L. S.; Campaigne, E. E., and Fancher, O.: Rate of Acid Formation in Carious Areas: The Etiology of Dental Caries. *Ill. Den. J.*, *10*, 85-95; 1941, Mar.

case a reduction of the carbohydrate intake. Some of these investigators reduced the carbohydrate not because they believed it important in the control of caries, but because they believed it necessary in order to have other important foods eaten in proper amounts. The candy and cereal crowded out other necessary items. Boyd[13] says, "It is important to recognize that the amount of carbohydrate eaten daily by the average child is considerably in excess of that we prescribe for normal child nutrition." Howe[14] says: "Under modern circumstances sugar is used to excess. That its intake should be restricted admits of no argument." In fact, the statement has been made that no research group has ever controlled caries in the human on a high sugar diet.

Jay[15] calls attention to the National Confectioners' Association which has distributed literature throughout the land citing a rat experiment in which high amounts of sugar in their diet failed to cause carious teeth, with the inference, of course, that sugar is not harmful to human teeth. They failed to tell the whole story. Research[16] on rats has shown that for them the important factor in producing caries is fine or coarse food. A diet of the highest nutritional value to which has been added some coarsely ground corn or rice resulted in caries in all the rats that ate it. The addition of sugar here increases the rate of decay. A diet which lacks the bare necessities of life will not produce caries in the rat if it contains no coarse particles. The high sugar diet fed to rats reported by the confectioners contained no coarse particles. It is not always tenable to draw conclusions for the human from animal experiments alone. There may be factors which are very important in one case and not in the other, as this research well shows.

We see then that there is at least one common denominator in all the research that claims reduction of dental caries in the human by

[13]Boyd, Julian D.: The Role of Diet in the Control of Dentinal Caries. *J. Am. Den. A.*, *27*, 750; 1940, May.

[14]Howe, Percy R., et al.: See Foot-note No. 3.

[15]Jay, Philip: Research in Dentistry, Its Importance to the Public. *Proc. Am. Assn. Dent. Sch.*, *17*, 65; 1940.

[16]Hoppert, Carl A.; Webber, P. A., and Canniff, T. L.: The Production of Dental Caries in Rats Fed on Adequate Diet. *J. Den. Research*, *12*, 161; 1932, Feb.

dietary means and that is the reduction of carbohydrate, especially in the form of refined sugar. Evidence is increasing every year in this regard. Here in this instance the old adage repeated for centuries has been proved to be correct. Nina Simmonds[17] reports Aristotle, who lived more than 300 B. C., as asking why soft and sweet figs damaged the teeth, and also that Tolver in 1752 wrote: "All kinds of sweetmeats and sugar contribute very much to the destruction of the teeth."

We still have the apparent contradiction in the few people who can eat candy and sugar and yet do not have dental caries. The answer seems to be that the mouths of such individuals will not tolerate organisms associated with caries. Would that our researchers might find the cause and how to produce this immunity in others. So far their efforts in this direction have not succeeded. The number of such immune individuals is very small—perhaps not over three per cent.

Something should be said also in regard to the prevalent teaching today concerning the importance of nutrition for the expectant mother for her unborn child and later all through life in order to "build or maintain strong teeth." Such statements are made on assumptions which do not take into account the histology of tooth formation. The work of Kronfeld and Schour[18] with the discovery of the neonatal ring shows that only a very little calcification of teeth takes place before birth and that the outer portion of the enamel of deciduous teeth is not formed until after birth. They say there is no evidence for and much against the importance of prenatal diet so far as the teeth of the expected baby are concerned. Of course, an adequate diet for the expectant mother is very desirable for other reasons, but we should not attempt to secure this with statements that are not borne out by the facts. There are too many unfavorable reactions later from disappointed mothers as many dentists can affirm.

In building well-formed teeth, it seems the important time that

[17]Simmonds, Nina: Present Status of Dental Caries in Relation to Nutrition. *A. J. P. H.*, *28*, 1381; 1938, Dec.

[18]Kronfeld, Rudolf, and Schour, Isaac: Neonatal Dental Hypoplasia. *J. Am. Den. A.*, *26*, 18; 1939, Jan.

diet can play its part is from birth to eight years of age—fourteen if we include the third molars. Teeth are not like bone, capable of continued nutrition and self-repair. After the crowns of teeth are once formed, Kronfeld[19] says they "have just as good or just as bad a structure as they are going to have for the rest of their life." We know too that often children with the best quality of teeth have rampant caries, and again children with very poor quality may have no decay at all. Mottled teeth caused by fluorine in the water is a case in point.

In view of these facts, which also coincide with our clinical experience, we believe that the idea of feeding teeth to improve their structure so as to prevent caries is questionable at any time and after they are once formed, just indulgence in wishful thinking. So far as dental caries is concerned, there seems to be a great deal of evidence that what you leave out of the diet is more important than what you put in. The importance of an adequate diet for growth, development and health is not questioned. We are only attempting to discourage statements concerning nutrition and diet in regard to teeth that are not in accord with present known facts. There is general agreement too that while calcium and phosphorus are necessary in the formation of teeth, this is supplied in a well-balanced diet and that the use of proprietary pills or preparations for this purpose, or to reduce dental decay, is not necessary and may do much harm.[20] [21]

In conclusion we can say that there is considerable disagreement yet among research investigators concerning the exact role that nutrition and diet play in the control of dental caries. However, there are some points of general agreement which are of major importance from a practical standpoint. These are:

1. Dental caries is a decalcification of tooth structure caused by the action of acids formed in the mouth by bacterial decomposition of carbohydrates in the diet.

2. An optimum diet is desirable for bodily growth and develop-

[19]Kronfeld, Rudolf: Calcium Metabolism and Teeth, Summary of Present Day Knowledge. Foundation for Dental Research, Chicago Col. of Dent. Surg., 1939.

[20]Howe, Percy R., et al.: See Foot-note No. 3.

[21]Schour, Isaac: Calcium Metabolism and Teeth. *J. A. M. A.*, *110*, 870-877, 1938.

ment irrespective of its importance or non-importance as a preventive of caries.

3. Consumption of carbohydrate, especially sugar, should be reduced in the American diet both to provide better balance in the diet and, as several investigators believe, to reduce the amount of dental caries.

4. The use of proprietary pills or preparations to supply calcium and phosphorus to reduce dental decay should be discouraged because they are found in an adequate diet and their indiscriminate use may do much harm.

AMERICAN COLLEGE OF DENTISTS

Recommendations for the Control of Dental Caries[1]

THOMAS J. HILL, D.D.S.
Cleveland, Ohio

A summary, in the sense of making a condensation of what has been presented by the previous essayists, would be unnecessarily repetitious. This discussion will consider the subject from such a perspective that the various phases of the problem will be brought into universal focus. Much work has been done and many factors which influence the incidence of caries have been found, but as yet we cannot explain why some people have dental caries while others remain free from it.

Investigators of caries have approached the problem from two viewpoints: first, a study of the clinical aspects of the disease and the employment of remedial or corrective measures which appear to reduce the rapidity of attack or which decrease its frequency; second, a study of the causative factors and the prevention of the disease by the elimination of those factors.

This bilateral approach to caries has resulted in many conflicting if not contradictory conclusions and has left the problem in an enigmatical state. There are two factors which may contribute to these apparent conflicts:

1. Dental caries has been considered an entity when perhaps it is a syndromic expression of various systemic influences which permit a form of bacterial growth at one period, and which may be quite different from the bacterial growth at another period. Certainly there are many clinical differences between pit and fissure caries of the 12-year period and the smooth surface caries of the 20- to 24-year period. And there are clinical variations between the rampant caries of childhood and the occasional gingival caries of middle life.

2. It has long been recognized that regardless of habits of oral hygiene or dietary influence, certain individuals possess a resistance to dental caries while others are susceptible to it. While there is

[1]Read at the Convocation of the College, Houston, Texas, Oct. 26, 1941.

some clinical evidence to place all individuals in one of these two groups, the border line between them is not clear-cut. Some people are only more resistant than others. It is true that there is a small group of people who remain free from dental caries regardless of where they live, what they eat, or what methods of oral hygiene they practice. There is another small group which has rampant caries in spite of all remedial measures to control it. In between these two groups there is a large group of people close to the border line who may be thrown across that line by various methods—some by the medicinal treatment of teeth, some by the maintenance of wholly adequate diets, some by elimination of sugar from the diet, and perhaps some by better methods of oral hygiene. We must believe then that each individual possesses a certain relative resistance or susceptibility to this disease. The question arises, how can such a character be carried? Is it a true immunity carried by inheritance or is it an acquired character of the medium in which acid-forming organisms live? Does the fact that caries decreases with age imply that one acquires an immunity because of repeated exposure to the causative organisms, or are we to believe that diet improves with age and is the determining factor?

Isolated primitive races relatively free from dental caries have been under repeated observation. It must be admitted that the observation of hereditary influences is somewhat obscured, but not eliminated, by the dietary habits of the people studied. Yet we must recognize the low incidence of caries in primitive races, sometimes even when these peoples are not on a wholly inadequate diet. Is it not possible that hereditary characteristics play some part in addition to the dietary influences?

Hunt and Hoppert, in work which has been partially supported by the American College of Dentists, have made preliminary reports on their ability to produce strains of rats which are susceptible or resistant to dental caries while on a caries-producing diet. These strains were produced by inbred lines of mated siblings from groups which showed early or late development of caries. At the present time they have one strain of rats which develops caries of molar teeth in 18 days after being put on the Hoppert diet and another strain

which will not develop caries until nearly a year after being fed the same diet.

In human caries similar evidence has been produced. Klein and Palmer have shown that susceptible siblings have twice as much dental caries as resistant siblings, and Green has shown that in the Cleveland Public Schools the first molars of the Negro, Italian and Russian stocks, in the order named, last longer than those of others. Recent work by Beck indicates that in the University of California, the students who were definitely resistant had one or both parents who were also resistant. It is extremely difficult to separate hereditary influences, racial or familial, from the results of dietary habits of the race or family involved, but such evidence indicates that dental caries is not entirely a local condition.

The active cause may be local for it has been shown that the only manner in which local acids can be formed in sufficient quantities to cause dental caries is by carbohydrate degradation through the medium of acidogenic organisms. The normal flora of the mouth contain many types of acid-forming bacteria. The constant presence of oral lactobacilli at the site of early caries, added to the fact that these bacteria are among the chief acid-producers of the mouth, indicate that they are the immediate cause of decalcification of the enamel. It is known that in direct smears taken from the site of early caries, oral lactobacilli are the predominating bacteria found. It is also well established that if from saliva the number of these organisms per cubic centimeter is determined, their prevalence is an excellent indicator of the presence or absence of active dental decay.

It has been shown that saliva from a caries-resistant mouth with the addition of a small quantity of sugar will not support the growth of oral acidophilus. On the contrary, cultures made from saliva from a caries-susceptible mouth and treated in the same manner will support the growth of these organisms. Oral acidophilus will not grow in any human saliva unless sugar is present. This is in conformity to the clinical observation that diets with reduced amounts of sugar tend toward the reduction of dental caries. The fact that salivas from caries-free mouths will not support the growth of these organisms even when sugar is added lends support to the belief that

factors other than sugar help to determine the presence of oral lactobacilli in the mouth.

It has also been shown that when caries-susceptible individuals have been on a severely restricted sugar diet for a limited period of time the oral acidophilus count is reduced and tends to remain low even when unlimited sugars are later added to the diet. This emphasizes the presence of some factor which controls the growth of these acidogenic organisms. The number of these organisms found in the salivas of different individuals varies from complete absence to a million and a half organisms per cc. of saliva. The important question then is, why do these organisms live in some mouths and not in others? Why do young people have more of these acid-forming organisms than older people? Why are they absent from the mouths of babies until after the baby has teeth and why do they disappear from the mouths of adults when all teeth are extracted and return when artificial dentures are worn? One might theorize that their presence is related to formation of plaques upon the surfaces of the teeth, thereby retaining the proper nutrient material for bacterial growth. But other factors must be involved because primitive races which never brush their teeth and have heavy plaque formations are relatively free from dental caries and have few acid-forming mouth organisms; and among our own people there is a great difference in the amount of caries and the number of acid-forming organisms in the mouths of individuals who eat at the same table and practice similar methods of oral hygiene.

The only relationship between dental caries and its causative factors which has proved consistent is that early caries is associated with the presence of oral lactobacilli. However, the fundamental cause of caries will be determined only when we understand what changes have occurred in the host-parasite relationship which permits the growth and multiplication of these organisms in some mouths. It is upon this relationship that our greatest hope for the effective control of dental caries must be centered.

It should be emphasized that even though we do not understand all of the underlying causes of caries, partial control of caries can be attained, particularly in those cases which are close to the border

line between the caries-susceptible and caries-resistant groups. Such individuals may be thrown across that line, some by one method, some by another. The fact that one investigator may be able to influence the incidence of caries by the correction of inadequate diets, another by the elimination of sugars from the diets, and another by the medicinal treatment of teeth or better methods of oral hygiene, may not mean that these theories are in conflict as to the cause of caries, but may only mean that each is controlling a contributory factor, the removal of which may change the patient from the susceptible to the resistant group.

RECOMMENDATIONS

Insomuch as there is ample evidence that the incidence of dental caries can be influenced in one manner or another, it is recommended that the American College of Dentists promote an educational program for both the dentists and the public, urging that all of the following methods be employed:

1. Such general reduction in the consumption of sugar as is consistent with wholly adequate diets. Emphasis should be placed on the reduction of sugar between meals, i.e., candies, gums with high sugar content and highly sweetened drinks. The severe restriction of sugar has been demonstrated to reduce acidophilus counts as well as caries activity. This has been a good experimental demonstration, but it is improbable that the general public will make a sufficiently drastic reduction of sugar to be effective.

2. Promoting wholly adequate diets—because of the influence on tooth formation as well as their influence on general body metabolism, including the influence on dental caries.

3. The medicinal treatment of teeth and, in particular, the use of silver nitrate in incipient caries.

4. Prophylaxis in its broadest sense as outlined by a previous speaker.

It is further recommended that the American College of Dentists support and, through its Committee on Research, financially aid the investigation of:

1. Hereditary influences on dental caries. The College is at

present aiding the work of two investigators in this field. Continuation of this aid is desirable.

2. A re-study of the oral bacterial flora with particular attention to the nutritional requirements of the aciduric micro-organisms of the mouth. The striking need for such a study is apparent because at the last meeting of the International Association for Dental Research, of the 110 papers presented, only two dealt primarily with the bacteriology of dental caries.

The dental profession in order to fulfill a great public service in caries prevention, is obligated to use any or all of these methods to control the ravages of this disease.

However, it should be remembered that at the present time our knowledge is inadequate to effect a complete or an effective control in all people. A return to the history of preventive medicine discloses over and over again that the control of a disease has seldom if ever become effective until the causative factors of it were established. One might recite many examples in which the establishment of the cause led to the control of a disease. Medicine, today, is pursuing the quest for the cause of cancer and other diseases that they too might be controlled. Is it not rational to believe that the complete and effective control of dental caries must await a better understanding of the relationship between the host and the parasite which permits the growth of acid-forming organisms in some mouths and not in others?

AMERICAN COLLEGE OF DENTISTS

Proceedings of the Houston Convocation, Oct. 26, 1941

Reports of Committees

CONTENTS

I. Certification of Specialists

E. W. Swinehart, D.D.S., *Chairman*[1]

Baltimore, Md.

The work of the committee is far from complete, therefore it would be inadvisable to make a report setting forth conclusions at this time. Resulting from its activities during the past year, considerable data have been collected through questionnaires sent to the consultants of the Committee as well as by correspondence with other individuals and groups, interested in the subject. This material will have value in further study but at present its main import lies in indicating that much confusion of thought exists throughout the profession regarding the necessity for certification and methods of its general application. A consensus of opinion can be presented but because of wide-spread lack of information, misinformation and snap-judgment based upon these conditions, the reliability of such a consensus in providing a reasonable basis for action in the matter is questionable.

General regulation of special practice of some kind or kinds seems definitely on the way, provided the present structure and control of dental practice shall remain as at present. Interest has quickened in the subject in all parts of the country. This commends the work of other groups who have been promoting study of the problem, as

[1]The other members of this Committee (1940-41): Max Ernst, H. C. Fixott, W. E. Flesher, C. O. Flagstad, J. O. McCall.

well as that of your Committee during past years. Certification by legal statute now exists in four states and the various specialty groups are actively engaged in extending their form of control. It must be admitted however, that both of these plans are now based upon trial and error methods, as thus far, no thorough-going study of all phases of the subject has been made.

The Chairman believes that in order to develop a body of informed *opinion* and thus avoid unnecessary mistakes, such a comprehensive investigation should be carried on by the Committee during the coming year. As this would require much work and time, it is felt that various phases of the study should be assigned to sub-committees, the Chairman of each being a member of the main Committee. These chairmen should be empowered to select, with the approval of the Board of Regents, four other Fellows to act with them. The consultants to the Committee, as per the recent plan, should be available to all. In order to stimulate interest, create friendly rivalry and mainly to give credit where credit is due, the sub-committee reports should bear the names of those committees.

In such a thorough plan of study, the following topics are suggested:

1. Requirements for certification in each of the self constituted specialties. (This would involve the necessity of certification from the standpoint of the public and also the educational requirements.)
2. The amount and method of undergraduate instruction in the various specialized branches being given by dental colleges. (At present an undetermined number of schools provide little basic instruction in orthodontia and no clinical training.)
3. Facilities available for adequate graduate instruction.
4. Methods of certification employed by various Specialty Boards. (Advantages and Disadvantages; Results as viewed by public, general practitioners and specialists.)
5. The plan of control recently adopted by the American Dental Association. (Its results as seen by the medical profession.)

6. Certification by legal statute in states in which it has been in operation for several years. (Comparison of laws; Results upon public and profession. Measures employed by State Societies in securing such legislation. Such a study is now well under way by a member of the Committee, Dr. William Flesher. As he is very much interested in the subject and particularly well qualified to deal with it, his continuance on the Committee is recommended.)

The Educational Council of the American Dental Association now has a Committee which has joined in study of the subject. Apparently from its original report the Committee has planned to make its investigation comprehensive and thorough, to provide a sound basis for action by the Council. The Chairman has suggested that these two committees cooperate during the coming year whenever possible. This may or may not be altogether desirable as two groups working independently should provide from their different viewpoints a more complete and impartial picture of the situation. It might be well if a division of the subject could be made in order to avoid duplication of effort and hasten completion of the study. One consideration to be borne in mind is that the College must remain a fact-finding body. Harmonious co-operation during the preliminary investigation should make the findings of the College more readily acceptable at the time of final action upon the matter.

II. Education

Willard C. Fleming, D.D.S., *Chairman*[2]
San Francisco, California

During the past year there has been a noticeable increase in the amount of interest shown by the profession in the subject of dental education. This sudden upswing of interest may be attributed to a number of causes. Some of these are: 1. Interest attendant upon the celebration of the centennial of dental education; 2. Activities of the Council on Dental Education; 3. Publicity given the find-

[2]The other members of this Committee (1940-41): A. W. Bryan, Harry Lyons, J. T. O'Rourke, R. S. Vinsant, L. M. Waugh, F. W. Hinds.

ings of the Selective Service physical examinations; 4. The apparent shortage of dental graduates. In any event, the general interest is apparent and denotes an attitude on the part of the dental profession that should not be allowed to change.

We selected the following topics for study and wish to present our comments and recommendations to the members of the College:

1. "Requirements for the approval of a dental school."
2. Certification of specialists.
3. Dental school and examining board relationships.
4. Stimulation of qualified young people to take up dentistry as a career.
5. Proposed shortening of the calendar years (not hours) of the present dental course during the period of the emergency.
6. Preclinical teaching: Is it desirable to have preclinical subjects (anatomy, bacteriology, pathology, physiology, etc.) taught by medical school teachers to combined classes of medical and dental students?

Requirements for the Approval of a Dental School

The committee wish to express their approval of the activity of the Council on Dental Education and to congratulate them upon the scope of their recommendations and their attitude which invites cooperation and counsel.

In line with this attitude of the Council, we do wish to urge that certain requirements continue to be general rather than specific in order to allow latitude for experiment and development. Two of the requirements in particular might be mentioned. One is the admission requirements, the strict interpretation of which would undoubtedly work a hardship on some schools. In some of the academic schools it is almost impossible to meet the specific requirements set up by the Council in the two year period.

The other item that might be considered is the statement that all dental schools should function as an integral part of a university. There is no question as to the value of this requirement, but some consideration might be made of those schools that can show evidence of real efforts to bring about this relationship. Some schools are dependent upon future endowments, gifts and bequests before such a relationship can be established. Evidence of sincere attempts in this direction might well be considered by the Council. While it is

desirable to see that all of our schools are integral parts of universities, it is just as important to see that they are connected with our strongest educational groups. Pressure for immediate action might conceivably force some schools into a university relationship of decidedly second choice.

Under the heading of Curriculum, the Council lists what appear to be the minimum courses they expect to find in a dental school. No mention is made of dentistry for children. It is quite possible that the Council feels this subject may be taught as a part of Operative Dentistry. However, a great many dental educators feel that this phase of dental practice raises a sufficient number of special problems to warrant special instruction. From a viewpoint of comparative values, such instruction might be offered even if given at the expense of such subjects as conduct of practice, ethics or jurisprudence.

Certification of Specialists

The opinions of the Committee may be summed up in the following quotation from one of the members:

"I favor a program offering certification to qualified practitioners who may elect to limit their sphere of practice. However, for the present, I believe that this should be done voluntarily by the professional organizations without the whip of state legislative enactment. The legal complications of the latter may tend to stifle the special development of qualified individuals. The limited experience in those states where legislative enactment has already occurred may be profitably studied by the committee."

Dental School and Examining Board Relationships

This committee is of the opinion that the College should encourage and further stimulate the attempts now being made to develop sound relationships between the educational and licensing groups.

That both of these groups use a similar technic (examinations) does not mean that both have the same objectives. The licensing boards are primarily a police group concerned with the dentists' ability to render professional service and his observance of the dental law. The educational group are concerned with developing the dental students' aptitude and ability, and inculcating within him

those scientific and professional attitudes so necessary for the continued advance of dentistry.

We wish to recommend that steps furthering sound relationship between these groups be taken by the Council on Dental Education. Furthermore, the American College of Dentists as an organization and through its individual members should assist in developing this activity. Recognition and encouragement should be given the group of dental teachers now furthering this relationship through the *Journal of Dental Education.*

Dentistry as a Career

The Council on Dental Education has undertaken an important and courageous move in publishing the brochure, "Dentistry as a Career." The dental profession should assist the Council in stimulating a greater interest in dentistry by bringing before young people the intellectual and professional opportunities of dentistry as a career.

The following statement was made by one of the members of the committee:

"A point has been reached where we must focus our attention on the fact that advances in dentistry in the future are for the most part dependent upon the quality of students admitted to our dental schools. It is clear that we should no longer attach too great importance to length of training or to required subjects, but rather should give primary consideration to the student as a whole and his achievement in the college of arts. For the various agencies to continue imposing restrictive admission requirements in terms of semester hours without at the same time making dentistry and dental education attractive, and encouraging the superior student to apply for admission represent to me, at least, a one-sided approach to the problem. We must have in dental education the same support of the profession as is now common in medical education. It is not that we need a great many more dental students, but rather that there is need for a broader field for selection on the part of dental schools. Students in the college of arts should be encouraged to believe that dentistry offers something worthwhile and that it no longer is the

trade craft which of necessity it was, not so many years ago. While it is true that some members of the profession may see in this the danger of crowding, in dentistry, it would seem that the Council on Dental Education might easily control the situation and prevent too great an increase in the number of students. Overcrowding in dentistry, of course, is bad for the profession and for the public, but it can be avoided while at the same time increasing the quality of men entering the profession.

"The Council on Dental Education, through publication and distribution of 'Dentistry as a Professional Career' will to some extent improve the situation; however, the greatest improvement can come by way of the profession itself. From my point of view, the profession at the moment can make no greater contribution because fundamentally the quality of the man power in any group is a major determining factor for its future activities."

Proposed Shortening of the Calendar Years of the Present Dental Course During the Period of the Emergency

There is a growing interest in reducing the calendar years required for medical and dental education. This move has been stimulated by the needs growing out of the present national emergency. It is doubtful that conditions warrant taking this step at this time. However, if such a change should become necessary, we wish to recommend that the schools work in cooperation with the Council on Dental Education. In no event should the hours of instruction be shortened or quality impaired.

Desirability of Medical School Teachers Teaching Preclinical Sciences to Combined Classes of Medical and Dental Students

The committee feels that the policy of inviting comment by members of the profession on controversial questions should be continued. Furthermore, it is believed that this question should continue to be discussed on a national basis until such time as an answer can be determined and used as a guide to assist the dental educational group. A direct answer is probably not possible under our present educational organization. Thoughtful consideration of this ques-

tion may have far reaching effects in future educational development.

The following bibliography represents a selected list of articles, editorials and books on dental education published during this year:

American Dental Association: Council on Dental Education: "Dentistry as a Professional Career." *American Dental Association*, 1941, (Chicago).

Appleton, J. L. T.: Education in Dentistry, *J.A.D.A.*, *28*, 359-65; 1941, (March).

Are Our Educational Standards Too High (Editorial): *J.A.D.A.*, *28*, 1133-36; 1941, (July).

Asgis, Alfred J.: Orientation in American Dentistry: Its History and Social Professional Background: A Text-Workbook for Dental Students and Professional Health Workers. Clinical Press, n.d., (New York).

Idem. New Frontiers in Dental Education: *J. Higher Educ.*, *12*, 325-29; 1941, (June).

Burwell, Sidney C.: The Harvard Plan of Dental Education: *J. Den. Educ.*, *5*, 179-86; 1941, (Feb.).

Commercial Grants for Research in Universities, (Editorial): *J. Am. Col. Den.*, *8*, 149-51; 1941, (June).

Dental Students' Register (Editorial): *J. Am. Col. Den.*, *8*, 138-41; 1941, (June).

Dentistry as a Professional Career (Editorial): *J.A.D.A.*, *28*, 1328-29; 1941, (August).

Filling Teeth with College Degrees, (Editorial): *J. Am. Col. Den.*, *8*, 144-46; 1941, (June).

Fleming, Willard C.: A Discussion—Should Preclinical Subjects be Taught to Combined Classes of Medical and Dental Students? *J. Am. Col. Den.*, *8*, 192-212; 1941, (Sep.).

Idem. University of California Dental Curriculums: *J. Den. Educ.*, *5*, 221-27; 1941, (Feb.).

Harvard School of Dental Medicine, (Editorial): *J. Am. Col. Den.*, *8*, 69-71; 1941, (March).

Horner, Harlan H.: An Inventory in Dental Education; *J. Den. Educ.*, *5*, 261-76; 1941, (April).

Jones, Morton H.: The Aims of Licensure; *J. Den. Educ.*, *5*, 167-78; 1941, (Feb.).

O'Rourke, John T.: The Aims of Dental Education; *J. Den. Educ.*, *5*, 155-66; 1941, (Feb.).

O'Rourke, John T., and Miner, Leroy M. S.: Dental Education in the United States. W. B. Saunders, Philadelphia and London, 1941, 367 pp.

American Dental Association: Council on Dental Education: Requirements for the Approval of a Dental School; *J.A.D.A.*, *28*, 151-56; 1941, (Jan.).

Robinson, J. Ben.: Dental History as a Subject of Undergraduate Instruction; *J. Am. Col. Den.*, *8*, 153-61; 1941, (Sep.).

Idem. Functions of the Council on Dental Education; *J. Den. Educ.*, *5*, 187-94; 1941, (Feb.).

Idem. Medico-dental Relationships in Dental Education; *J.A.D.A.*, *28*, 785-93; 1941, (May).

Romnes, Arne F.: Graduate Education in Preventive Dentistry; *J. Den. Educ.*, *5*, 283-90; 1941, (April).

Schour, Isaac: The Problem of Dental Research, Teaching and Clinical Practice; *J. Den. Res.*, *20*, 221-30; 1941, (June).

Unwarranted Dental Pessimism, (Editorial): *J. Am. Col. Den.*, *8*, 229-31; 1941, (Sep.).

What's in a Name: Graduate or Post Graduate? *J. Am. Col. Den.* *8*, 71-72; 1941, (March).

Wilbur, Ray Lyman: Professional Education and Licensure; *J. Den. Educ.*, *5*, 149-154; 1941, (Feb.).

III. Endowments

Arthur H. Merritt, D.D.S., *Chairman*[3]
New York City

Very early in its career, the American College of Dentists, in recognition of the many problems having to do with the progress of dentistry in this country, appointed a committee to study ways and means for the possible creation of an endowment fund and to report

[3]The other members of this Committee (1940-41): H. J. Burkhart, Dan. U. Cameron, Oscar J. Chase, William J. Gies, E. W. Morris.

its recommendations to the College for consideration. In taking this action, the College had in mind the vast unexplored fields of dental research; grants in aid to those already engaged in research work; the unfinished task of professional journalism; the need for constructive action in dental education; grants to needy students in our dental schools, etc. It was an ambitious aspiration and one that might well fire the imagination of any forward looking group interested in professional progress.

Unfortunately for all concerned, constructive action was delayed during the years which have since intervened, economic conditions having been such as to raise some question in the minds of the Committee as to the wisdom of such an undertaking. Business depression, unemployment, increased taxation, lower standards of living and a vast public debt, have all conspired against the work of this committee. The net result has been that, to date, no action toward the raising of an endowment fund has been taken. Not since the plan to create such a fund was first conceived, has there been a time when it seemed less opportune than at present to attempt it. With one-half of the world in arms against the other half, with a steadily mounting public debt and added taxes, any committee appointed to consider ways and means for raising an endowment under these conditions, might well fold its arms and say, What's the use? But the fact remains that the things which the College had in mind, in appointing that first committee, were never more necessary to professional progress than at present. If science is to be preserved in the world; if progress in the peaceful pursuits of every-day living is to be maintained, is it not our duty, living in a country where human freedom is still a living reality, not only to gird ourselves to support every effort that is being made to preserve that freedom, but at the same time to do everything within our power to advance the arts of peace, not forgetting that the subversive forces abroad in the world "neither slumber nor sleep."

These and other things have all been given careful consideration by your committee. Five times during the year it has been polled; requests for suggestions have been made and when received, sent to each member for consideration and further suggestions. Since the

appointment of an advisory committee, to each member has been sent a progress report and criticisms and suggestions invited. There have been those of its members who have felt that this was an inopportune time to consider the raising of an endowment or the formulation of plans to that end, and have counselled against it. Others again, while agreeing that the time for such action is not propitious, felt that it was wiser to recommend what we hope to achieve rather than what we are afraid to attempt, in the belief that it is better to have tried and failed than never to have tried at all. In other words it is the opinion of the Committee that it should consider and report its recommendations in terms of what is *desirable*, the Board of Regents to accept or reject, or modify, the report. The Committee feels that it has discharged the duty for which it was appointed when it offers suggestions by which such a fund might be created, if and when the College so decides. It is with this in mind that the following recommendations are made:

First. The name of the Committee should be changed to that of "Committee on Endowment." There are no indications that it was the intention of the Board of Regents, in setting up such a committee, to plan the creation of a variety of endowment funds, but rather to consider the coverage of objectives for which one fund and endowment income could be constructively used.

Second. Each year some part of the annual income of the College above current expenses should be set aside and applied to the Endowment Fund.

Third. A direct annual appeal should be made to the Fellows for individual contributions to the Fund. It is also suggested that this appeal might be attached to the bill for annual dues, separated from it by perforation so it could be easily detached. This would serve to remind each member of the Fund and encourage contributions to it. Five or ten dollars annually from each member would in a few years, create a substantial fund without embarrassing anyone. It would also have a stimulating effect upon the membership and add to their interest in the other activities of the College.

Fourth. Make the 25th anniversary year and annual meeting

(1945) a special occasion for important additions to the Fund, this effort to be continued meanwhile.

Fifth. Provide for an honor roll of contributors to be published from time to time in the Journal of the College. This would further serve to keep the Fund before the members and encourage contributions.

Sixth. Emphasize the making of bequests to the Fund by will. This would apply especially to Fellows but could include laymen who might be interested in the progress of dentistry.

Seventh. Suggest to Fellows that, instead of sending flowers at the death of a colleague (where they are often an embarrassment), the cost of same be sent to the Endowment Fund, the members of the family to be notified by the Secretary that a contribution (without mentioning the amount) had been sent to the Fund by Dr. Blank in memory of the deceased, and that mention of the same would be published in the Journal.

Eighth. Consider plans that might be effective in appealing to philanthropic foundations. This would need to await developments and a statement of endowment objectives. It is believed that we should first of all prove our interest in the Fund as a group before we can hope to appeal successfully to others.

Ninth. Appeal to men of wealth for contributions, especially among one's patients. This too would need to await developments.

Tenth. A definite objective or program should be developed, setting forth clearly the purpose or purposes for which the income of the Fund will be used. This is necessary in appealing to foundations or philanthropists for support.

Eleventh. The income from the Fund should be used year by year in support of the objectives that the College may regard as in greatest need of assistance. This would give the Fund the widest possible elasticity for effective service.

Twelfth. If and when an Endowment Fund is set up by the College, a Board of Trustees, three in number, should be created by constitutional amendment to have charge of the proposed Fund.

These, briefly, are the recommendations of the Committee on Endowments. They have been framed with a view to indicating

possible ways and means for the building up of an Endowment Fund. The Committee is unanimous in the belief that a Fund such as is being considered by the College can be of inestimable value to the profession.

There are members of the Committee, including the Chairman, who feel that the creation of such a fund is a matter of supreme importance and that action should not be further delayed in the hope that a more favorable opportunity will present itself. Had plans for the accumulation of such a fund been set in motion when the project was first considered, who can estimate what it might have meant in the onward march of scientific dentistry?

IV. Hospital Dental Service

Howard C. Miller, D.D.S., *Chairman*[4]
Chicago, Ill.

The activities of the Committee on Hospital Dental Service of the American College of Dentists during the past seven years have been directed toward the study and determination of the extent of dental service in the hospitals of the United States; and to co-operate with other dental and medical organizations interested in encouraging the recognition, extension and uniformity of dental service in all hospitals.

The question of dental internes and interneships has been studied, and efforts have been made to encourage the appointment of dental internes in hospitals having dental service. The most recent reports compiled by the American Medical Association show a decided increase in these appointments.

The Committee has received excellent co-operation from the Council on Medical Education and Hospitals of the American Medical Association in securing accurate data on the number of dental internes, the length of service, the type of interneship, the location, capacity and type of hospital, and other information pertinent to our study.

Our efforts so far have clearly shown that further extension of

[4]The other members of this Committee (1940-41): R. W. Bunting, E. A. Charbonnel, L. M. Fitz-Gerald, Leo Stern.

dental service in hospitals will require a vast amount of coordinated effort by the American College of Dentists and all dental and medical organizations, who for so many years have endeavored to bring about a closer relationship between medicine and dentistry. The problem now is to interest medical groups, hospitals and individuals in the value of dental service as an integral part of the modern hospital, and this will necessitate not only further stimulation of interest, but full co-operation of dental societies in each community.

The recent appointment of consultants to the Committee on Hospital Dental Service in various sections of the country, by the College, should do much to bring this about. In addition, this will permit more careful and detailed study of the problems which will arise in individual hospitals. It is the intention of the Committee to make available to each of these consultants all the information which has been compiled, and to each will be sent a strong appeal that a study be made of the situation as it exists in their community, the results of which study should be sent to the Committee with recommendations and suggestions as to the future activities of the Committee.

When this has been done, it is hoped that a plan may be formulated that can be adapted to all hospitals. The data received should be of great value in establishing uniformity of hospital dental service and will help in determination of the highest possible standards.

The American Hospital Association, through a special Committee appointed for this purpose, has prepared a manual on Dental Care and Interneships in Hospitals, and this manual contains a complete plan for the standardization and extension of dental service. It is contemplated that each of the recently appointed consultants and the members of this Committee will be supplied with a draft of the manual in order that their suggestions and recommendations may be forthcoming. A request has already been sent to Dr. T. L. Marsh of Toronto for a sufficient number of copies.

The future activities of this Committee should be directed toward further co-operative effort and study of all phases of the subject with the dental and medical organizations active and interested in establishing and extending dental service in hospitals; to continue their

endeavors in establishing dental service as an integral part of the modern hospital, and to continue to stress to members of the dental and medical professions, hospital organizations, and lay groups, the importance of dental service as a part of complete health service.

V. JOURNALISM

J. Cannon Black, D.D.S., *Chairman*[5]

In the early part of the last century a few men interested in the practice of dentistry as a public health service saw a faint view of a possible new horizon which might be developed to greater proportion through the organization of dental societies, a professionally controlled journal, and a College where those who desired to practice dentistry could receive ethical and scientific instruction in that art. Since that time history records the correctness of their vision and today we recognize a new horizon which should cause us to consider earnestly the present and arouse inspiration for the future.

In order to enlarge this new horizon it must be recognized that education, literature, and research are the foundations upon which we have to build. These must be strengthened not only as individual units but solidly united through a better understanding of their dependence one upon the other.

In tracing the historical background of our present day education we are proud of the progress made. Our colleges, the majority of which were so long under proprietary control, have met the tests and standards for university affiliation, and only a few are without university guidance. Professional organizations are aiding and stimulating the practitioner to greater efforts. Research is exploring new frontiers and making known its findings to the profession, while journalism has almost completely freed itself of proprietary control and is endeavoring to assist in, and record, our educational growth.

While the past has witnessed noticeable advancement in our development and dental educational standards are steadily being carried higher, the requirements of present day dental practice are

[5]The other members of this Committee (1940-41): J. M. Donovan, W. B. Dunning, Walter Hyde, B. E. Lischer, T. F. McBride, E. G. Meisel, Edw. B. Spalding, R. C. Willett.

becoming more exacting, and there are still many problems which must be intelligently solved if we are to continue to advance in dental health service.

For years dental periodicals, undisciplined and undirected, developed under the guise of professional journalism. The desire by the publishers for commercial profits, and the failure of a majority in our profession to recognize the need for professional control of their periodical literature, furnished the fertile ground in which our former publications grew.

During these years voices were raised against this perplexing problem, but it was not until the American College of Dentists in 1928 created the Commission on Journalism that an organized effort was made to place our publications upon a higher educational plane and also under the control of the profession.

In accepting this appointment, the Commission realized that a study of past and present journalistic conditions was necessary before a proper method of procedure could be determined. After a thorough analysis and open condemnation of many practices, but with a new and better knowledge of the problem, they made certain recommendations which they hoped would lead to a planned and well-directed effort for the future development of a new standard of dental literature.

In the endeavor to attain this new standard much credit must be given to the American Association of Dental Editors. They have been fully cognizant of the fact that their responsibility to the profession was not only for the present. This Association, since its organization ten years ago, has continually sought to analyze ways and means by which improvements might be brought about, and through earnest and intelligent effort, has contributed greatly to the future growth of our periodicals. This may be comprehended more fully by a study of the reports of their Survey Committee.[6], [7], [8]. A review of the first published report of the Commission on Journalism[9] and a comparison of the findings and recommendations made

[6]Transactions, American Association of Dental Editors, p. 43-50; 1938.
[7]Idem., 44-47; 1939.
[8]Idem., 41-47; 1940.
[9]The Status of Dental Journalism in the United States, 1928-1931.

in that survey with the above mentioned later reports of the Survey Committee of the Editor's Association give evidence that much has been accomplished.

Upon the presentation of the Commission's first report, dental journalism was in a chaotic condition. The profession gave little recognition and small financial support to those journals which endeavored to represent it officially, but willingly granted many commercially controlled publications the right to publish their society proceedings. In so doing they were aiding these publications.

When the Survey Committee of the Dental Editors Association presented their reports, an entirely different situation had developed. Proprietary periodicals did not enter into the picture. The profit-seeking journal had become of little consequence, while more than one hundred professionally controlled dental periodicals were exercising their right to speak for the profession. Some of these journals have grown to sizeable proportions under the guidance of editors who are showing an intelligent interest in professional problems and a capability of maintaining scientific editorial leadership. In these publications we are constantly made aware of a desire for a departure from tradition and of a forward-looking attitude toward the future. But, what can be said for those periodicals which are laboring under many handicaps? What is obstructing their growth and how can it be remedied?

The Association of Dental Editors observed these shortcomings and their Survey Committee undertook an investigation of the present requirements of dental journalism in an effort to suggest possible methods of improvement. In making a survey of all non-proprietary dental publications they found the important defects to be: 1. Lack of funds; 2. Need for better editors; 3. Need for better material—text and editorial; 4. Lack of membership interest.

An exhaustive study was then instituted to point out ways to meet these needs, with the result that in 1940 the Association's Committee prepared a basic, long-range program for the entire journalistic structure. This was made available for all who might wish to use it. The need for a truly educational program for our journalism

has been presented again and again. The reasons are many and have been often expressed, but success lies in their repetition. Just one thing will bring the result sought for—and this was mentioned in the Survey's analysis—overcoming the lack of membership interest. It has been encouragingly said that "Progress begins with the minority. It is completed by persuading the majority—by showing the reason and the advantage of the step forward and that is accomplished by appealing to the intelligence of the majority."[10]

The 1939 report of the Commission on Journalism (since 1940, the Committee on Journalism) contained a list of all dental periodicals published in the United States as of May, 1939, classified according to the classification adopted by the College.

This year all Class A and B publications have been reviewed in an effort to ascertain the means used to exercise and maintain professional control. Also, to learn the number of these journals publishing advertisements of products publicly indicated as acceptable to the Council on Dental Therapeutics of the American Dental Association and, if they published advertisements of products not approved by the Council, whether it was done with the consent and approval of the organization. Of the 111 questionnaires sent out all but two—Journal of the Oregon State Dental Society and the Connecticut State Dental Society Bulletin—were returned answered and the replies indicated a splendid cooperation on the part of the editors. All periodicals listed in Class A or B are under professional control but the method of this control is varied. In the majority of cases the editor is appointed either by the President or Council of the organization and, with the assistance of an editorial board or publications committee, is responsible for the policy of the periodical. With but few exceptions the publications in their advertising policy give whole-hearted support to the valuable findings of the Council on Dental Therapeutics of the American Dental Association. The following is an analysis of the advertising policy of our Class A and B publications in relation to the recommendations of the Council, as reported by the editors: (J.—Journal; Bul.—Bulletin; Col.—Col-

[10]Curtis, George William: Forty Thousand Quotations by Charles Noel Douglas, Published by Blue Ribbon Books Inc., 1939, p. 1389.

lege; Fr.—Fraternity; DHA—Dental Hygienists and Assistants.)

	J.	*Bul.*	*Col.*	*Fr.*	*DHA*
Periodicals restricting such advertising to acceptable therapeutic products...	26	16	11	1	4
Periodicals with no restrictions regarding therapeutic products.....	3	3	1	0	0
Periodicals not advertising therapeutic products.....	8	9	7	3	0
Periodicals publishing no advertising...	4	3	7	1	0
Periodicals failing to reply.....	1	1	..	..	..

A comparison of the list of Class A and B publications as published in the Commission's 1939 report[11] with those of the present survey shows that only a few changes have occurred. The *Bulletin of the Dental Society of the State of New York* is now listed as a Journal. The *Year Book, College of Dentistry, University of Southern California*, being only a program of annual Alumni meetings, has been omitted. Publication of the *Maine Dental Society Bulletin* was discontinued, and the *Harvard Dental Record* has been succeeded by the *Harvard Dental Alumni Bulletin.*

A new group—*Class D: Periodicals that are distributed free of charge to American dentists generally*—has been added to the classification.

The current classification of dental periodicals exclusive of "house organs" is appended as a part of this report.

CLASSIFICATION OF DENTAL PERIODICALS

By the Committee on Journalism of the American College of Dentists
October, 1941

CLASS A: PERIODICALS CONTROLLED AND OWNED BY DENTAL SOCIETIES

1 *Society Journals*

American Association of Dental Editors, Transactions of the
American Association of Dental Schools, Proceedings of Annual Meeting
American College of Dentists, Journal of the
American Dental Association, Journal of the
Angle Orthodontist, The
Apollonian, The

[11] J. Am. Coll. Den., 7, 188; 1940, (Sept.)

Archives of Clinical Pathology
Arkansas State Dental Association, Journal of the
California State Dental Association, Journal of the
Colorado State Dental Journal
Dental Education, Journal of the American Association of Dental Schools
Dental Outlook
Dental Research, Journal of
Dentistry for Children, Journal of
District of Columbia Dental Society, Journal of the
Florida State Dental Association, Journal of the
Georgia State Dental Association, Journal of the
Houston District Dental Society, Journal of the
Illinois Dental Journal
Kansas State Dental Association, Journal of the
Michigan State Dental Society, Journal of the
Minneapolis District Dental Journal
Missouri State Dental Association, Journal of the
Nebraska State Dental Association, Journal of the
New Jersey State Dental Society, Journal of the
New York Journal of Dentistry
Northwest Dentistry—Regional—Minnesota, N. Dakota, S. Dakota
Ohio State Dental Society, Journal of the
Oregon State Dental Association, Journal of the
Pennsylvania State Dental Journal
Periodontology, Journal of the
Second District Dental Society of the State of New York, Journal of the
South Carolina State Dental Association, Journal of the
Southern California State Dental Association, Journal of the
State of New York, Journal of the Dental Society of
Tennessee State Dental Association, Journal of the
Texas Dental Journal
Washington State Dental Journal
West Virginia Dental Journal
Wisconsin State Dental Society, Journal of the

2 *Society Bulletins*

Alabama Dental Association, Bulletin of the
Alameda County District Dental Society, Bulletin of the
American Society of Oral Surgeons and Exodontists, Bulletin of
Fortnightly Review of the Chicago Dental Society
Chronicle, Omaha District Dental Society
Cincinnati Dental Society, Bulletin of the
Cleveland Dental Society, Bulletin of the
Connecticut State Dental Association, Bulletin of the
Denver Dental Association, News Bulletin of the
Detroit Dental Bulletin
Essex County New Jersey Dental Society Bulletin
Hudson County Dental Bulletin
Iowa Dental Bulletin
Kansas District Dental Society Bulletin
Kings County Dental Society Bulletin
Massachusetts Dental Society, Bulletin of the
Midtown Dental Society Bulletin of New York City
Milwaukee County Dental Society, Bulletin of the
Nassau County Dental Society, Bulletin of the
Newark Dental Club Bulletin
Ninth District Dental Society, Bulletin of the
North Carolina Dental Society, Bulletin of the
Northern Dental Society Bulletin
Odontological Society of Western Pennsylvania, Official Bulletin of the
Oklahoma State Dental Society, Bulletin of the
Outlook and Bulletin
Pacific Coast Society of Orthodontists, Bulletin of the
Philadelphia County Dental Society, Bulletin of the
San Diego County Dental Society Bulletin
Southern California State Dental Association, Year Book of the
Toledo Dental Society Bulletin
Virginia State Dental Association Bulletin

3 *College Publications*

Alumni Bulletin, Medical College of Virginia
Alumni Bulletin, University of Illinois College of Dentistry
Alumni Bulletin, University of Michigan Dental School
Articulator, The (St. Louis University)
Baltimore College of Dental Surgery, Journal of the
Bur, The (Loyola University)
Bushwhacker, The (Kansas City Western Dental College)
Caementum, (North Pacific College)
Contact Point, (College of Physicians and Surgeons, San Francisco School of Dentistry)
Columbia Dental Review, The (Columbia University, N. Y. C.)
Dental Rays, (University of Pittsburgh)
Dental Violet, The (N. Y. U. College of Dentistry)
Dentoscope, The (Howard University)
Explorer, The (Kansas City Western Dental College)
Georgetown Dental Journal, (Georgetown Dental School)
Harvard Dental Alumni Bulletin
Informat, The (Texas Dental College)
Medentian, The (University of Buffalo)
News Letter, (University of California College of Dentistry, San Francisco, Cal.)
New York University Dental News, The
Northwestern University Dental Bulletin
Penn Dental Journal, (University of Pennsylvania)
Temple Dental Review, (Temple University School of Dentistry)
Tufts Dental Club of New York, Bulletin of the
Tufts Dental Outlook, (Tufts College Dental School)
Washington University Dental Journal

4 *Fraternity Publications*

Alpha Omegan, The
Desmos
Frater of Psi Omega, The
New York News, (Alpha Omega Club of New York)
Xi Psi Phi Quarterly

5 *Hygienists or Assistants Publications*

American Dental Hygienists Association, Journal of the
Dental Assistant, The
Dental Hygiene Quarterly
New York State Dental Hygiene Quarterly, The

CLASS B: PERIODICALS CONTROLLED BY DENTAL SOCIETIES BUT PRIVATELY OWNED

SOCIETY JOURNAL

Indiana State Dental Association, Journal of the

CLASS C: PERIODICALS PRIVATELY CONTROLLED

(*a*) By owners *exclusively* engaged in the business of publication
Dental Digest
Dentistry—a digest of practice
Orthodontics and Oral Surgery, American Journal of
(*b*) By owners *not exclusively* engaged in the business of publication
Dental Items of Interest

CLASS D: PERIODICALS THAT ARE DISTRIBUTED FREE OF CHARGE TO AMERICAN DENTISTS GENERALLY

Dental Survey
Oral Hygiene

VI. ORAL SURGERY

Malcolm W. Carr, D.D.S., *Chairman*[12]
New York City

Effort has been made, during the past year, to review the activities of the Committee on Oral Surgery, to determine whether these activities should be extended or curtailed, and in order to determine just how this committee might function to the best interest of the profession at this particular time. It was deemed desirable to extend the work of the committee, and in doing so it appeared as though best results would be obtained by engaging wider interest through-

[12]The other members of this Committee (1940-41): E. R. Bryant, C. W. Freeman, W. I. Macfarlane, W. H. Scherer.

out the country. Therefore, it was determined that in order to accomplish this purpose, consulting members of the committee should be appointed accordingly. Consultant assignments to the Committee on Oral Surgery were first made in the various geographical sections of the College, and later additional consultants were appointed from states not included in the various sections. It is hoped that this procedure will prove to be one that will engage wider interest, and also a procedure that will be exceedingly helpful in disseminating more widely, and with greater force, the recommendations that the committee, from time to time, will propose.

The Chairman of the Committee has reviewed all past Annual Reports, and has attempted to evaluate the importance of past recommendations, with particular reference to recommendations of specific work suggested for committee activity. Although the Chairman had requested that he be relieved of his responsibility as Chairman of the Committee, he later agreed to serve as Acting Chairman until a successor was appointed. As time went on, it appeared desirable for him to continue in this capacity, to the conclusion of the present year. Various circumstances have made it difficult for the committee to function with the force and success that have been planned for it, and as the result the report this year is essentially one of progress. The appointment of consulting members to the committee alluded to in a previous paragraph, is a definite accomplishment.

A National Committee, with a geographical distribution of its membership, has many desirable features. However, it is recognized that it is difficult for a committee so composed to function successfully. The committee feels that in as much as we now have a national and geographical distribution of consulting members, it would be well to concentrate the membership of the active committee within an area sufficiently limited so that committee meetings may be held with full representation of membership, in order to engage in active discussion, planning for the future, and formulating concrete recommendations. This suggestion the committee respectfully presents this year as a recommendation.

In the previous reports, the committee has also taken occasion to refer to the coordinating of activities of the Committe on Hospital Dental Service, the Committee on Certification of Specialists and the Committee on Oral Surgery. Each one of these committees has for its purpose, at least to some extent, the same aims of accomplishment, and the coordination of these committees is exceedingly desirable for the purpose of interchange of thought. The committee, therefore, believes that one of the first considerations in the ensuing year should be in the direction of coordinating the work of these three committees in order to formulate recommendations that would be agreeable to all.

Since the organization of this committee in 1935, various surveys have been conducted and much data has been accumulated. The committee, therefore, believes that in planning for the future it is desirable to review carefully the work that the committee has done during the past few years, and to evaluate the importance of past recommendations in the light of present national conditions.

The national and international crisis which we are experiencing at this time, makes it desirable for the committee to deliberate upon its functions with special reference to the national emergency and the national defense. It is for this reason, therefore, that recommendations which we considered important last year and the year before, may necessarily within the next few months have to be subjugated to a position of relative unimportance in order to make way for matters of greater importance in meeting changed conditions.

The committee wishes, at this time, to express its appreciation for the very helpful cooperation it has received during the past year, from the office of the secretary, and also for the continued and stimulating interest evinced by the Board of Regents.

VII. Preventive Service

L. A. Cadarette, D.D.S., *Chairman*[13]
Detroit, Mich.

The establishment of this committee was decided upon at the Cleveland meeting. It was about the first of this year before we began the work of organization. After correspondence and conference with the various committee members it was decided that our objective should be: "An effort to broaden the concept of prevention in the minds of general practitioners of both medicine and dentistry, as well as in the minds of the public". After agreement by the committee upon the objective it was decided by further conference that the starting point was to find out what was being taught in the dental schools and what suggestions could be offered for the guidance of the committee in the work ahead. Accordingly a questionnaire containing the following questions was sent to the membership of the American Association of Dental Schools.

1. How much is being taught on preventive service?
2. Is it taught as a separate course or integrated in other courses as it relates to the specific course?
3. If taught as a separate course is it presented by a physician or a dentist?
4. What suggestions have you for enlarging the scope of preventive service?

There was a list of consultants selected from the membership of the college and a second questionnaire was sent to them as follows:

1. Do you feel that the teaching of this subject should be as a specific course or integrated?
2. What is being done in your state or community that would aid in the accomplishment of the objective?
3. What suggestions do you have as to the manner of the accomplishment of our objective?
4 What do you feel is the average practitioner's viewpoint regarding preventive service?

At the time this report is being prepared some of the questionnaires are still out, therefore, rather than attempt to draw definite con-

[13]The other members of this Committee (1940-41): Hermann Becks, C. S. Foster, E. M. Jones, E. W. Swanson.

clusions it would appear better to report what trends are being exhibited in the replies.

1. Both the membership of the schools association and consultants replying are very much interested in the problem.

2. The schools are for the most part giving integrated courses and in addition some are giving specific courses concerning public health and hygiene.

3. The suggestions for enlargements coming from both groups include more research, better application of the theories, and more lay education.

4. From the consultants there is evidence that state health departments are playing an important role.

5. Also from the consultants there is the opinion that there is much to be done for the professions from within.

AMERICAN COLLEGE OF DENTISTS

Abstract of Minutes: Meeting of Regents, Chicago, Ill., February 21, 22, 23, 1942

O. W. BRANDHORST, *Secretary*

St. Louis, Mo.

February 21 (8:00-11:00 p.m.), *first session:* Present, nine. (1) Minutes of Houston meeting with ad-interim activities read and approved. Reports of Officers: (2) President; (3) Secretary; (4)Treasurer; (5) Editor—all received. Reports of special committees: (6) Wm. J. Gies Endowment Fund for the Journal of Dental Research; report received.

February 22 (3:30 p.m.-6:30 p.m.), *second session:* Present, eight. Reports of special committees (continued): (7) Credentials; (8) Protective Dentistry; (9) Reference Committee on Report of Committee on Socio-Economics; reports received, details referred to special committees.

February 23 (3:30 p.m.-6:30 p.m.), *third session:* Present, eight. Reports of special committees (continued): (10) Committee on Hood for College; (11) Ceremonial; (12) Dentistry in Action; reports received and committees instructed to proceed. (13) Committee on Research requested funds for grants-in-aid and Fellowships for 1942-1943; requests granted to extent of $3,200. (14) Special committees appointed for Boston convocation.

EDITORIALS

William John Gies

Seventy Years of Labor in the Public Interest

Thirty-three years ago there came upon the horizon of dentistry the greatest lay benefactor in the history of the profession. It was in 1909 that William John Gies brought to the service of dentistry, as was stated so well at the testimonial dinner given him at the Convocation of the American College of Dentists in 1937, "the scientific outlook of a research worker, the educational ideals of a university teacher, the ethical standards of a philosopher, the literary ability of an author and editor, the energy and enthusiasm of a sportsman and the sympathy and understanding of a friend." It is with a deep feeling of gratitude and veneration for his benefaction that the profession greets and congratulates him on his seventieth birthday, February 21, 1942. We are thankful for having had the benefit of his dynamic personality and fruitful life through all these years. We sincerely hope for a continuation of his unselfish service to dentistry in the years ahead.

It would be impossible at this time to refer to all of his activities and achievements in his labors for dentistry because they have been so many and varied. While he has been interested in the status of dentistry, dental education, dental research and dental journalism, the latter two may be most appropriately referred to on this significant birthday.

Of all the matters related to the advancement of dentistry in which our honored fellow is interested perhaps the nearest to his heart at the moment are dental research and journalism. It was through his activities in the "War on the Autocracy of Ignorance" that he founded the International Association for Dental Research in 1920 and the Journal of Dental Research about the same time. The Journal, he believed to be a logical and necessary means of disseminating scientific knowledge to the profession in the interests of what dental service should, could, and would be in the public interest.

In the realization that the International Association for Dental Research, vital to the advance of the science of dentistry, could not exist effectively without a means of disseminating important scientific information, Dr. Gies made personal sacrifices, unknown to all but a few of his friends, in continuing the publication of the Journal over a period of many years.

It was through a recognition of the value of his labors for research and the Journal, that a small group of his friends in New York, recognizing the necessity of the continuance of this publication, organized in an effort to raise an endowment fund of $50,000 to assure the perpetuation of the Journal. In a few years more than $30,000 of this amount has been contributed to the fund. It is still approximately $18,000 short of the coveted goal.

The greatest and most precious birthday gift which dentistry could present to Dr. Gies would be the early completion of the endowment fund of the Journal of Dental Research. It would be a token of appreciation to him for the unstinted service he has rendered dentistry. This could be achieved if every fellow of the college would make a sacrifice for the completion of the endowment in the same quality of spirit and effort with which Dr. Gies founded and carried on the Journal for so many years, by sending directly to Dr. Leuman M. Waugh, 576 Fifth Avenue, New York, a liberal yearly pledge or contribution to the fund.

It is suggested that contributions to the fund may be made in the form of Defense Bonds and Stamps. These are convertible into cash after sixty days and could be made productive otherwise after the total of $50,000 has been attained to provide current income for use in support of the Journal. Funds invested in Defense Bonds could be accredited for the amount paid for them and the accrued interest on them could be recorded annually by the treasurer of the fund with other interest received.

It is strongly recommended that contributions in the form of Defense Bonds and Stamps be made to this fund because of the double value from this procedure; performing a patriotic duty and supporting a most worthy project for dentistry.

In appreciation of your interest and unselfish labor in the cause

of dentistry and with profound esteem for you as a gentleman, sportsman, and scholar, Dr. Gies, the fellows of the American College of Dentists greet you and congratulate you on your seventieth birthday, and sincerely hope that the most cherished goal of your life, at present, that of completing the endowment fund for the Journal, may be attained. May you live long in your valued service to the dental profession to which you have dedicated and devoted the past thirty-three years of your life.—*G. W. W.*

Dentistry and Poetry

Dentistry embodies humanitarian aspirations. It projects objective achievements. It is idealistic in its motivations and practical in its aims. It is animated by noble purposes and provides essential personal services. It is science and art in close coordination. Dentistry appeals to the intellect and to the emotions. It inspires altruism, requires understanding, applies knowledge, exercises skill, stimulates artistry. Its reconstructive phase is one of the minor beautiful arts of form. In accord with these spiritual, intellectual and esthetic conditions, many dentists have been also actors, architects, musicians, painters, poets, sculptors. *A poetic star of the first magnitude is rising among dentists today.*

In George Eliot's opinion, "to be a *poet* is to have a soul so quick to discern that no shade of quality escapes it, and so quick to feel that discernment is but a band playing with finely ordered variety on the chords of emotion; a soul in which knowledge passes instantaneously into feeling, and feeling flashes back as a new organ of knowledge." "*Poetry*," wrote Channing, "reveals to us the loveliness of nature; brings back the freshness of youthful feeling; revives the relish of simple pleasures; keeps unquenched the enthusiasm which warmed the springtime of our being; refines youthful love; strengthens our interest in human nature, by vivid delineations of its tenderest and softest feelings; and, through the brightness of its prophetic visions, helps faith to lay hold on the future life." A poet of this rare kind, who writes poetry of this distinction, is Anderson McLaren Scruggs, D.D.S., F.A.C.D.

Dr. Scruggs' first book of poems, *Glory of Earth*[1], was accorded deservedly wide acclaim. His latest book, *Ritual for Myself*[2]—the title of the last poem in a collection of 70—contains short poems of the finest intuitive and lyrical quality, expressive of tender and consoling philosophies, and notable for their detachment, simplicity, sincerity, serenity, and vitality. Dr. Scruggs' poetry exemplifies his basic judgment that "poetry cannot be considered as an escape from reality; it is a penetration into reality." The several typical quotations below, from many available current estimates by competent critics of the quality of Dr. Scruggs' latest book, agree with the foregoing opinions and also express various other views that the present writer heartily shares:

"Dr. Scruggs approaches the verities of life, and even death itself, in a beautiful, deeply understanding way, a way that soothes and satisfies the human heart."—*Carroll.*

"Here is a *real* poet . . . . In *Ritual for Myself* . . . . I find some of the finest poems and some of the profoundest thoughts that I have come across in a book of poems for many years . . . . Each of these 70 poems is a little masterpiece of meditation and wisdom, sculpt with the hand of an artist. Here are echoes of Shakespeare, Ecclesiastes, Omar Khayyam and Shelley. . . . No 'Marxian approach,' no cheap bellyaching, no freakishness, no politics in Dr. Scruggs' poems. They touch you with a profound sincerity. They are the rituals of a superior, a melancholy, a pantheistic soul, who is in love for life with Nature and the Dream."—*De Casseres.*

Dr. Scruggs' "type of poetry . . . . is wholly lyrical, tender with the thought and sensitivity of a man who has lived and, living, seen the dark and lights of being . . . . known the strong joy, the slow, even appreciation, the burst of grief, the lingering half-remembered shadows."—*Scarborough.*

Since Dr. Scruggs began to write poetry, in 1928, his poems have appeared in many leading American magazines and newspapers, including Century, Forum, Harper's, Holland's magazines, North American Review, Saturday Evening Post, Poetry (Chicago), English Journal, America, Commonweal, Asia, Christian Century, New York Times, New York Herald-Tribune, New York Journal-American, Washington (D.C.) Post. Today he is one of the most

[1]Glory of Earth: Oglethorpe University Press, Oglethorpe University, Ga., 1933; now in its second edition.

[2]Ritual for Myself: Macmillan Company, New York, N. Y., 1941.

widely published poets in America. For nine consecutive years selections from his work have been included in *Best Poems*, a series of yearly anthologies edited by the eminent London anthologist and critic, Thomas Moult. This annual series includes what Mr. Moult considers the best poems in magazines published in America, England, Ireland and Scotland during each of the respective years. Dr. Scruggs' second book—*Ritual for Myself*—has been mentioned as a best seller, in the non-fiction class, in the New York Herald-Tribune's weekly summary: *What America is reading*. It is very unusual for a book of poems to be mentioned in this list.

Dr. Scruggs was born in West Point, Georgia, February 18, 1897. Since 1905 he has been living in Atlanta. Dr. Scruggs' wife, before their marriage, was Miss Leila Mae Smith, of Atlanta. Their daughter, Eugenia Elizabeth Scruggs, is now a Freshman in Rollins College, Winter Park, Florida.

Dr. Scruggs is a grandson of the late Colonel William Lindsay Scruggs, one of the pioneer settlers of Atlanta, who served for twenty years in the diplomatic corps of the United States, having been United States Minister to Colombia; also United States Minister to Venezuela during two administrations. During the latter service he was instrumental in bringing the famous boundary dispute between Venezuela and Great Britain to successful arbitration by the United States Government (1899).

In 1925, Dr. Scruggs graduated, and received the D.D.S. degree, from the Atlanta-Southern Dental College. For several months after his graduation he conducted a private dental practice in Atlanta. On January 1, 1926, he became a member of the Faculty of the Atlanta-Southern Dental College. Beginning his teaching career as a full-time Assistant in the Histology-Bacteriology-Pathology Department, he has been in full-time service ever since, and now is Professor of Histology and Associate in Bacteriology and Pathology. In 1935 Dr. Scruggs was elected an Active Fellow of the American College of Dentists.—*W.J.G.*

Chicago—1942

The American Dental Association's New Building

The American Dental Association will, within the next few months, move into its new office building a few doors beyond the present location. This is a very desirable building and will accommodate us adequately for many years. This was of particular concern to the writer in as much as he is giving attention to building up the library and indexing our literature. Or, to put it simply, he is Chairman of the Committee on Library and Indexing Service. A full day was spent with the Building Committee of the Board of Trustees. You are asked to watch this department both in its physical growth and in its usefulness to the profession. We'll have a good location and space and our hope is that we may be used extensively.

Dental Education

A splendid Congress on Dental Education was held on Saturday under the direction of the Educational Council of the A.D.A. Here was considered the present and future status of dental education. Dr. Minor J. Terry, Chairman of the Council, presided. Three sessions were held, morning, luncheon, and afternoon. At the opening of the morning session greetings were extended by Dr. Oren A. Oliver, President of the American Dental Association, Dr. A. L. Walsh, President of the American Association of Dental Schools, and Dr. Walter F. Barry, President of the National Association of Dental Examiners. Two papers were presented at the morning session, one by a dental teacher, Dr. Charles F. Bodecker, Professor of Dentistry (Oral Histology), Columbia University, and one by a dental examiner, Dr. Philip L. Schwartz, New Brunswick, N. J., former member of the New Jersey State Board of Dental Examiners. These papers dealt with obsolete processes in teaching and examining.

President Snyder of Northwestern University addressed the luncheon session.

Two papers were presented at the afternoon session dealing with the design of the dental curriculum. One paper was devoted to the subject from the standpoint of integration with medicine by Dr. Howard M. Marjerison, Dean of the College of Dentistry, University

of Illinois, and the other from the standpoint of autonomy in administration and teaching by Dr. W. C. Fleming, Dean of the University of California, School of Dentistry.

There was much favorable comment concerning this, the second Dental Educational Conference, with the very obvious feeling of satisfaction as to the course which dentistry will follow in the years to come.

Research

A few years ago the College set actively to work in the promotion of research. As a means of substantiating talk about this subject, certain funds were earmarked that might be allocated to research projects. People began to believe we meant what we said. But we have now drifted over into the field of financing rather than promoting research. We meet and consider renewal, rather than new applications. At the February meeting of the Regents, upon recommendation of the Research Committee, $3,200 was granted to various projects. Some of these were granted with a warning that they should now find other sources of income. This should be true with nearly all of our present projects, for we cannot continue to finance established projects and promote new ones. Our business is to promote research through early help, a little help and thus, to encourage.

Protection and Prevention

A short while ago the Regents established a Committee on Preventive Dentistry. Since then, within the Research Committee, there was created a committee on Protective Dentistry. Both of these committees have done good work, but in our discussions at Chicago, it became apparent that there was little difference between the two, in fact *protection* at a young age may be *prevention* at a later period. At the same time in giving the question full consideration and from the standpoint of the public, the Socio-Economics Committee was brought into the situation. A move was therefore made to co-ordinate these three and from whom we shall have some concrete recommendations next August in Boston. It will be a matter of protecting the little ones and preventing the trouble for the older ones.

Reports of Other Committees

Journal of Dental Research, William J. Gies Endowment Fund: This self appointed committee started out to raise $50,000. You have heard of it many times. We have raised approximately $33,000. This leaves $17,000 yet to go. The present directors are Dr. Arthur H. Merritt, who was relieved for his two years of service as President of the A.D.A., but who is now back with us; Dr. Fred A. Richmond of Kansas City; and Dr. John E. Gurley of San Francisco. Will not you as members of the College get busy in your locality, collect a dollar or more from your confreres and send it in to Dr. L. M. Waugh, Treasurer, 576 Fifth Avenue, New York, N. Y? We hope to complete this campaign this year. We can with your help. Why not members of the College do the job—we have 1,000—$17 each will make it. Why not give a Defense Bond at $18.75? Who'll be the first?

Meeting of Representatives of Sections: This meeting was attended by representatives and fellows who listened to discussion concerning the work of the Committees on Socio-Economics, Credentials and Dentistry in Action.

Socio-Economics: This committee has made an exhaustive report of approximately 600 pages—which has been studied by a special committee for that purpose and will be published soon under the editorship of Dr. Gies. It should serve a useful purpose in future developments.

Dentistry in Action: Under the chairmanship of Dr. Midgley, this committee has been very active and almost all-inclusive. Their report was replete with good suggestions, including revision of our Ritual and remodeling our robes. This committee has been so active and covers so wide a field that herewith their schematic outline is presented for your study:

Basic Scheme—Framework—Designed to Assist in the Development of a Mechanism to Operate in the Attainment of Our Objective

1. *Aim and Purpose:* To advance dentistry in *all* of its educational, professional and civic phases.

2. *Objective:* To formulate a plan whereby the ideals, theories and proposals of the College may be translated into action.

3. *Motive Power:*
   (a) Fellows of the College
   (b) Sections
   (c) Officers and Regents
   (d) Standing Committees
   (e) Special Committees
   (f) Consultants

4. *Basic medium* (a); *Interrelated media* (b), (c), (d), (e), (f), (g), (h):
   (a) Dentistry
   (b) Dentistry—Medical Relationship
   (c) Dentistry—Nursing Relationship
   (d) Dentistry—Pharmacy Relationship
   (e) Dentistry—Engineering Relationship
   (f) Dentistry—Law Relationship
   (g) Dentistry—Laboratory Relationship
   (h) Dentistry—Technician Relationship

5. Instrumentalities and resources available for united growth

Educational—
(a) Medical and Dental Journals—
National
State
Local
Research
(b) Universities—
Dentistry
Medical—Medium
Engineering
Law
(c) Bureau of Education—
National
State
Local

Professional—
(a) Dental Societies—
National
State
Local
Research
(b) Hospitals
Dispensaries
Children's clinics
Internships

Civic—
(a) Public Health Bureaus—
National
State
Local
(b) U. S. Bureau of Standards

Educational—
(d) Dental Health Programs—
In schools
In communities.

Professional—
(c) Dental Examining Boards
(d) Philanthropic Foundations

Illinois Section of the College

The Illinois Section entertained at luncheon. Members attended in large numbers, and our thanks are hereby extended. Dr. Timmons gave a splendid presentation of government relationship as related to the war, which will be found in the *Journal of the A.D.A*, *29*, 466; 1942, (Mar.).

The Dental Teacher

When Dr. William J. Gies made his monumental report on dental education, in 1926, he stated that the observed educational infirmities of the dental schools were due, among other things, to "conspicuous indifference to the requirements of good teaching; serious shortage of capable teachers; prevalent use of teaching titles as inducements to underpaid part-time practitioners to accept the advertising values of such school relationships in private practice in lieu of salaries, . . . ; absence of the spirit of research and of the aspiration to scholarship in general; . . . "[1] He found no recognition by dental faculties that teaching was a profession for which adequate training was desirable, and he suggested that, as the salaries were inadequate and the standing of dental teaching was relatively low, there was little to encourage dental teachers to look forward with confidence to a life of contented usefulness in whole-time positions in dental schools.[2]

This severe indictment was followed by a striking statement indicating the key position of the teacher:

Everywhere education is chiefly what the teacher makes it. The most important immediate need in all of the dental schools is a much larger proportion of able and inspiring whole-time teachers, who, devoting their lives to teaching as a profession, by their character and example would

[1]William J. Gies: *Dental Education in the United States and Canada*, p. 141; Carnegie Foundation for the Advancement of Teaching, Bulletin No. 19, 1926.
[2]*Ibid.*, p. 237.

exalt the spirit of dentistry, by their conduct of the instruction would heighten the quality of oral health-service, by their research would steadily extend the boundaries of dental knowledge, and by their scholarship would give to dentistry and to dental education the intellectual distinction now lacking in each. All desirable early improvements in dental education would follow their advent.

This statement concerning the significant position of the dental teacher in relation to improvement of the profession is entirely sound, and there is reason to believe that it has been effective. There are now signs of great interest in the improvement of teaching, particularly among those who are directly in charge of dental education.

Today there are special reasons why better teaching must be provided in dental schools. *First*, the students now entering these schools have had two or more years of instruction in college, usually by teachers who were scholars and were fairly skilled in teaching. Such students cannot be expected to tolerate poor teaching. *Second*, the demand now made that a comprehensive curriculum in dentistry be mastered in a limited time requires teaching that is of the highest effectiveness. There is no time to waste with poor teaching and inefficient learning. The business of teaching dental students will have to be carried on more and more by men who have made special preparation for this important service, men of broad and thorough scholarship who understand educational principles and can apply them in their daily contact with students, men whose work and ideals are a constant inspiration to the hundreds of young people who are preparing for professional service.

Four things can be done that will contribute mightily to the improvement of teaching. *First*, the dental profession can exalt the position of the teacher as the key to its efforts to raise the level of dentistry. There is no such thing as a great profession without great teachers. The esteem in which a profession holds its teachers is a clear indication of the character of the profession itself. *Second*, the dental schools can surround their teachers with conditions that encourage good teaching, such as ample facilities by way of libraries and laboratories, security of tenure, an atmosphere of scholarship, sufficient remuneration to provide the means of growth as well as the means of comfortable living, and an opportunity to participate

in an important way in developing and executing educational policies. *Third*, provision can be made for special training for those who aspire to be teachers of dentistry. Such provision should obviously encourage thorough scholarship and promote understanding and skill in the application of educational principles to teaching. *Fourth*, capable and high-minded young men who have a strong interest in teaching and research can be encouraged to prepare themselves for service on dental faculties. Not only the dental schools, but also dental practitioners as well, should assist in recruiting for the teaching staffs of their professional schools the best talent that can be had.

The day is rapidly passing when teaching dental students can be a side line for practitioners. One for whom teaching is a minor or casual, rather than a principal, interest cannot possibly give it the attention which the work demands. Teaching is creative work which calls for broad and profound scholarship, a genuine interest in the learning process, and a strong desire to see students develop to their full capacities. Dentistry can hope to occupy a respected educational position only if many of its ablest men devote themselves to educational problems and become expert in the art of teaching. For a long time dental schools will probably have some part-time teachers, but certainly no dental school can expect in the future to rely principally upon them. More men will have to devote their entire time to service on dental faculties.—*L. E. B.*

[The further report of the Curriculum Survey Committee of the American Association of Dental Schools, on "Learning and Teaching Dentistry," prepared by Dr. Lloyd E. Blauch, Executive Secretary of the Committee, is in process of publication in the *Journal of Dental Education*, as chapters are completed and approved. The Foreword and Chapter I were published on pages 85-95 of the issue of that Journal for December 1941 and chapter II, on pages 201-224 of the issue for February, 1942.—(*Ed.*)]

Palming of Amalgam

Since the time when amalgam was first used the dentist has generally finished the mixing of the mercury and the alloy in the palm of one hand, using the thumb or fingers of the other hand in mulling

the amalgam. This so-called palming of the amalgam converted it into a soft plastic mass which, for most of the alloys, could not be obtained in a mortar-and-pestle mix. But certainly this procedure was not sound surgically because of possible contamination of the amalgam with epithelial cells, perspiration, sebaceous secretions and other materials often found on the hands. Lately, scientific findings have condemned this practice. Several research workers have shown that the contamination of many alloys with perspiration causes an enormous expansion, which accounts for some of the adverse clinical conditions that have been noted from time to time. (*Reference*—Research Commission: Palming of amalgam; *J.A.D.A. 28*, 830; 1941, (May); excessive expansion of amalgam, *J.A.D.A. 29*, 292; 1942, (Feb.). With suitable alloys, and proper mortar and pestle or mechanical amalgamator, a satisfactory plastic mix of amalgam can be made. What, then, is the excuse for continuance of the practice of palming? It is one of the dangers that should be eliminated from modern amalgam technique.—*G. C. P.*

Dentistry and Public Opinion

The respect which the public has for dentistry is not due primarily to the sagacity of dental leaders, nor to the researches of outstanding scientists, nor to any other such factors, but instead to the average integrity and character of the dental profession as a whole. Thus the personal behavior of each dentist, intra- as well as extra-professional in scope, is a potent factor in the public's evaluation of and esteem for dentistry. When a dentist fails to meet his professional obligation, the sense of professional responsibility, rather than a "holier than thou" attitude, makes his colleagues feel ashamed. This condition was illustrated recently when, in a crowded Pullman diner, a prominent dentist holding a responsible position in organized dentistry—with too much alcohol aboard—revealed himself, through a series of loud-mouthed foul remarks, as a Class-A jackass. This would not have been so telling, if he had not also announced that he was a dentist. The alcohol washed away the man's thin veneer of respectability. On the same train were many dentists—men of excellent character, achievement and bearing. Unfortunately the

passengers who heard the raucous misrepresentative knew that many dentists were on the train, and doubtless the thought—"birds of a feather flock together"—came to their minds.—*G. C. P.*

Is the M.D. Degree a Prerequisite for Effective Research in Dentistry?

The issues of this Journal for March and June, 1941, contained —under the above title—a paper (page 1) and also a supplementary editorial (page 141), each of which answered in the negative the question in the title. The said paper and editorial were elicited by claims emanating from Harvard to the effect that the primary purpose of the new dental program at that University was the special promotion of dental research, which, it was alleged, has been deficient because—unlike medical research—it has not been based on the professional education required for the M.D. degree. The paper—which presented data from the Yearbook (1940-41) of the Federation of American Societies for Experimental Biology—showed "that less than half the whole number of persons in the membership of the Federation received the M.D. degree." The related data indicated "clearly that very much, probably most, of the important research for the advancement of medicine is being accomplished by men who have not taken 'courses for the M.D. degree,' and that *the M.D. degree is not a prerequisite for effective research in either medicine or dentistry*." The editorial—which referred to data in the second edition of "Dental Caries" (1941)—stated that of the "237 authors or groups of authors, representing accumulated research in this field in twenty-six countries .... 55 have received the M.D. degree. Notwithstanding the earnest efforts of these 55 physicians among the many workers in caries research .... agreement as to how dental caries may be prevented has not yet been attained. There are no indications in the said volume that the research accomplished by dentists has been inferior, in any respect, to that done by those who received the M.D. degree."

The data in the current Yearbook (1941-42) of the Federation of American Societies for Experimental Biology have been compared with those presented in the said paper, to determine whether the

elections to membership at the annual meeting in 1941 required a modification of the conclusion quoted above from that paper. This examination yielded the directly comparative data in the accompanying summary (*Table 1*), which show definitely the following conditions:

(1) Of the members elected (150) in 1941, more than half the total number—84 (56 percent)—do not have the *M. D. degree.* The percentage of the total membership in 1940 who did not have the M. D. degree was 54 percent.

(2) Of the number elected in 1941 who have the *M. D. degree* (66; 44 percent), 29 percent (19) also received the *graduate* education leading to award of the *Ph.D. degree.* The corresponding percentages in 1940 were 46 and 20, respectively.

TABLE I

Actual and percentage distributions of indicated degrees held by the persons elected to membership in the Federation of American Societies for Experimental Biology, at the annual meeting in 1941; compared with the percentage data in a similar table for the total membership in 1940 [1], [2]

	1941 New elections to membership		*1940 Total membership*	
	Number		*Number*[1]	
Degrees in medicine or "medical sciences:"	(150)	*Percent*	*Percent*[1]	(1639)
(a) *Do not have M.D*	84	56	54	878
(b) Have Ph.D. or Sc.D.; *not* M.D	81	54	51	841
(c) Have Ph.D.; *not* M.D	77	51	49	811
(d) *Have* M.D.; not Ph.D	47	31	37	608
(e) Have both Ph.D. *and* M.D	19	13	9	153
Ph. D. first; *M.D. second*	11	7	6	95
M.D. first; Ph.D. second	8	5	4	58
(f) Have neither Ph.D. *nor* M.D	7	5	4	67
Of these: have Sc.D	4	3	2	30

[1]From *Table 1: J. Am. Col. Den., 8,* 6; 1941, Mar.

[2]The total membership in 1941, as indicated in the Yearbook—corrections having been made for deaths, withdrawals, duplications and errors—was 1746.

(3) Of the number elected in 1941 who received *both M. D. and Ph. D. degrees* (19), nearly two-thirds (11) were primarily "Ph. D. men." The corresponding ratio of the total membership in 1940 was the same—"nearly two-thirds."

(4) Of the number elected in 1941, a total of 96 (77 + 19) have the *Ph. D. degree*—64 percent. For the total membership in 1940 the corresponding number was 964 (811 + 153)—59 percent.

(5) In short, in harmony with conditions in the total membership in 1940 and in preceding years, most of those who in 1941 were elected to membership, in one or more of the five national research societies in the Federation of American Societies for Experimental Biology, do not have the M. D. degree (1), but have the Ph. D. degree (4). Of those elected to membership in 1941 who have the M. D. degree, 29 percent (compared with 20 percent of the total group in 1940) also received the *graduate* education leading to award of the Ph. D. degree (2). Of those elected to membership in 1941 who received both M. D. and Ph. D. degrees, nearly two-thirds, as for the total membership in 1940, are primarily "Ph. D. men" (3). There is evidently no trend toward acquisition of the M. D. degree as a *sine qua non* for research in medicine.

The foregoing data confirm the previously published conclusion that the M. D. degree is not, as claimed at Harvard, a prerequisite for effective research in either medicine or dentistry, and also justify repetition of the following comment in the paper mentioned in the first sentence of this editorial:

> [The five national research societies in the Federation of American Societies for Experimental Biology] "and their membership constitute a representative group of the personnel in research in 'scientific medicine' (p. 5) . . . . The many who, although not graduates of medical schools, conduct competent research in medicine, are successful for broad reasons: they acquire fundamental medical knowledge in their own individual ways as *continuing students*, without taking 'courses for the M.D. degree:' and they achieve success, in this as in any field of research, not by reliance upon superficial, conventional, elementary knowledge—like that in 'courses for the M.D. degree'—but instead by applications of new procedures in unconventional ways in intensive study deeply of particular problems" (p. 7).

The following illustrative quotations, from letters by correspond-

ents who privately endorsed the paper mentioned in the opening sentence of this editorial, present related views that may suitably be inserted impersonally in this record:

(*A*) *Written in April, 1941, by one of the leaders in higher education*

In my opinion your reasoning [in the said paper] is well based and entirely sound. What is needed in dentistry is more men with a broad training in science and graduate training beyond the D.D.S. I have often wondered whether those desiring to advance the dental profession should not be thinking more seriously of the Ph.D. rather than the M.D.

What you say applies also to medicine. I suspect that a very large part of the advance in medicine is the work of the Ph.D.'s rather than the M.D.'s. It is quite the fashion for the medical profession to claim all the credit for the great discoveries and inventions in the art of healing, but the simple fact is that much of this claim is not warranted. Certainly the average run of practitioners contribute little if anything. Much of the fine work has been done by the anatomists, the physiologists, the pathologists and other highly specialized scientists, many of whom have had no medical degrees. Is it not about time that the world be told about this?

(*B*) *Written in June, 1941, by one of the leaders in medical education*

Dr. . . . . has just sent to me a reprint of your article on the M.D. degree in dentistry with which I find myself in full accord.

It certainly seems strange that those who direct educational policies at Harvard should so completely confuse the things which are essential and those which are not essential for effective research. Surely the mere addition of letters after one's name is no guarantee of an inquiring mind or a painstaking investigator. Furthermore, is it not true that only a small number of those who have received the best kind of a medical education ever succeed in research? Is it not also true that more and more we see specialists in the different branches of medicine collaborating because even a medical degree, without further training along various lines, does not provide an adequate foundation for the solution of some of our most pressing [medical] problems?

The foregoing data on the question in the title of this editorial fail to support the claim, at Harvard, that dental research has been deficient because those who engage in it have not passed courses leading to award of the M. D. degree.—*W. J. G.*

Experience as a Teacher

Life in part at least, is a series of experiences. Or it may be better said, life consists of one experience after another.

This is true, but must be considered as a very general statement, although it is at the same time specific. If one is preparing for his vocation there must be two parts to the method involved. There are some fundamental facts which he must learn and upon which the structure for a realization of his experiences will be built. Then as he goes on with the application of these, he gets his experiences. For example, if one is about to begin his preparation for radio engineering, he must begin with the atomic, the ionic, and the electronic theories of matter. These are theories in themselves since they cannot be proved as facts, but they are fundamental facts in radio construction, because no radio can be constructed without their consideration. Experience begins with the satisfactory building of the first radio, i.e., putting the parts together in conformity with demands of these theories, now becoming fundamental facts.

Of course one may follow instructions of the engineer and be successful in building radios and to that extent, experience teaches him. Both have learned from experience, but the one is qualified through learning fundamentals and the other only through technical application.

The same holds true for any of the many vocations. Not so many years ago physicians, dentists, and lawyers learned from a preceptor. Such are not capable of meeting the demands of today, because experience alone is not sufficient. We have now reached the same point in requirements for others—librarians, clergymen and even business executives.

The first chapter on The Dental Teacher and Methods of Teaching has just been published[1]. In this the author refers to "learning as a habit formation and learning as a creative process." Isn't this just the difference between learning by experience and learning fundamental facts and theories?

[1]See *J. Den. Educ.*, *6*, 89; 1941, Dec.

[2]Fleming, Willard C., Dean, College of Dentistry, University of California: The Design of the Dental Curriculum: by Autonomy in Administration and Teaching; *J. Den. Educ.*, *6*, 191; 1942, Feb.

In his address before the recent Dental Educational Conference, Fleming[2] made a point relative to the dental curriculum, which can easily become the experience of dental teachers, the philosophy involved in dental education for both teacher and student, and by no great stretch of the imagination, its spiritual aspect may be gleaned. He states three major objectives in the pattern of the dental curriculum: "(1) the selection and preparation of men for the practice of dentistry; (2) the selection and preparation of men for teaching and research; and (3) the continued development of dental research."

This appears to be a splendid "design" or "pattern", as Fleming calls it, and herein are involved the autonomy of the dental profession, and experience; and the development of the "habit formation" and the "creative process" in learning. This augurs well for the future and those responsible for bringing the dental curriculum to its present level should realize its safety in the hands of the oncoming generation.

However, there is another thought involved in this particular consideration, namely the broader aspect of life. Some twenty-five years ago, Horne[3], quotes a definition of education by John Stuart Mill; " . . . the culture which each generation purposely gives to those who are to be its successors, in order to qualify them for at least keeping up, and, if possible, for raising the level of improvement which has been attained."

This is a simple statement of fact but yet not capable of being fully understood until experience can have made it so. Don't we see it now in dentistry? Similarly in all of life's participations, experience really and finally gives the true significance.

There is then a formula which may be suggested to educators as they plan for presentation of material to be learned and to students as they plan to receive that material, so that "habit formation" or "creative ability" or even the fuller experience of the material as

[3]Horne, Herman Harrell, Ph.D.: Idealism in Education, The Macmillan Co., 1916, p. 63.

applied in life may be realized. There are three requirements of any given field of learning:

1. It must be utilitarian.
2. It must be cultural or humanizing.
3. It must be integrating.

It must be utilitarian, in that the learner must be able to make his living by it. This is only true of course, in case of vocations. Should it be an avocation, the utilitarian aspect becomes less important. It must be cultural or humanizing, for by it, one finds his place in the world of men and of things. Through his vocation, one is prepared to make his living and to find his place among men. He is of benefit to society. It must be integrating, for through it he must know how to integrate his life, his thoughts, his acts with those of other people. He must learn how to integrate his life and thoughts into the acts of nature. The more fully he does this, the more satisfaction he finds for himself (Hedonistic Philosophy) and the more useful he becomes in living and in helping to live that "abundant life" (Religion). Or the integrating forces accompanying one's learning and one's experiences are philosophy and religion.

What is the use of knowing if there be not benefits to be derived, both real and ideal? This is philosophy—reason—a girding of the mind. Then to go on a step beyond the human into the realm of nature, the work of the Divine, one finds a place for the widest use of his imagination and so, his learning has fitted him for many experiences, while in turn his experiences will have taught him much. He becomes a man.

Politics and the A. C. D.

It has been repeatedly said by dentists, both within and without the American College of Dentists, that the College is "riddled with politics." Unbiased observers agree that there is considerable truth in this judgment. But with that concession, this question arises: Is there any society that is alive, awake, and active, be it religious, educational, technical, scholastic or fraternal, that does not have its factions, its cliques, and its politics? This is a healthy condition, when compromise and give-and-take animate the contending groups.

Recall what under other conditions the so-called "amalgam war" did to the first national dental organization—the American Society of Dental Surgeons—a hundred years ago. In that contest, as always, there was truth on both sides. The same holds for disagreements about the policy and conduct of the affairs of the American College of Dentists. This fact accounts for the observation that the College has changed considerably since its establishment in 1920—from a type of "slap-them-on-the-back group" to one with a worthwhile professional program. So, to many, the evidences of unrest in the membership of the College are signs of vigor. Let those who disagree with current conditions state their views. Where could that be done more effectually than in this JOURNAL?—*G. C. P.*

CORRESPONDENCE AND COMMENT

Should Most of the Technical Training for Dental Practice be "Left to Postgraduate Experience," as it is for Medical Practice?

One of the early official "releases" about the new dental program at Harvard contained these announcements (June 17, 1940):

"Certain important changes of method in dental education will be involved, bringing dental education at Harvard closer in line with the methods and standards of medical training . . . . As in the Medical School, there will be left to postgraduate experience some of the preparation for complete technical proficiency in specialized fields."

A year earlier one of the members of the Committe of Eight that formulated the "Harvard Plan"—Dr. Lewis H. Weed, Professor of Anatomy and Director of the Medical School, Johns Hopkins University—made the following public statement, in which the reasons for the changes noted above are indicated in detail:

"Everywhere throughout medical schools today, there is realization that in any of the prescribed divisions of instruction the student has time merely for an initial survey of the subject matter of that branch of medical knowledge. The fund of information is too large in every one of these subjects: the student can, at best, obtain merely the biological philosophy of the subject, hardly the pertinent details. He learns in a preliminary way the manipulative procedures employed in the field for the acquisition of knowledge, but the acquirement of technical skills is postponed in this educational process to the intern-resident years, or to the years as laboratory assistant. Our four-year medical course, therefore, becomes a preliminary canter across a wide and rugged field. The student acquires a general comprehension and a philosophy in each course rather than a great body of specific knowledge and a mastery of technical procedure.

"The merit of this postponement of the acquirement of the technical proficiencies until the postgraduate years is that it has permitted medical teachers to devote their energies largely to presentation of biological view points rather than to insistence on techniques. Here medicine has been more fortunate, or wise, than dentistry. For in American dentistry we are confronted with an art standing supreme in its international field as a health service. Dentistry is today a superb artistry, but only relatively

few dental practitioners or teachers are aware of the full biological implications of disease of the teeth and jaws. The dental schools of America have insisted that their students acquire in the four-year curriculum all of the technical proficiency needed for immediate practice. The dental schools provide biological courses in the preclinical medical sciences for roughly one and one-half years of the four-year course; then, in spite of sporadic efforts at reform, the school superimposes two and one-half years of the most rigid technical discipline. No wonder that the scientific interests of the average dental student in the biological and medical aspects of his great subject do not survive. The number of dental teachers who still maintain the spirit of investigative curiosity, except as to technical method, is woefully small. The result of the development of superb techniques in dentistry has been a pulling away from medicine: dentistry has become too largely a restorative and reparative art. It has produced a technical perfection which is not being applied, and cannot be applied, to the whole population. Technical dentistry, therefore, has arrived in a blind alley: it can liberate itself as a health agency only by developing a biological viewpoint and a biological body of knowledge. To do this the dental school should emphasize the underlying biological sciences and relegate technical training, except as to the theory of procedure, to postgraduate years. It would do well to follow medicine in its educational program."—(*J. Assoc. Am. Med. Coll.*, *14*, 287; 1939, Sep.)

If dentistry "would do well to follow medicine in its educational program," several questions arise, among them these: Should not all prospective practitioners of dentistry be physicians—like specialists in ophthalmology and otolaryngology—and without any specialist degree? Why continue D.D.S. or D.M.D.? Does the prospective practitioner of dentistry need more *undergraduate* professional education than that required in a medical school for the M.D. degree? Could not all of the "technical dentistry" he might need, as a medical specialist in dental practice, be acquired during a regular medical hospital internship or voluntarily, in his own way, as is customary in medical practice—especially by experiments on his patients until his technique would be developed and matured? Ignore dental statutes; they can be repealed.—(1)[1]

Comment. The following quotation of "recent authoritative comment on conditions in medicine in the United States," from the

[1]The terminal numerals in parenthesis are inserted for purposes of identification in the records of this *Journal*—(*Ed.*)

Annual Report of the Carnegie Foundation for 1930 (page 86), presents answers to some of the foregoing questions:

"There is no control over physicians who propose to practise a medical or surgical specialty or who are doing surgery, nor is there any prescribed method of procedure by which they may qualify as specialists . . . . The courses which are available are inadequate numerically for the large number of men who should take advanced work in order to prepare themselves for the practice of a specialty. The great majority of men simply have to shift for themselves. They may work in an out-patient clinic and pick up what they can without proper guidance, or they develop skill on private patients who come to them, or they go to Europe or to one of the post-graduate schools of this country for a short course. If they have ability they will overcome all the difficulties and eventually develop into good specialists. This is the course many of our prominent men have followed, but it is unsatisfactory even for them. For men less gifted, the practice of a specialty resolves itself into the performance of a few typical operations without adequate understanding of anatomy, physiology, or pathology, and frequently they are led to the performance of operations for which they are not trained and which result in a high morbidity or mortality. Evidently some way must be found, not only to guide along definite lines a young medical man seeking to practise a specialty, but to compel him to have special training before he is allowed to engage in a specialty. To be called a specialist, whether in general surgery or any surgical specialty, or in the various branches of medicine, should indicate to the profession as well as to the public, that he has special qualifications and has had special training beyond that required of the general practitioner. . . . At the present time it is considered unethical to put out a sign, 'Dr. Smith, Ophthalmologist, or Specialist in Diseases of the Eye,' or relating to any other specialty. . . . It may be distinctly advantageous to make use of these titles, as it will indicate to the general profession, as well as to the public, who is qualified to practise a specialty. . . . Permitting specialists to use their titles will make it difficult for the public to be imposed upon, as it will be very easy for a patient to determine whether he is dealing with a specialist who has been certified and approved by his peers in the profession, or whether he is dealing with a self-styled specialist."—[*C.Ed.* (1)]

Dentistry in Public and Military Services

When Dr. Clinton T. Messner died, on May 28, 1936, he was head of the Dental Division of the United States Public Health Service. After his death that Division was broken into several

parts. Many persons feel that these changes have not been beneficial from either an administrative or a professional standpoint. That this feeling is being made articulate is shown by the following excerpt from "News Highlights of the 83rd Annual Meeting, Houston, Texas, October 27th-31st, 1941," prepared by Dr. David W. McLean, Trustee of the American Dental Association, for the members of his (thirteenth) district:

"*U. S. Public Health Service* . . . has been handicapped, in opinion of National Health Program Committee, because it has no definite Dental Division. Board of Trustees recommended, and House of Delegates voted that proper A.D.A. agencies commence all possible activities to obtain a Dental Division in the P.H.S., headed by a (D.D.S.) Assistant Surgeon General, working under the (M.D.) Surgeon General."

That the dental profession objects also to the present analogous adverse dental conditions in the military service is evidenced by the increasing effort to correct this situation. The following quotation, from the same report by Doctor McLean, shows a further stage of this movement in organized dentistry:

"*Administrative authority* . . . for the Dental Corps of the Military Services was the subject of a Southern California resolution turned over by the House of Delegates last year to the Dental Preparedness Committee for study and report at this meeting. That Committee heard Guy Van Buskirk, So. Calif. spokesman, and after due deliberation brought in a report to the Board of Trustees, approving in principle the granting of administrative authority to the Dental Corps; the Preparedness Committee feels the present time to be unpropitious, however, since all government agencies are overburdened with defense activities; urges that no action be taken until the Board of Trustees considers the time propitious."—(2)

Comment. The war situation makes it imperative that no drastic changes should occur at present in the said administrative set-up. But immediately after the end of this emergency, the dental profession should urge that dentistry be given, in the public and military services, degrees of responsibility comparable to that of dentistry's autonomous standing in civil life. See earlier references to this general subject in this *Journal* (1941): "Subordination of dentistry in governmental services," page 143 (June); "Two points of view," page 231 (Sep.); "Dental officers of the Army and Navy not in control of dental affairs," page 308 (Dec.).—[*C. Ed.* (2)]

NOTES

Harvard Snap-shots

Stop, read and reflect. In the book entitled, "The Christian Criticism of Life" (1941), by Dr. Lynn Harold Hough, Dean of Drew Theological Seminary (Madison, N. J.), the following comment occurs on page 278 of chapter 22, on "The Humanism of Irving Babbitt" (teacher at Harvard, 1894-1933):

". . . . Harvard itself was not particularly friendly. It had ceased to have permanent principles and was inclined to rely upon a combination of technical scholarship, the intellectual adventure of playing in a patrician fashion with every form of thought and every kind of life, and a social arrogance which did not take time to seek to analyze the sources of its consciousness of superiority, and was quite incapable of that moral repentance which is the first step toward delivery from intellectual impotence."

How much of this judgment applies to the new dental program at Harvard?—[*C. Ed.* (1)]

Unbounded enthusiasm for dental health-care. An official news "release" at Harvard University, on January 6, 1942, refers to the mobilization of Base Hospital Unit No. 5, as organized by the Harvard Medical School. Associates of the Harvard Dental School and of the Harvard School of Dental Medicine are included among the officer personnel, which are listed in the following significant sequence of paragraphs of names: Unit Director, Surgical Service, Medical Service, Laboratory, X-ray, Headquarters, Registrar, Mess, Dental Corps. This climax seems to say: "Dentistry, 'go way back' and sit down;" or, in the language of sportsmen: "On the medical track, it is always the same—dentistry 'also ran.' "—[*C. Ed.* (2)]

Wonderful "modern development in education." An official news "release" at Harvard University, on November 15, 1941, contains this quotation from a statement by Dr. Kurt H. Thoma, a member of the Committee of Eight that formulated the new dental program:

"The Harvard plan is part of the modern development in education which encourages cooperative partnerships of men in various fields and departments of our institution to bring together all available knowledge in order to solve intricate and complex problems of the body such as are presented by oral and dental diseases. . . . "

Just why, in order to "encourage cooperative partnership," it was desirable or necessary, at Harvard, to discontinue the Dental School, and to create in its place a School of Dental Medicine within the Medical School, is not clear. Why "cooperative partnership" could not be conducted between the faculties of the Dental and Medical Schools—as now obtains between those of, say, the Medical and Graduate Schools—was not indicated in the "release." The alleged aim to achieve "cooperative partnership" is especially interesting in the light of such realities at Harvard as that mentioned in the following comment in the *Annual Report of the Carnegie Foundation* for 1930 (page 84):

"During the past year the Medical Faculty of Harvard University issued a volume of 194 pages entitled: *Synopsis of the Practice of Preventive Medicine as applied in the Basic Medical Sciences and Clinical Instruction at the Harvard Medical School.* Although the full professors in the dental school at Harvard are members of the Medical Faculty, dentistry and all its medical aspects were overlooked in this important book."—[*C. Ed.* (3)]

"Five-year plan" has been extended to the equivalent of a six-year plan. In our issue for December, 1941—under the heading, "The 'Harvard Plan' Unfolds"—appeared the following comment:

"An official 'release' from the Harvard 'news office,' for the newspapers on November 15, 1941, indicates that there will be 'summer work in *at least* three of the years.' Perhaps 'at least' implies expectation that there will be further extensions. 'Time marches on.' "

An official "release" from the same source, for the newspapers on December 29, 1941, included this announcement:

"As a war-emergency measure, the Boston University School of Medicine, the Harvard Medical School, the Tufts College Medical School and the new Harvard School of Dental Medicine announced yesterday in a joint statement that beginning on July 1, 1942, they will go on a twelve months' basis. The new program of continuous operation, the announcement stated, will do away with the present summer vacation period and will shorten the period of medical training to three calendar years instead

of four. Graduates of the new Harvard School of Dental Medicine will qualify in four and one-half years instead of five, as originally planned. No change in the total amount of required work is contemplated in any of the institutions involved, and there is no intention to lower the standards of education in these important fields."

The additions to the curriculum for the new dental program at Harvard have increased its length to 150 percent of the total time required for the M.D. degree; that is to say, to six academic years, or four and one-half calendar years. The "five, as originally planned," were academic years. The "Harvard Plan," since its original announcement in 1940, has been extended one academic year or the equivalent.—[*C. Ed.* (4)]

"From Jest to Earnest"

"*Amalgam:*" a mixture of perspiration, epithelial cells, mercury and an alloy usually containing silver, tin, copper and zinc.

"*Dry socket:*" one of those things that patients of certain "successful" dentists never seem to experience.

"*Periodontoclasia:*" a scientific name that can never compete in the open or professional market with Webster's "pyorrhea."

"*Subzero professionalism:*" the practice of quoting a fee of, say, $50.00 for a vulcanite denture and a fee of $100.00 for an acrylic denture—and of basing the whole farce on the relative costs of the materials.—(*C. Ed.* (5)]

Navy Dentists in First-Aid Service

A discussion in *Time* (Jan. 19, 1942, p. 38), of the injuries caused by the attack on Pearl Harbor, included this comment:

"Since mouth and jaw injuries were rare, Navy dentists took over doctors' first-aid jobs and administrative work. Navy doctors and dentists last week urged that sailors receive more first-aid training, that large ships have 15 or 20 first-aid posts, small ships at least half a dozen."

Navy dentists are assigned to battle stations that treat the wounded and render first aid. In addition to physicians, chaplains also are assigned to battle dressing-stations to assist in the care of the injured.—[*C. Ed.* (6)]

In Memory of a Dentist's Public Service

Abstract of an article by Dr. Eduardo Ferraro, Santiago, Chile

Doctor German Valenzuela Basterrica, Founder and Director of the State School of Dentistry in Santiago, Chile, who died in 1922, was associated with conditions of public service, not heretofore published in this country, which led the Chilean Government to rename the School in his honor—*State Dental School G. Valenzuela B.* (State University of Santiago, Chile, S.A.).

On February 5, 1909, a fire destroyed the building in Santiago, Chile, containing the offices of the German Legation. Simultaneously the *Second Secretary of the Legation* disappeared. A charred body in the ruins, showing evidence of homicide and identified superficially as that of the missing *Second Secretary*—and also the theft of a large sum of money from the Legation's safe—seemed to indicate that the building had been burned to destroy the evidence of murder and theft. As the *janitor of the Legation* was missing simultaneously, he was at once generally regarded as the culprit. Animated by a variety of circumstantial conditions, however, Dr. Valenzuela, Director of the Dental School, obtained permission to examine the teeth of the charred body before its burial. From a collateral study of a local dentist's record, the remains were then identified by Dr. Valenzuela as those of the *janitor of the Legation.* An immediate widespread search for the *Second Secretary* ensued, leading to his arrest a few days later near the border of Argentina, as he was endeavoring to escape to Europe. He confessed the murder and theft, and explained the artifices used to make the body in the ruins appear—successfully for a time—to have been his instead of the *janitor's.* When the President of Chile asked Dr. Valenzuela to state his fee for his service in correctly identifying the body by the application of dental methods, Dr. Valenzuela indicated that his cooperation had been given free of charge. But he tactfully expressed the hope that a greatly needed new building would be erected for the Dental School. The President appreciatively assured him this would be provided. Shortly afterward the building was erected.—[*C. Ed.* (7)]

Trends in Dental Education

In commenting on a correspondent's inquiry about the alleged *decreasing number of students* in the dental schools in this country, we included the following statement (*J.A.C.D.*, *8*, 230-31; 1941, Sep.):

"These data show that each successive *first-year* group, during the past three years at the *present high level of requirements*, was larger than the preceding group. . . . There is nothing in these *trends* to discourage dentists, or to imply lack of public esteem for, or appreciation of, oral health-service as compared with any other kind of health service. On the contrary, these trends show very clearly that men and women who have been as well educated as those now entering medical schools are, *in increasing number*, selecting dentistry for their life work."

Below we present from the "Dental Students' Register: 1941," recently issued by the A.D.A. Council on Dental Education, data for the current year—and comparative data for previous years.

NUMBER OF UNDERGRADUATES IN THE FOUR CLASSES

Year	*Freshmen*	*Sophomores*	*Juniors*	*Seniors*	*Total*
1940-41	2305	1973	1841	1601	7720
1941-42	2476	2072	1974	1833	8355
Gain	171	99	133	232	635

ENROLLMENT OF UNDERGRADUATES IN THE 39 U.S. DENTAL SCHOOLS: 1937-42

	1937-38	*1938-39*	*1939-40*	*1940-41*	*1941-42*
Total number. . . .	7184	7331	7407	7720	8355
Average per school	184	188	190	198	214

PREPROFESSIONAL EDUCATION OF THE FRESHMEN: YEARS IN AN APPROVED ACADEMIC COLLEGE, SUPPLEMENTARY TO GRADUATION FROM A HIGH SCHOOL

Year	*Total number*	*Two years*	*Three years*	*Four years or more*			
				Total	*Bachelor degree*	*No bachelor degree*	*Beyond bachelor degree*
1940-41	2305	1201	421	683	601	64	18
1941-42	2476	1162	526	788	626	140	22

The foregoing data accord with the following opinion expressed

on page 230 of the comment from which the foregoing quotation was taken:

"Now that prospective dental students have adapted their plans to advanced pre-professional educational attainment, and presumably will continue to do so, the number of dental students (on a higher educational level than ever before) may be expected to increase steadily until the need for dentists (*actual demand* for oral health-service) will be met and perhaps exceeded."—[*C. Ed.* (8)]

HELP YOUR COUNTRY

We believe it well to submit the following to our members. Surely we love our country and our plan of life to the extent that we will strain every nerve to protect that which we hold dear.—ED.

America is now engaged in total war. Our ultimate success in this mighty effort depends upon each and every one of us. For those of us in dentistry, this means the giving of professional services to the armed forces and to the civilian population. In everyday life we shall conserve goods and materials in order that production facilities may be utilized in the war program. And as members of a united civilian army, we shall lend our dollars to the Government to help pay for war materials.

Although the Nation is involved in the greatest war effort that America has ever been forced to pursue, we still want to follow the democratic way. The Defense Savings Program offers each individual the opportunity to show his faith in our country by his purchase of Bonds and Stamps. At the same time the purchaser receives a security backed by the full faith and credit of the United States Government. There are Bonds for individuals and groups among the three series of Defense Bonds being offered.

The Series E Bonds, are the "People's Bonds." These may be bought only by individuals, and can be obtained at any post office and almost any bank. The People's Bonds are appreciation bonds which cost 75 per cent of their face value and the Government pays back the full face value amounts at the end of ten years. The smallest Series E Bond costs $18.75 and pays $25 at maturity; the largest costs $750 and pays $1,000. The 33⅓ increase is equivalent to an annual return of 2.9 per cent, compounded semiannually. The bonds may be registered in the names of one or two persons or in the name of one person with a second listed as beneficiary. To protect the buyer of a bond, it is made so that he cannot sell it or use it as security for a loan, but he may redeem it any time after 60 days from the date of issue.

To buy a Series E Bond on the installment plan, one can purchase Defense Savings Stamps. Stamps can be purchased for as little as ten cents and when $18.75 has been invested in them, they can be turned in for one of the registered interest-bearing bonds.

The F and G Bonds are largely for associations, corporations, and other large investors. The Bonds of Series F are purchased for 74 per cent of their face value, and at the end of twelve years they will mature and provide a return equivalent to an annual interest rate of 2.53 per cent, compounded semiannually. The new small denomination Series F Bond of $25 costs $18.50; the largest bond of this series is the $10,000 Bond which costs $7,400.

Series G Bonds are intended for those who wish to receive a current income from their investment. Their cost is the same as their face value, and they are issued in denominations from $100 to $10,000. These bonds mature twelve years from the date of issue, and interest is payable semiannually at the rate of 2½ per cent. Although bonds of Series F and G are issued only by Federal Reserve Banks and the Treasury Department, commercial banks generally will handle applications for them.

We must enlist our dollars in this fight for freedom. We must buy, and continue to buy Defense Bonds and Stamps that the men in the armed services shall not lack for food, clothes, arms and equipment.

BOOK ANNOUNCEMENTS

A new magazine, Dental Health, Vol. I, No. 1, published quarterly by the National Dental Hygiene Association, has just appeared. It is edited by Mr. Randolph G. Bishop, Secretary of the above named Association or Foundation. It will be published quarterly at 934 Shoreham Bldg., Washington, D. C. No subscription price is indicated, but it is stated to be "part of its (National Dental Hygiene Association) program for the advancement of dental health for the American people". It should serve a useful purpose and will be welcomed by the profession.

OUR ADVERTISEMENTS

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

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

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

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

The welfare of the consumer is our paramount consideration. In accordance with the recommendation of the American Association of Dental Editors, the placement of advertisements will be restricted to the advertising section.

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

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

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

AMERICAN COLLEGE OF DENTISTS

STANDING COMMITTEES (1941-1942)

Certification of Specialists—E. W. Swinehart (45), *chairman;* Max Ernst (42), H. C. Fixott (44), W. E. Flesher (46), H. E. Kelsey (45), D. F. Lynch (46), J. O. McCall (43).

Education—W. C. Fleming (44), *chairman;* C. W. Freeman (46), F. W. Hinds (42), Harry Lyons (45), J. T. O'Rourke (43), G. D. Timmons (43), L. M. Waugh (42).

Endowment—A. H. Merritt (42), *chairman;* H. J. Burkhart (45), O. J. Chase (44), W. J. Gies (45), E. W. Morris (43), J. E. Psayla (46), C. R. Sturm (46).

History—W. N. Hodgkin (44), *chairman;* H. L. Banzhaf (46), E. E. Haverstick (42), A. W. Lufkin (45), J. Ben Robinson (43).

Hospital Dental Service—W. H. Archer, Jr. (46), *chairman;* R. W. Bunting (44), E. A. Charbonnel (45), H. C. Miller (43), Leo Stern (42).

Journalism—J. Cannon Black (45), *chairman;* J. M. Donovan (45), Walter Hyde (44), B. E. Lischer (43), E. B. Spalding (44), R. C. Willett (42).

Necrology—J. V. Conzett (46), *chairman;* F. H. Cushman (42), P. V. McParland (45), R. H. Volland (43), M. L. Ward (44).

Nominating—H. O. Lineberger (43), *chairman;* A. W. Bryan (46), G. M. Damon (44), W. R. Davis (42), H. E. Friesell (45).

Oral Surgery—L. M. FitzGerald (44), *chairman;* E. R. Bryant (42), M. W. Carr (46), W. I. Macfarlane (43), William Shearer (45).

Preventive Service—L. A. Cadarette (45), *chairman;* Hermann Becks (44), C. S. Foster (43), E. M. Jones (42), E. W. Swanson (46).

Prosthetic Service—W. H. Wright (43), *chairman;* W. H. Grant (46), C. A. Nelson (45), A. P. O'Hare (42), Jack Werner (44).

Relations—L. E. Kurth (46), *chairman;* J. O. Goodsell (43), H. F. Hoffman (45), T. E. Purcell (44), Nathan Sinai (45), Wilmer Souder (42), E. G. Van Valey (45).

Research—A. L. Midgley (42), *chairman;* L. E. Blauch (44), P. J. Brekhus (46), W. D. Cutter (43), J. E. Gurley (42), P. J. Hanzlik (45), P. C. Kitchin (43), A. B. Luckhardt (46), L. R. Main (44), Irvine McQuarrie (45), L. M. S. Miner (46), Fr. A. M. Schwitalla (44).

Socio-Economics—C. E. Rudolph (43), *chairman;* E. H. Bruening (44), W. H. Mork (43), B. B. Palmer (46), M. W. Prince (45), K. C. Pruden (46), Maurice William (44), G. W. Wilson (42).

Announcements

Next Annual Convocation: Boston, Mass., August 23, 1942.

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

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