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Editorial

Student Unrest and the Dental Schools

The wave of unrest that has swept through universities in all parts of the country has had little effect to date on the student bodies of dental schools. There are indications, however, that not all students are in total accord with the policies pursued by school administrations.

Dental students are generally of an older age group. Most have had three or more years of pre-professional education and, it is assumed, are therefore more mature. Their educational aims are more clearly defined; their ultimate goals are in sight. As they prepare themselves for careers in dentistry, their primary concerns are to secure the best education possible, overcome the hazards and obstacles which their curriculum often places before them, and reach the day of graduation with some degree of competence and technical skill. Generally they are not interested in "rocking the boat" for they have learned that their relationships with the faculty and administration can influence their success or failure in school.

But the times and the tides are changing, and dental students, too are beginning to take a closer look at their instruction and their instructors. And they are not completely enchanted with what they see, for they recognize that in some respects their education lacks relevance to the world in which they live. They find antiquated teaching methods, uninspiring lectures, course material which is no longer applicable to modern practice, and a slavish adherence to fixed requirements. In short, they are receiving an education which prepares them to practice dentistry in the 1930's. They are going to enter practice however in the 1970's, and will be faced with problems which their elders have never had to contend with. The need for dental care for the indigent, the concept that health care is the right of all people, not the privilege of the few, the expanding dental programs under government sponsorship, the role of the dentist in
his community, are all problems which today's dental students will have to deal with when they go out into the world.

It is to the credit of a number of schools that they have begun to recognize these changing conditions and are preparing their students to meet them. They have instituted courses in Community dentistry, have begun to experiment with new curricula, with "core" basic science courses and revised clinical teaching programs that are more flexible than in the past. They have invited student representatives to sit in on policy-making discussions, to take part in the decision-making that will affect their programs of study, their educational objectives, and their relationships with the profession and the public.

Schools such as these, with a forward outlook, with a desire to upgrade and modernize their standards, methods and policies, need have no concern that their students will become infected with the malaise that leads to revolt and violence. Those which fail to heed the signs of the times, who remain complacent instead of innovative and aggressive, may one day discover that the old ways are no longer good enough as their students rebel against them.—R.I.K.
Research Methodology in Oral Diseases

IRWIN W. SCOPP, D.D.S.*

This paper has two significant purposes. First, it is hoped that it will serve as a guide and introduction to research for those professional persons who by chance or desire may wish to investigate a problem in clinical science. Newer techniques and methods have been developed recently, and these will be discussed. The second purpose is to acquaint the clinician with the scientific approach and methodology so that he may be better able to evaluate on an objective basis the research completed and published by other investigators.

A great deal of material is being published in the professional and scientific journals, and the clinician must be in a position to assay the validity of these papers. He can do this only by having some knowledge of the techniques available to researchers. With a knowledge of these procedures, the reader can be in a position to appraise intelligently and critically the methods used and data presented. We are living in a decade of meetings, conventions, symposiums, and conferences to which the clinician may be exposed. At these sessions, new material is being presented, and a requisite of perceptive interpretation is an understanding of the fundamentals of research technology.

Many practitioners attend scientific meetings and leave with a sense of frustration, having the disappointed feeling of not fully comprehending the papers presented. With a working knowledge of research methodology, one may acquire a background or at least some understanding of basic techniques and thus profit more from attendance at these meetings.

Responsible Research

A researcher works at the frontier of his specialty. He asks a question of nature and sets up an experiment to answer it. It is his responsibility to report meaningful and purposeful findings to the

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community of science. Many do, but when reading the scientific journals and attending professional meetings, one becomes aware that there may be other motives. There is a plethora of trifling papers presented that are well written by people who frequently have considerable literary talent in restating known facts.

Then, too, in relentless pursuit of truth, investigators may engage in irrelevant research. Withdrawal of the scholarly researcher from clinical experiences and problems is not to be condoned for this has resulted in some morally indefensible neutral research. Fastidious and sophisticated research efforts applied to problems that could have not even a remote relationship to the basic and applied science of oral medicine is merely "small-scale research backed by large-scale grants." In the meantime, urgent basic problems remain unresolved.

Furthermore, some material appearing in scientific literature is grounded upon personal experience, observation, or theories, without the support of valid testing. At times, personal experience and observation, unaccompanied by valid controls, have been used to justify a new procedure. A researcher may have a pet theory or concept which he promotes with great enthusiasm and aggression, without analyzing critically the basis on which it is presented to determine whether the conclusions are scientific.

Much can be learned by the researcher in the process of doing an investigative experiment. In searching the literature, one may learn how many opinions he carries in his mind which are erroneous. The sources in the literature may contradict one another; and as a matter of fact, if all that was written was known and certain, no more research would be needed, and the volume of publications would diminish.

More and more, science is expressing research results in terms of probabilities and numerical values. In clinical research, some points can be measured quantitatively and objectively, but many others can be described only qualitatively. However, qualitative judgment varies among individuals and from country to country. Precise specific standards, measuring devices, and methods will make evaluation of such studies more meaningful.

During the past few years, research in oral diseases has reached a new and elevated degree of sophistication. The time of subjective
drug testing and new methods of dental therapy lacking controls is past. Present and future clinical research requires the double-blind method of drug testing, in which neither the patient nor the doctor knows the identity of the medication. It has long been known that 40 per cent of the patients will respond favorably to placebo therapy. The application of statistical techniques to oral research methodology will bring more scientific, objective, and finite results. In the past, much of our therapy had been based on subjective and unscientific opinions.

**The Drive to Publish**

The arithmetic of publishing papers and presenting lectures is quite simple. A shortcut to academic professional advancement can be achieved via research leading to publications and lectures. To the specialist in medical sciences, referral of patients often follows. Too often, professional men are judged by the length rather than quality of their bibliography. If you are a teacher, your department head thinks you are "pulling your weight" for the department by this activity. Each publication precipitates the next foundation, business, or government grant. Multiple authorship, too, may contribute to the evil, and the identity of the true researcher becomes obscure. Unfortunately, without publications a professional man may find himself lacking both academic advancement and support for future investigative activities.

**Literature Search**

The literature of science has become so voluminous that it is difficult to keep abreast of current developments. There is an increasing number of periodicals published in progressively narrower fields. One may unwittingly repeat work which has already been well done and is thoroughly documented. To refrain from undue repetition of research experimentation, a careful search of the literature is essential in order to uncover past achievements. The time is gone when one could keep up with advances by browsing occasionally through his journals or depending upon reprints of workers in the fields. Systematic use should be made of abstracting journals, index journals, review journals, and annual reviews and yearbooks. The number of "unfacts" that one carries in his mind
as facts would be revealing and the knowledge obtained equally rewarding.

**Analysis of the Problem**

A strategic breakthrough of a research frontier is extremely rare. Yet, some day acceptable answers to diseases in the oral cavity may be found, and much of the mass of former experimentation will be regarded as futile. How can such meaningless investigation be avoided?

Careful analysis of the problem can do much to eliminate a large percentage of wasteful and misdirected experiments. No single well-marked groove can be followed blindly. An entity as complex and baffling as periodontal disease, for example, requires step-by-step progress through various stages of the "scientific method."

Individual investigators often pursue a very limited phase of the broad problem and are lost in minutiae. Failure to view one's experimental work in the light of the problem leads to numerous unproductive experiments on tangential ideas. A scanning of the titles of published research reports gives much evidence of this. An investigator should consider how this specific experiment will contribute to the solution of the basic problem.

Anatomically, the oral cavity contains all the basic tissue elements found anywhere in the body. There are at least thirty different disciplines of basic science involved in dental research. A few examples of purposeful research are:

1. Microbiologists studying the sticky extracellular polysaccharide coating of streptococci and dextran, formation intimately involved in caries and periodontal disease. Animal experiments have shown that dextranase effectively dissolved dextran which is essential for dental plaque formation.

2. Marine biologists working on cement-producing glands from barnacles from Puget Sound, centrifuging and distilling the cement since a lipid ingredient has been found that can serve as an adhesive dental filling.

3. Biochemists developing the cross-linkage of collagen, an important ingredient of the oral mucosa.

4. Metallurgists investigating an alloy of copper, nickel, and manganese that would greatly improve dentures.
5. Crystallographers examining the structure of apatite crystals.
6. Chemists working on enzymes, antibacterial agents and fluorides which inhibit caries by strengthening enamel crystalline structure.

The ultimate aim then is to synthesize the knowledge of researchers in basic sciences and to apply this to the understanding of the clinical lesion, prevention of oral disease, and improving therapeutic techniques.

**Cooperation Between Disciplines**

It is becoming increasingly clear that research in oral diseases has attained a degree of development that requires cooperation between individual scientists in different disciplines. The crystallographer studying the structure of the apatite crystals, the metallurgist investigating corrosion, the microbiologist examining the activities of streptococci, and the biochemist working on the cross-linkage of collagen are at the frontiers of science engaged in fields of vital interest to the dentist. The mouth involves all tissue elements. A researcher who is basically a clinician needs the methodology and knowledge of a microbiologist, or a chemist, or a histopathologist, or a statistician in order to set up and carry out an experiment to solve the problem. Most research problems have developed to the point that they can be solved only with the assistance of other disciplines; and unless a dentist is well-trained in another field, he must join with others in completing an experiment. Some research can be undertaken only by relatively large groups in several disciplines.

**Limitation of Equipment**

Recognition of the experimental limitation of one's equipment is important. Great strides have been made in instrumentation, but each apparatus has a restricted application. For example, there are boundaries imposed by the physical theory of the microscope. It is useless to attempt an experiment oriented to discover minute details in biologic structure when the details are beyond the capabilities of the optical microscope. Here an electron microscope which has several hundred times greater theoretical resolving power should be used.
Waves of progress have occurred following introduction of a new research tool, and every effort should be made to utilize the precise device that would help answer the question on hand. Use should be made of such research media as stable isotopes as tracers, x-rays and irradiation, action spectra and absorption spectra, electrophoresis, and the electron microscope. Obsolete equipment may yield obsolete data.

**Experimental Animals**

Selection of subjects for any biological experiment should be carefully weighed. Almost all experimentation is done on less than 1 per cent of various groups of animals. Predominantly used for research projects are white mice and rats, dogs, guinea pigs, and monkeys. Important discoveries can be overlooked by the universal choice of these animals. For example, the discovery of nicotinamide was delayed because white rats were used as experimental material and white rats do not require this in their diet. Vitamin C is especially important to the life of the guinea pig, but no other animal has this nutritional need. Extreme care must be exercised before one transfers knowledge gained from experimental data on animals to the needs of humans.

**Statistical Consultations**

It should be a cardinal principle of investigation that one never undertakes a statistical study before consulting with a statistician unless, of course, one has that training himself. Biologic experimentation yields data that is suitable for statistical analysis. The use of this objective criterion furthers a critical attitude toward experimental techniques. Meaningless and unwarranted conclusions can often be avoided.

It is not sufficient to attempt statistical consultation subsequent to recording of experimental observations. From the inception, the statistician should participate in the planning of the experiment. Otherwise, inconsequential data may be collected while important data required for analysis may be omitted and nonretrievable. Numerous economies and greater reliability will certainly be attained by discussing the problem on hand with a statistician before starting an experiment.
Observations subjected to statistical measurement must be correct. They must be recorded without omission or modification. Conclusions are only as valid as the data from which conclusions are made. To treat careless observations with statistical methods will not yield valid results.

**Accuracy in Measurements**

Appropriate degrees of accuracy should be used in an experiment. Some factors can be measured with a high degree of objectivity and accuracy and others with only a subjective estimate. In the same experiment, one should not go to great length to measure one item precisely, while other items are just estimated subjectively. Extreme discrimination may not be indicated for some results. Unless the added effort to obtain finite measurement can be justified in terms of usefulness of data, one should not go to extremes.

**Title of Article**

Some thought should be given to the title of an article. Essentially, it should be descriptive though brief. A misleading caption can result in improper indexing and omission from an abstract journal. With the prolific literature on hand today, an ineptly titled article can easily be lost. A lengthy title ceases to be a caption, and its impact is dissipated.

**Clinical Research**

Despite the many contributions made by research to clinical therapy, certain inherent problems have made these bequests difficult to appraise by the yardstick of the scientific method. The very nature of therapy as presently practiced is empirical and pragmatic but not necessarily scientific.

This situation is beginning to change as more objective methodology is introduced. Lately, there has been more questioning, experimentation, and development of scientific methods in interpreting results of treatment. Clinical impressions are being replaced with statistical verification and double-blind study. Quantitation by the scientific method is essential in order to achieve a more complete comprehension of the disease entity and the evaluation of therapy.
HUMAN VERSUS ANIMAL RESEARCH

In clinical research, as stated, determination of the potential of a new drug is difficult and empirical at best. Observation and the use of roentgenograms are valuable but have their limitations. In order to observe cellular activity, biopsies are objectionable since they interfere with the healing process and require the patient's consent. Even if a biopsy is obtained to study the progress of the effects of the drug, there are limitations to observing cellular activity since only a small section of the area is used. Block sections, usually obtained in animal experimentation, are most desirable, but this is not a procedure normally resorted to in humans. Most important in studying experimental drugs in humans are the limitations on using controls effectively since no two lesions may appear identical.

On the other hand, animal experimentation may have shortcomings. Lesions that are artificially created in the jaws are not similar to those resulting from chronic diseases in humans. In bone surgery, for example, it is known that the surgically created bony lesion made under sterile conditions will heal quickly in animals and without any therapy. Men and monkeys are primates; but men are not monkeys, and the bony lesions or defects artificially created in the jaws of animals are not similar to the bony defects resulting from the factors that cause disease in humans. Special differences do exist.

UNTESTED NEW DRUGS

In recent years, there has been a tremendous drive by the drug industry to produce new drugs to benefit mankind. These new products result from coordinated efforts in many fields including chemistry, pharmacology, medicine, and dentistry. The commercial laboratories are well staffed and well equipped, but they can bring the testing only to a certain point and then have to turn to practitioners to test the drugs. However, before a new drug can be administered to a human being, it must satisfy several requirements. The therapeutic desirability and the potential activity of the new drug must be related to a medical need, and safety data must be provided before clinical trial.
Preliminary Clinical Trials

After studies on experimental animals have demonstrated that a compound is both safe and beneficial, a clinical trial may be undertaken. Protection of the patient is most important, and in no case should a study be undertaken without the patient being told that the compound is new and experimental. A trial is generally exploratory in order to determine the salutary effect on humans of a drug that has previously shown beneficial effect on laboratory animals. Uncontrolled clinical trials are useful in predicting the dose and the indication for the use of the drug. During the initial trials the patient should be followed carefully with laboratory tests and astute clinical observation. After the clinical trials have been completed and after it has been shown that they are safe and advantageous, then only should a well-controlled statistically significant study be designed for confirmation. In considering which studies are well controlled, it is important to remember that the double-blind study with random selection of patients may yield the most significant results.

Clinical Reports

The clinical report is actually an impression in which the experimenter describes empirical observations. The investigator will record findings concerning the use of a specific drug on a number of patients, and based upon these results, a report is made. There are no controls, no statistical analysis, and the fact that the disease here treated may have cleared up in the same time without therapy is not taken into account. At best, the clinical report is merely a testimonial.

It may be considered as preliminary drug testing and may be used prior to a more extensive and controlled study. However, these reports very often lead to erroneous impressions. The studies are undertaken on human subjects, and there are many different factors operating at the same time. Very often, the information obtained is subjective and opinionated. Not only does the patient have a feeling of obtaining relief from any new drug, but also the investigator himself inherently has bias to obtain favorable results when testing it. Clinical judgment or observation is useful in pri-
vate practice, but in research more objective, finite, and scientific methods of comparison are essential. Otherwise, one becomes trapped by not making suitable comparison between the tested drug and the placebo on controlled cases.

**The Double-Blind Study**

The clinical investigation is a rigorous scientific study set up with controls. When testing and evaluating the effectiveness of new drugs, the double-blind procedures should be used. In this method, two preparations are utilized. One has the active ingredient, and the other, appearing physically identical, contains inactive ingredients or a placebo. It is important that neither the clinician nor the patient be aware of the contents of the medication he is receiving. Patient selection and assignment to each group should be impartial. The patients admitted to the study for trial should be comparable in all aspects. They should be assigned randomly to either the placebo therapy or the medicated therapy, and then be subjected to uniform conditions. When the results are secured, they should be studied with sound statistical methods.

For a valid double-blind study, the selection of patients is of great consequence. Patients must manifest a condition or disease for which the drug being tested is indicated. For example, if one is evaluating a drug that purports to reduce edema following extraction, it would be unwise to include patients who have simple tooth extractions since most extractions produce little or no edema. If one administers a drug in this situation, then obviously the result would be meaningless. On the other hand, the type of patient to be selected here is one in whom edema is likely to result, such as when impacted teeth are removed.

After selection of a group of patients who have the lesions for which the drug is used as treatment, random assignment of the patients must be accomplished. Too often, the enthusiasm of the investigator, or even of the patient, may influence a study. For this reason the double-blind technique, in which neither the investigator nor the patient knows whether the active drug or a placebo is being used, will lead to a more valid study.

To recapitulate, then, the planning stages of a clinical research project, the following factors should be carefully considered before undertaking the research:
1. Consultation with a statistician
2. Size of sample
3. Selection of patients
4. The setting up of controls
5. The assurance that a double-blind technique is being used
6. The random assignment of patients to each group.

RESPONSIBILITY

The professional man must have the freedom to exercise curiosity experimentally. In ancient times, this curiosity was unexploitable, and until recently, it was denied. Research must be guarded zealously as a priceless heritage of our age. But it should not be abused by intellectual gadflies. With freedom comes responsibility. Careless indulgence and irresponsibility jeopardize this legacy and cannot be condoned. Many professional reports are barren, destined to be fruitless, or are a mere repetition of material appearing in textbooks.

CURRENT TRENDS

Recently, research in oral disease has attained an enviable degree of sophistication and has made exciting progress toward understanding oral disorders. The mouth is no longer considered as a separate biologic entity, and researchers have moved forward on a broad front of basic sciences. Anatomically, the oral cavity has all the intrinsic tissue elements of the body. Research in basic sciences serves as an underpinning from which clinical progress is sought. This multidisciplinary approach is the logical manner to solve the problems of oral disease.

BIBLIOGRAPHY


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For several years the American College of Dentists has sponsored PROJECT BOOKSHELF whereby members and friends of the College have donated textbooks and journals which have been sorted and distributed to schools and other dental institutions throughout the world. The Navy's Project Handclasp has been most helpful in transporting the book cartons to various points of distribution. Recipients have expressed their sincere gratefulness to the College, and the Regents are most desirous of continuing this worthwhile effort.

The demand for books and journals increases each year. Therefore, measures are now being taken to step up the collection efforts. All-out publicity and information concerning the program has been given to dentists in various sections of the country and they have been asked for contributions. The College members have assumed responsibilities at the grass roots level to promote the program.

The PROJECT BOOKSHELF Committee has given guidance to the new thrust by:

1. Calling for committees to be formed at the local levels.
2. Developing new instructional material to inform Bookshelf committee members on procedures to follow in carrying out the program.
3. Preparing publicity to be sent to editors of various national, state and local society journals.
4. Timing the collection drive efforts to precede most state or section meetings.
The Problems Facing Negroes in Dental Education*

JOSEPH L. HENRY, D.D.S., PH.D.†

Although this paper was directed originally toward Harvard University, its message applies to all universities in our country. Dr. Henry makes an impassioned plea for racial understanding and cooperation, and offers some practical suggestions for solving the problem of declining Negro enrollment in dental schools.

HOW can Harvard help with the problem of the vanishing Negro Dentist? Harvard can help in many ways. The solutions to be provided should focus on immediate (emergency), intermediate and long range programs and objectives. The greater part of this paper deals with the decline in Negroes attracted to dentistry today. However, this is only a part of the larger, more crucial problems of race relations and racism in America. The larger problems of race relations and racism must be considered first and then together with dental problems with proposals for providing immediate and continuing solutions.

The first and foremost obligation of any profession is to serve society. Today the problems facing us are grave and far reaching. Not only must the profession of dentistry and Harvard cooperate to serve society, but also in all likelihood, such cooperation will be necessary to save society.

One does not have to designate what the urban problems were in the past. No one can deny that the core of the urban problems of today and in the foreseeable future are and will concern race relations and racism.

One of the underlying problems of race relations in the past has been the failure to acknowledge the real problem or important aspects of the problem. It must be conceded that one cannot resolve a problem if he doesn’t admit that it exists. Finally, in the wake of

* Presented at the Harvard Club at Exercises for Post-doctoral Fellows in Dentistry, June 3, 1968.
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the report of the President's Commission on Civil Disorders following the riots of the past summers, an outstanding finding is that there was undue brutality and unquestioned racism by the white majority. Priests, religious societies, public spirited groups, outstanding public servants (1) one after another have come forward and proclaimed the existence of racism of the worst kind in America. This is not to say that there are no good people who are not bigoted, but it does say that there is a substantial proportion of our population which does practice bigotry as a part of their everyday existence. Bigots and racists come in all colors, black and white and all shades between. Also, they exist in all creeds and I have no patience with or respect for bigots regardless of race, color or creed.

So there you have it friends. It's out in the open. Now we can deal with it effectively. It is hard to suppress rumors and whispers of long standing that have been repeated time and again. However, as the majority begins to live with and examine the facts about Negroes, it becomes all too clear that the Negro puts his pants on one leg at a time as everyone else does. That he doesn't have a tail. That he doesn't have a peculiar odor any more so than anyone else. Any odor on Negroes is related to their personal hygiene habits and inability to bathe regularly or to afford long lasting deodorants. Anybody of any color who does not practice ample personal hygiene will have an odor. Sometimes it's hard to be concerned about a body odor when there's no bathtub in the house, or when one bath is shared by ten families, or when one has to "scratch" for meals that in many cases would turn the stomachs of the more affluent, or when one is forced to wrap newspaper around the body in winter under a tattered sweater or coat to keep warm.

If you cut a Negro he bleeds. If you hit him on the head, it hurts, and if you brainwash him for over 400 years, he tends to lose confidence as any other human would.

It is now the responsibility of all who have contributed to this brainwashing directly or indirectly to undo it, to build confidence, to nourish the substance of physical well-being, moral fortitude and mental acuity among Negroes in every possible way. There is a definite need to institute special measures to make up for his subjugation in a disadvantaged status for so long. Regardless of
his strata in society the Negro has been a victim of racism by individuals who couldn’t see beyond his color. Perhaps some of you think that I am overstating the case. Let’s try a small part of Henry’s test for bigots (time will not allow for all of it).

Would you object to your daughter or sister marrying Cassius Clay? If you say yes, then ask yourself if it is his color or his ideology that you object to or his education? If you object on any of these counts, you are practicing a form of bigotry. Would you get the same answers on each count if Cassius Clay were white? Remember a bigot is one who obstinately and irrationally, often intolerably, is devoted to his own church, party or opinions.

Ask yourself further, what is the racial composition of the neighborhood in which you live? Is this a coincidence? Why does this condition prevail? Some honest answers will shock you!

Almost as bad as bigots are the great masses of moderates who tolerate the atrocities perpetrated by the extremists of our nation. The moderates constitute by far the bulk of the population. If the moderates don’t speak out and act soon, then the decline and fall of the American empire is just a matter of time.

Harvard can help! But you must be willing to be innovative and even ridiculed. You can afford it for who ever laughs at Harvard will have to look-up to see the object of his laughter. Harvard enjoys an incomparably prestigious position in America’s heart and America’s economy. This is an unbeatable combination!

This great University always has been in the vanguard of experimentation and innovation. I’m reminded of how the entire method of teaching law in this country was revolutionized by Harvard’s utilizing the case method of teaching. Today that is standard procedure. But when it was begun years ago many scoffed at it and intimated that it wouldn’t last long since it was obviously somebody’s nutty brainchild.

It has been said that if we consider the elements of success we could draw a triangle and let one side of the triangle be knowledge, the second side skill and the third side attitude. Knowledge is purported to constitute 80 per cent of this triad, skill 15 per cent and attitude 5 per cent. But, the 5 per cent that is attitude is determinative. No matter how knowledgeable we are, or how skillful we are, if our attitudes are wrong or askew, then the product of performance will miss the mark widely and we shall fail. There-
fore, we must focus on changing attitudes. The changing of an attitude is one of the most difficult things in the world to do, but it can be done.

Allow me to illustrate my point with a story.

There was once a six-year-old boy who had a turtle that he loved dearly and prized most among all of his possessions. One morning he awoke and was not able to elicit any signs of life from the turtle. He began to cry and apparently could not be consoled or comforted. In desperation his father said:

"Son, we can't bring your turtle back to life. However, we are going to give this turtle the finest funeral a turtle ever had. We'll get a velvet lined box and snuggle him in it and tie it up with the prettiest ribbon you have ever seen. You can invite all of your friends to the funeral. Please tell them to bring their tricycles. After a nice parade and funeral we will have a party. The backyard will be decorated with balloons. There will be prizes for all. Mother will bake your favorite cake and serve it with your favorite ice cream. Naturally, there will be plenty of candy, games and your favorite records. After the party you will ride your tricycles until it is time to go to the movies to see a triple feature that you will love. That isn't all..."

Just as the boy was beginning to beam the father noticed the turtle move. The father exclaimed "Son, your turtle isn't dead! Isn't that wonderful!"

The son looked at the turtle and visions of the party, the parade, the goodies, and the movies flashed through his brain. He leaned over, squinted at the turtle with a somber face and said "Dad, let's kill it!"

This little story illustrates a change in attitude by making something else more attractive than the beliefs which gave rise to the attitude which one is attempting to change. Yes, you can change an attitude by offering something more attractive!

A number of legislators object to much needed legislation on the grounds that laws cannot change the hearts of men (2). This is not really the purpose of laws. All criminal law, and much civil law, is designed not to change the hearts of men, but to prevent some men from carrying out their heart's desire... which includes abominable treatment for Negroes.

Enforcement of proper laws will provide the opportunity for the races to work and live together. The basic nature of man will do the rest.

Actually, it is easier to accept than to reject, it is more satisfying generally to do good for someone than to do harm.

The current prevailing attitude among Negroes, as for most
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Americans, is to get to the good life by the shortest legitimate route. In prior years, the avenues to the good life of the middle class available to the Negro numbered only four. He could become a physician, dentist, school teacher or a minister. The next best avenue open to him was the post office. Our lawyers weren't making adequate incomes and the number of Negroes who had inheritances to give them entry to the good life were infinitesimal.

However, the passage of the Civil Rights Law of 1964 and the institution of integrated compliance teams to see that the law is enforced has resulted in massive opportunities for Negroes in most of the avenues to the good life. This reality has created a brain drain among Negroes from the health sciences. This result is due, in part, from the golden opportunity available with far fewer years of training and partly due to the aggressive, sophisticated recruitment tactics of industry, government, and management concerns. Dentistry has been particularly affected. The decline of Negroes applying to dentistry is well established (3-10) and will not be labored here.

The truth is that except for predominately Negro populated institutions the university is, and I quote Milton Stern:

"In the view of large numbers of Negroes, the university is but one more racist institution among many. What evidence can most universities offer to the contrary? To repeat, institutional self-scrutiny is necessary for example, looking at the student body to see who isn't there; exploring the hard realities of compensatory counseling to get them there; speeding of the faculty committee processes to introduce new curricula and new instruction now to begin serving the urban black population" (11).

It is obvious that Stern has great incisiveness into the current need and into what should be done.

We are asking that the same type of approach for Negroes in Dentistry be initiated. Identify the potential of Negroes. Admit them using the identification of potential rather than conventional tests which have not been proven valid for any minority group in this country as noted by the American Management Association. After identifying Negroes with potential and admitting them, it is absolutely necessary to set up specialized programs which will make up for their educational and cultural lags. This action will have to be done in a programmed way. Students admitted should
be extensively pretested and specific programs should be charted taking cognizance of the *adequacies* and the *inadequacies* of the students admitted.

Based on special screening and identification of potential in Negroes and special reinforcement or remedial programs, it will then be more palatable for great institutions such as Harvard to alter admission standards for gifted Negro students. One immediate solution related to solving the problem in dentistry is to change your admission standards, not your graduation standards, but your admission standards. You must take into account the failure of your admission screening system to identify Negro potential as differentiated from potential plus cultural exposure. It bears repetition that extensive testing for admitted students will be essential in order to identify deficiencies or special needs toward which remedial or compensatory programs must be directed. Such students admitted will need close supervision and guidance. Availability of understanding counselors who will motivate these students to achieve their best effort is necessary. In some cases, more successful results might be achieved by mapping out the program over five years instead of four. Tutors may be assigned during the first two years since this is where most students encounter their major difficulties.

A concentration on immediate solutions would prove to be shortsighted. This is necessary, but the emergency need will continue to arise if we concentrate on immediate solutions only. Harvard should lend its expertise and efforts to establishing immediate, intermediate and long range solutions and goals if a permanent removal of racial problems in America is ever to be achieved.

An intermediate goal should be the establishment of sophisticated recruitment programs in colleges and in high schools throughout the land to attract students to dentistry. Special emphasis should be placed on attracting women students to dentistry. Among the 230,000 Negro college students almost 60 per cent are women. Yet, only 1 per cent of the American dentists are women. This does not compare favorably with countries such as Russia, Scandinavian countries, Venezuela, etc., where more than 75 per cent of the dentists are women. Thus, women represent a great untapped reservoir for dentistry, and this is especially true among Negro women in college (12).
The long range goals actually relate to dentistry indirectly. The long-range goals should be to do away with the dual school systems in our big cities and throughout the southland and even in the far west. We should be taking every measure possible to make certain that everyone regardless of race, creed, or color actually receives an appropriate opportunity for a good education, good health and a good life.

There must be a concerted effort to do away with bigotry at all levels and to assure every child of every mother an equal opportunity for the realization of the American dream.

I am an American first!—and a Negro second. When I stop believing this I shall leave America for Negroland (wherever that is). Nevertheless, this places a great onus on America to see that the American dream of a good life and health is achieved by those of us who have been disadvantaged by prior mistreatment, lack of opportunity, oppression, racism, color, religious barriers, etc. Each obstacle which has worked to the disadvantage of individuals or groups must be removed and compensated for if we expect to save the American Society.

Some say it can't happen here. Look at Poland today. Already there are concerted and widespread new assaults on the Jews. Look at Germany. There is a seething unrest seeking power in every quarter. There is much to remind us of the early days of Hitler compared with the political activities occurring now in Germany. These and many other examples can be cited.

Many analogous activities are occurring in the U.S.A. Therefore we must decide that we are going to exist!—that we are going to attack our problems head on. Having admitted to a racist society, we must resolve to do something about it. Let the good people of all races, all colors and all creeds be identified with progress and fair play for all in America.

There must be something terribly wrong with America if men of substance such as Rev. Abernathy in the Southern Christian Leadership Conference are beginning to echo such statements as "There is a conspiracy out to murder off black people." This saying did not originate with him. It is something that has been repeated over and over, and often enough so that a large segment of American blacks believe this and are reacting to this belief. A typical example of this occurred in Montgomery after Hosea Wil-
liams, another top SCLC official, was told last year that it was illegal for him to lead a march in Montgomery because of the lack of a parade permit (after an attempt to get a permit was refused). He retorted, "Of course it is illegal. Whenever black people want to do anything for themselves, it is illegal 'illegal.'"

It must be remembered that this is not the far "left" or the far "right" or black power militants speaking. These are the leaders who are appealing to conscience, who are merely telling the poor to stand up and become visible and heard so that their problems can be focused upon. Once we realize and look at the poor, particularly the Negro poor, we can see how dismally bad off Negroes are; how bad things in America really are. Dr. Allen Maynard (13) has indicated, for example, that black children in Lowndes County, Alabama are doomed to incomplete lives from the moment of their birth. This famous pediatrician has indicated that life for Negroes is ten years shorter than life for Whites living in the same county.

There is a widespread belief among Negroes that the black people have become a liability for white Americans. The blacks were slaves first. After emancipation they were essentially cheap labor. Now they are to a large extent a burden as non-labor.

Perhaps you think I exaggerate. You need first-hand encounters with the deep South and inner city ghettos to really become aware of the problem, and most of you have not had this experience. If you haven't, then before you doubt, go out into the ghetto, into the highways and byways, into the deep South, and see the problem first hand. See the madness observed and vividly described by visitors from England (14).

The plight of our country today can be directly traced to extremists on both sides. It is a case of hate getting out of hand, resulting in cruelty to mankind because of the color of the skin. This need not prevail if strong men will it otherwise. That is why I am appealing to the Harvard community as well-recognized strong men to use your will to eliminate the problems of race relations and unequal opportunities for minorities in America. Achieve this and you will automatically resolve the problem of Negroes in Dentistry.

What can Harvard do to help? Harvard can use its Washington lobby now to influence the legislation needed to start us on the
road to self respect as a nation. If Harvard takes the lead, others are sure to follow. Harvard is represented in the highest places in all major companies of the country and if the policy of Harvard were made known and the graduates of Harvard were exhorted to help build the will that is necessary to bring true meaning to freedom and equality for all, then success will be assured!

It may be difficult to believe but true that it is a matter of fact that 5 per cent of the people of this country possess 20 per cent of the wealth and resources. On the other hand, 20 per cent of the people at the bottom possess less than 5 per cent of the wealth and resources of this country. It may be difficult to believe but true that there are 20 million people of this country who are hungry, malnourished and almost doomed to degradation and despair because of the system under which they exist. We must put an end to this system as it exists today. We must create a system that works. Only you and more like you can put the human back in humanity.

Your renowned anthropologist and sociologist Professor Montagu (15) has written more than thirty books. He insists that man is not born as mean as he is. He points out that humans are given to mistaking their prejudices for laws of nature. Professor Montagu asserts “There is certainly no evidence whatever that there exists anything remotely resembling an instinct of aggression in man. On the other hand, there is plenty of evidence that all aggressive behavior not due to chromosomal anomalies, not to mention all essentially human behavior, is learned.”

It is hard to believe what man has done to man and is doing to man every day here in a country of “milk and honey.” My faith is not shaken! I believe as Montagu does. That man is educable. This is the outstanding species characteristic of man. I cannot believe as Freud put it, that man is polymorphously perverse. I do believe that man is polymorphously educable. He can learn to be aggressive and can learn to be unaggressive, but he is not born one way or the other normally.

What I am asking Harvard to do is to engage in a monumental project of problem solving in human relations, with a special goal of eradicating racism and inequality of opportunity for every citizen of our country.

The problem of Negroes in Dentistry cannot be solved by schol-
arships or loans alone. Scholarships and substantial loans are needed, but there must be students to make use of these scholarships. This calls for identification of Negro potential and this requires additional research. We probably can be of some help since we know that three parts of the Dental Aptitude test—reading comprehension, science application and three dimensional visualization, are highly predictive of Negro potential in dentistry at Howard. However, at Harvard, Negro potential for dentistry is not enough. Even if you admit Negroes with potential there needs to be soundly structured and well planned compensatory programs to assist those who can succeed with appropriate counseling and aid. Such students would not be admitted using current selection procedures and they would fail if left to flounder after being admitted. It is our contention that if we make the profession attractive enough the return of pursuit of dentistry by Negroes will take care of itself.

**SUMMARY AND CONCLUSION**

In summary, I have indicated that the problem of the decline of Negroes applying to dentistry is provincial and that it will be solved automatically if the much greater problems of race relations and racism are resolved.

Suggested courses in solving the dental problem involve immediate, intermediate and long-range programs and objectives. There is a crying need for a change in attitude and practices generally in dental education. We urgently recommend the following:

a. Better testing methods to identify the potential of Negroes for dentistry.
b. Pretesting of Negro students admitted to dental school to identify their weaknesses.
c. Compensatory programs to deal with identified weaknesses.
d. Special advisors and counselors assigned to and empathetic with the Negro enrollee.
e. Ample funding at the predental level and continued through dental school to make dental education more competitive with the offers from industry and government.
f. Sophisticated Recruitment Programs at the high school and college levels to publicize the attractiveness of the profession and the funding available.

Harvard can provide the answers at least in part. The question is, will you provide the answers? Part of the answers are going to have to come from your heart. Part of the answers are going to
have to come from your pocketbook. Part of the answers must come from your educational and research resources. But, most of all the answers are going to have to come from your will to supply the answers. It is the American heritage and fulfillment that what America wills, she does. And, it can be so in this cause.

Permit me to close with a poem by Edgar A. Guest. The title is "Discrimination."

This is the truth which you shall find;  
Good flourishes in all mankind,  
And soon or late some evil man  
Disgraces every sect and clan.  
Be not deceived by form or creed.  
Some bad appears in every breed;  
But, Gentile, Jew, nor brown, nor white  
By birth alone are wholly right.  
My son, despise not race or clan;  
Pass judgment only on the man.  
Make friends or enemies by deeds,  
Never by boundaries or creeds.

LITERATURE CITED

The Dental Curriculum: Its Theory and Development*

RICHARD M. JACOBS, D.D.S., M.P.H., M.S., PH.D.

The word “curriculum,” derived from Latin currere, i.e., “to run,” signifies more than “running,” or scheduling, of a course of study; curriculum document actually lays down a set of principles and objectives of a scholastic program and, therefore, represents a modus operandi of an institution. There are three major sources of influence which determine the pattern of curriculum: (1) faculty’s credo, (2) the interests of students, and (3) the needs of society. In order to be a living reflection of these determinants, curriculum document should have a built-in “elastic clause” so that it can be amended and adjusted to the constantly evolving social environment and institutional setting.

The recent astounding scientific, social, legislative, economic and cultural changes taking place in our society have brought about an educational explosion which affects us all. The dynamism of new pedagogical concepts and the thrust of newly developed educational hardware have produced a ferment in most academic institutions. A blend of vigorous pressures from pedagogically oriented faculties and restless students, superimposed upon the general background of the national revolution of rising expectations, has generated an outburst of curricular revisions on all levels of education.

Figure 1, below, displays a scheme of dynamic interaction between the faculty, students and society—presented conceptually as a whirlpool—and the curricular “mushroom” produced by welding an “effervescent intermeshing” of these three curricular determinants.

Let us now discuss the three curricular determinants shown above.

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The philosophy and the education of faculty are the most important considerations in making curricular decisions. We must recognize the fact that prior commitments to curricular matters exist among faculty in various degrees and intensity to form the general context within which the planning of curricular revisions takes place. This seems to suggest that curriculum development may depend greatly on pertinent and concurrent in-service education and genuine involvement of the faculty in curricular matters. In fact, curriculum design should provide the individual faculty with an understanding of their role and responsibilities in making the major decisions of curriculum development. When faculty is not given an opportunity to participate fully in curricular delibera-
tions and decisions, alterations of the curriculum become highly traumatic. This is especially true in old, established schools. In effect, the reality of dental education often forces great innovations into a surprising conformity with existing curricular patterns, with much of the variations being in semantics rather than in operation.

**STUDENTS**

The role of the student body in the academic "vortex" has only recently received serious consideration. But we saw enough symptoms of student dissatisfaction with their self-perceived status as "customers" of a university to anticipate increasing demands for their elevation to partners in the "community of scholars and students." Students' active participation in academic affairs might be further enhanced by availability of liberal government loans and scholarships which will reduce their need to work while in dental school.

**SOCIETY**

Both society and the government are concerned with the delivery of health services to the people and therefore, the development of educational programs in professions must relate to health needs and the social context within which it takes place. To meet this challenge, the dental education of today must be tuned and keyed to the dental needs and patient care of tomorrow. Prediction of these needs, which will be determined by the new scientific developments and social changes, must be speculative and therefore presumptive; however, such conjectures are necessary in planning curricular revisions. The nature of dental practice in the future may be influenced by:*

1. Increase in demand for care caused by: (a) population increase which is expected to be 272,000,000 by 1980, (b) Medicare, (c) Medicaid, (d) children's programs, (e) Denticare, (f) programs of the Office of Economic Opportunity, and (g) increase in voluntary prepayment and fringe benefit programs (for example, one service corporation grew from 9,388 eligible patients in 1961 to 1,150,000 by 1967).

* Based on the report of the Workshop of Dental Examiners and Dental Educators held in Chicago on February 3-4, 1967.
2. Greater involvement in provision of dental service within the hospital and expanded care facilities stimulated by Medicare.
3. Greater effectiveness of preventive dentistry on individual, community and regional bases.
4. Continuing technical development.
5. Greater governmental attention to dental health at all levels.
7. Increased use of auxiliary personnel requiring the dentist to be better trained as a small businessman.
8. Pressure of increasing knowledge forcing greater use of continuing education for dental and dental auxiliary personnel.
9. The ability and the willingness of society to pay the increasing cost of high quality health care, increasing the demand for special services and making an adequate statewide distribution of such care imperative.

The three main sources of influence, i.e., those of the faculty, students and society, must be harmoniously superimposed upon the broad base of school resources and administrative organization and leadership, which may be viewed as a fourth significant curricular determinant.

It can be noticed (Fig. 1) that the curricular “mushroom” generated by the institutional “whirlpool” displays four basic components which constitute a framework of any rational curriculum: (1) Objectives, or goals that the institution seeks to attain; (2) Content, or set of educational experiences which are likely to help to attain these objectives; (3) Methods, or organization of learning experiences to maximize their cumulative effect; and (4) Evaluation, or measuring of the effectiveness of educational programs in attaining institutional objectives. Let us now examine each of these elementary components of the curriculum individually.

Objectives

A statement of objectives establishes the direction and the scope of educational programs, and forms one of the major bases for evaluation.

One of the basic objectives of dental education should be functional knowledge, that is, attainment of a harmony between what dentists know to be important and what they in effect and practice
"do." This applies particularly to the basic science element of dental curriculum.

Educational objectives should be defined in behavioral terms, so that the desired terminal behavior of our students is clearly perceived. As an example, we may cite the broad institutional action objectives recently developed by our Curriculum Committee. These objectives are expressed in terms of what our students are doing when they are demonstrating that they have achieved our objectives:

**BROAD INSTITUTIONAL ACTION OBJECTIVES OF THE COLLEGE OF DENTISTRY OF THE UNIVERSITY OF IOWA**

The objective of the Dental Program is to develop in students (1) a capacity to learn, (2) skills, and (3) attitudes, so that at the time of graduation they are capable to perform voluntarily the following actions:

1. Read dental and related literature with comprehension and ability to evaluate and criticize.
2. Identify and analyze problems related to a defined core of "dental" knowledge.
3. Communicate, orally and in writing, the concepts pertinent to the identified core of knowledge.
5. Perform specified dental procedures with skill and competence.
6. Fulfill the legal requirements to practice dentistry.
7. Pursue special professional interests with scientific curiosity.
8. Be cooperatively involved in comprehensive interdisciplinary health care embracing the total patient.
9. Be involved in community activities—especially those related to health care—on a local, national and international level.

**CONTENT**

*Flexibility*

It is well recognized that there is a wide variety of terminal objectives, which may lead some students into general practice, others into teaching, research or speciality areas. In view of that, a question may be raised whether our dental curriculum should focus its efforts on this core knowledge, abilities and skills which are...
common to the multivariant potential of the student, or should we force all to learn what only a small percentage may ever have reason to know.

Dental curriculum has traditionally encouraged unimaginative cramming courses and discouraged imaginative departures from conformity. This lock-step type of education has been, naturally, detrimental to the recruitment of gifted students.

We should, in the future, produce a curriculum which permits effective use of individual guidance, and remains flexible, as well as productive. Dental curriculum should be organized to permit a great deal of individual freedom in the pursuit of knowledge. To enhance that we could introduce, in addition to traditional content, such courses as (1) problem-solving exercises, (2) training in library science, and (3) "rehumanization courses" which call for emphasis upon gentleness, kindness, emphatic consideration and humility.

Integration

Curriculum design must be more than a collection of unrelated individualized courses and provide for both horizontal and vertical continuity. Such integration of content requires continual cross-reference among all the courses taught concurrently.

Dental curriculum should achieve a synthesis of three orientations: (1) Basic Science, (2) Clinical Science, and (3) Preventive Dentistry and Public Health. Such interdisciplinary integration and correlation should not be impossible, since most students and faculty would like to consider the broad spectrum of dentofacial disease in solving of clinical problems.

An effective integration between basic science and a clinic requires chronological coincidence which, unfortunately, is now rare. Clinical application of a particular technique should follow immediately after students have learned the technique to provide continuity and a meaningful sequence of educational experience. However, an earlier contact with patients has been feared in the past as a step which might suggest a regression to trade school or an apprenticeship approach to education. These objections may be mollified by an early approach to a patient through some form of a correlation clinic in the first year (we will call it a "bioclinical" conference).

Integration can be achieved at three distinct levels: (1) integra-
tion of teaching (multipurpose laboratory used as home base for the students), (2) integration of basic science, clinic dentistry and epidemiological studies (carried out on the level of the teacher), and (3) integration of the subject matter, taught in a dovetailed fashion, so that discussion of normal and abnormal processes is approached from all pertinent viewpoints simultaneously. Under such a system the supervision of the course moves from one department to interdisciplinary committees.

An oral biology course can be viewed as a rational point of departure for integration of related clinical and basic science disciplines. It is now recognized that biology should be taught for its own intrinsic value going beyond the learning of factual information and major generalizations into the sphere of interrelationships which generate a context of meaning and application.

**Problem Solving**

If the learner is to gain competency in understanding processes as well as learning them, then instructional methods employed to achieve these two objectives must recognize the traditional dichotomy existing between content and process. We should appreciate our student’s capacity for perception of goals of his own, his ability to identify, select, and verify the nature of and uses to be made of emergent generalizations and procedures of decision-making.

We should give our student, not the synthesis, but meaningful tools to manipulate his own emerging synthesis on the basis of his own knowledge. Such instructional practices stress primarily an active rather than passive involvement by the student, and place only secondary emphasis on content and its retention. To become creative and actively involved a learner must feel reasonably secure in his social framework and therefore, he needs the sympathetic rapport, not aggressions, of others in his environment, that is, faculty and his peer group.

**METHODS AND ORGANIZATION**

**The Process of Learning**

Learning is an active and highly individualistic process. There are some basic generalizations, which most learning psychologists
have agreed upon, at least as factors which improve the efficiency of learning:
1. The learner must be motivated to learn.
2. Learning which can be easily related to concrete aims is most efficient.
3. The task-oriented learner is better motivated.
4. The learner must get satisfaction, either intrinsic or extrinsic for efficient learning to take place.
5. Intrinsic motivation is preferable to extrinsic motivation.
6. Motivation for a reward is more suitable than motivation to avoid punishment.
7. Reinforcement of successes and desired behavioral changes brings about more efficient learning than does the emphasis of failures.
8. Emotional involvement in the learning process is important; however, intense emotional involvements such as fear, anger, and jealousy, interfere with learning.
9. Frequent feedback will greatly enhance the efficiency of the learning process.

Education Technology and Instructional Strategies
Most of the recently developed educational hardware represents an application of the learning principles outlined above. As examples we may cite: employment of closed-circuit television, 8-millimeter concept films, video tape, film strips, stratovision, electronic teaching laboratory, self-instructional devices like teaching machines, thermoplastic recording, multiprojection systems, computers, data-transmission systems, programmed books and new library technology.

Improved teaching methodology can increase the cumulative effect of learning experiences. The updating of instructional materials, the exploration of various teaching strategies, use of the wide variety of instructional aids, and the development of related programs of teacher in-service education are all having great impact on the quality of instruction.

Introduction of small class instruction, student discussions, and tutorial sessions places strong emphasis on motivation, interest and intellectual stimulation. This system is concerned with transmis-
sion of attitudes and values and developing the student to his capacity, by giving him an opportunity to learn his own capabilities and his particular interests.

**Evaluation**

The fourth major task in education is the evaluation of the effectiveness of the program in attaining its objectives. This requires appraising the educational progress of the students and evidence of changes in students' behavior during the time they are taking part in the educational program. This means measurement in the beginning as well as near the end of the course. It is generally agreed that the essential aspects of evaluation include: (1) identified behavioral objectives, (2) a set of observations of the behavior of the subjects being evaluated in pertinent situations, (3) development of criteria for establishing the degree of adequacy of observed behavior, (4) the evaluating of these behaviors in the light of the identified objectives and in relation to the criteria of norms, and (5) the use of evaluation results in determining and directing future behavior.

It is important to emphasize that we evaluate primarily to guide student learning and to test attainment of objectives—not for administrative purposes.

We all well recognize the fact that a concept of status quo in professional education is untenable; however, if an indictment against the status quo is to be returned, the burden of proof should rest with the innovator and the data provided by an evaluation process. This seems to be a rational approach to the developing of a blueprint of a curriculum which can meet the changing demands of a changing society.
What Is an Honor Society?*

PERCY T. PHILLIPS, D.D.S.†

WHAT is an honor society? What is the American College of Dentists? These questions have been asked many times down through our years of fellowship. Yet today they call for answers somewhat different from those which the Founders and Organizers would have responded with in 1920, or for that matter, the answers we would have given a decade or so in the past. The American College was born back in an era when the challenge to equality of opportunity and the need for a service relationship to one's fellowman was a primary ideal. Security to self had not become the primary goal that it is today.

Not that the American College has changed basically, or the concepts of an honor society has been altered fundamentally. However, the background of social evolution against which the answers are projected has been greatly revised by politico-economic events and circumstances. Today's world—a transitional world—is different. And we are different. We must be; we must constantly adapt ourselves to a changing national and world environment, else we may find ourselves out in the cold—left behind by the trend of the times.

With today's public relations emphasis upon good community citizenship, I like to think of the American College of Dentists as an honor community of honored professional men and women, who, by the way they live and work, exemplify the highest principles of professional citizenship and who thereby continually qualify to maintain fellowship in our College.

Today we live in a period of social transition that requires a keen perception of health matters, far exceeding our knowledge of yesterday when life everywhere in the world was less complex. The changing nature of the distribution of health services alone has created problems, the solution of which must be approached

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†Dr. Phillips, a past-president of the American Dental Association, is Executive Secretary of the Dental Society of the State of New York.
unemotionally with discerning caution and the impact must be considered carefully.

Arnot said, "If honor be your clothing, the suit will last a lifetime; but if clothing be your honor, it will soon be worn threadbare."

Our heritage is good—our accomplishments commendable—our experience invaluable. As Cicero once said, "If no use is made of the labors of the past, the world must remain always in the infancy of knowledge." Let us frequently pause to reflect upon those fellows of the College who have contributed so much to bring about the enviable position that our dental profession holds in the overall health service field. If we can but weld the experience of those who have gone before with the challenges and knowledge of today, we can foresee a true fulfillment of the basic responsibilities, obligations and duties of the College as envisioned nearly fifty years ago by Drs. Conzett, Friesell, King and Black.

The strength of an honor society such as ours lies in its composition of professional leaders, who in fulfilling their fellowship obligations try constantly to live up to the principles and traditions of our group through personal selfless service to their colleagues and to the public they serve. That is the collective image of our membership—the image of professional character and functional integrity.

Similarly, the institutional and collective image of the American College of Dentists is the mirror-reflection of its influence and leadership in fostering cordial and understanding relations among dentists everywhere; in urging maintenance of high standards of education and practice; and, in cooperation with other health science professions, promoting support of community health programs.

The rewards of fellowship lie at least in part, in the satisfaction that comes from knowing that jointly with his colleagues, one has contributed to the welfare of his fellow man.

Confucius, who has been widely quoted in and out of context, once said, "He who wishes to secure the good of others has already secured his own."

We who are assembled here at this Section meeting have demonstrated—and must continue to display—a keen awareness of our
WHAT IS AN HONOR SOCIETY?  

obligations as citizens of the A.C.D. community and the larger national and world communities in which we live and practice.

Collectively, the College, our College, and individually as private practitioners or administrators, we work actively for the good of our profession and its improved service to humanity. We must not, as so many are doing today, leave it to others to solve the problems of the profession while they, when the day's work is done, relax with feet in carpet slippers and eyes fixed on the television screen. Dental problems, and social problems are every dentist's concern; they should not be completely delegated to a relatively few dedicated workers. Let it not be said of us, as the Scriptures report of a certain situation centuries ago, "The harvest is great, but the laborers are few."

Responding to the challenges put to us by a changing society, let us appraise the important significance of each of the problems that arise, while looking long and hard in the directions they point. Then insofar as we can, aid in the determination of what shall be done about them for the sake of the public and the profession. In other words, let us never fail to open our eyes and raise our voices when the profession faces an economic, moral or social crisis. Let us base our posture on reason, not emotion; on principles, not personalities; and on the common good, not partisanship.

Perhaps we should have a point in question, since it is in the mind of all at this time. Many of the fundamental problems facing the health care complex of the nation can be traced to well intentioned but ill-advised legislation. When the federal or state government steps into the marketplace to purchase additional billions of dollars worth of health care through an already overburdened complex, the effects are serious, severe and all-encompassing. This has been particularly in evidence during the last few years with the adoption in Washington of Titles XVIII and XIX to the Social Security Laws of 1965, and in 1966 at Albany, a program of Medical Assistance for Needy Persons. It is almost an understatement to say the problems which this legislation have brought have been extensive with many areas yet unresolved. However, while I am no Jim Farley at making accurate predictions, I would hazard a guess that with continued effort they will be in the main resolved with reasonable satisfaction. It can be done if we will but work on it. It
will not be accomplished, however, by repeal of the law. This would be wishful thinking, for this basic type of social legislation is here to stay.

Today all but a minority accept these new social programs, although rightly so, most of the health care providers are wary about further government regulations and restrictions. The complaints today are less and less on the grounds of ideology, than on practical application and continued administrative confusion in the governmental agencies.

A professional honor society, like any other society, is no better and no worse than the sum total of its leadership and rank-and-file membership. It is what they make it. By their actions they either add lustre to its image or downgrade its status. It is up to us to determine whether the American College of Dentists is to be a mere haven of smug sociability or a viable and responsive organization of influence and purpose.

All groups, clubs, associations and societies are in constant need of renewal from within. This observation applies equally whether they are religious, civic, community, educational, business, labor, professional or honorary societies. All Sections of the American College of Dentists, and the national officials as well, should frequently take a long, hard look at themselves from within and constructively and critically evaluate how close they approach full attainment of the ten current goals and objectives of the College in which they were so proud to accept fellowship. This assignment is not an easy one, but what is today? If each one of us were to even occasionally read these principles and ideals, and then ask ourselves, what have I done recently to foster the aims of the College and merit the confidence my sponsors had in me?, I am certain we would soon see some of the every day problems vanish rather quickly. One cannot contemplate, nor is it expected that all goals can be attained singlehanded or alone. However, together as a Section, or a group within a Section, we could become Doers, and reduce the percentage of Onlookers, and Uninterested to a joyful minimum.

Some months ago I was honored with an invitation from one of our best known regional meetings to present my thinking on how one might strengthen a professional organization. As I thought about it, more than twenty observations came to mind which
seemed to me best to exemplify the ideal principles of professional citizenship. Frankly, I believe that all could equally apply to an honor society, but I shall take the liberty of excerpting just a few with modifications which I think particularly pertinent to us as we are gathered here tonight.

1. Accept your responsibility. Good management of the College and the Sections is as much your responsibility as that of any other fellow. Don’t leave it to George, or Carl, or Walt.

2. Think in the terms of the interests of all. Ask yourself, when a question arises, or you have a potential candidate for fellowship in mind, would this help or harm? Remember that unless it would be good for everyone, it is not in the long run good for anyone.

3. Keep posted. Be informed of what the College is doing and how you can help. If you do not keep up to date, you will be out of step with your fellows.

4. Be a builder, not a wrecker. Administrators agree that the man who criticizes the deeds of others rather than contributing works of his own is no asset to any organization. As the motto of The Christophers has it, “Better to light one candle than to curse the darkness.”

5. Communicate. The competence of those who make decisions for the College can always be strengthened by those who communicate their ideas to the designated officials. Don’t hesitate to speak up. However, for your own sake, be sure your thoughts have been carefully formulated before you do. Superficial thinking, lamely offered, reflects no credit upon the individual who verbally “shoots from the hip.”

6. Protect the integrity of the dental profession. Very few persons enter the profession of dentistry who have not been attracted to it by the intellectual opportunities offered for creative endeavor in providing a professional service which has assumed social significance and importance to the health of man. Few will question that the American dentist is not professionally and scientifically competent; the product of a good sound system of constantly expanding education; submissive to rigid qualifying licensure; attentive to the demands for continuing education; subject to ethical discipline; conscious of his obligations to the needs and aims of social man; and one who enjoys high respect in relationship with the allied healing arts. If you believe this as I do, then I think you
and I, favored to honored fellowship by invitation, can expect College fellowship to reflect honesty and integrity of purpose and character as priceless ingredients of professional initiative and progressive developments.

Most of the things I have been saying are self-evident and no doubt you would say them too. Perhaps also you will agree that fellowship in an honor society gives some degree of realization for positive needs in:

1. Achievement—the need to feel one has done something worthwhile or has materially contributed.

2. Recognition—the need to feel one's achievements have been made known to others.

3. Autonomy—the need to feel one has power or decision over one's actions in an area of responsibility.

4. Affiliation—the need to have friends, peers, colleagues, and to be in communication with others.

5. Evaluation—the need to feel that the standards for judging one's behavior and performance are reasonable and just.

If we have these positive attributes, we should have one more—the real need to bring out the best in other fellows and non-fellows alike, by seeing to it that these factors prevail for them too.

Let us build an honor society at all levels which will be honest enough to know where it is deficient; one whose printed goals will not be self-acknowledged as accomplished fact; one which will not accept a path of ease and comfort, but under the stress of spur and challenge willingly face the storm; one whose aim is high, and with determination will master today's problems of health service and care, before it seeks to master others; and finally one which will reach into the future, yet never forget the past.

What is an honor society? It has many intangibles. As Carl Stark, our Past-President, said in Dallas "Let us be certain that we see the right image of ourselves, one that includes, whether we like it or not, our weaknesses and shortcomings, as well as our strength and virtues."
Lieut. (jg) Williams Donnally, DC, USNR

*Father of Dental Legislation for the Army and Navy*

Rear Admiral A. W. CHANDLER, D.C., U.S.N., Ret.

A DEPARTMENT of Defense publication (1) states: "When suggestions from any subordinate are adopted, the credit should be passed on to him publicly." Who among us has not felt that this altruistic principle is notorious for its nonobservance?

We should realize that many of our rights and privileges have been gained through the acumen, effort, and action of uncredited colleagues. Of course, failure to give credit where credit is due very often arises through ignorance. George Washington once stated: "Truth will ultimately prevail where there is enough pains taken to bring it to light" (2). It is so much easier not to make changes and to leave things status quo, as changes do require a lot of costly work. This status quo business appears to be prevalent throughout the recorded history of dentistry. In the interest of sound history, errors should be challenged to prevent further repetition, and significant omissions should be revealed (3).

With this thought in mind, I have reviewed carefully many items dealing with the remarkable accomplishments of Dr. Williams Donnally, an inadequately publicized individual whose outstanding documented suggestions were adopted upon the enactment of Congressional dental legislation. On four noteworthy occasions, twice for the Army and twice for the Navy, he acted to promote the image and much needed prestige of the dental profession.

Dr. Donnally was born February 18, 1851 at Lewisburg, West Virginia, and attended the public schools there. In 1875, he entered the office of his brother in Georgetown, Kentucky, where he served an apprenticeship of some three years. Then he entered the dental department of the University of Michigan from which institution he received the D.D.S. degree in 1880. Directly thereafter he

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went to Washington, D.C. and established a practice which he carried on throughout the remainder of his life.

Dr. Donnally joined the District of Columbia Dental Society and became one of its most active leaders, serving as secretary and in 1911-12 as president. He was a member of the dental examining board for several years and was instrumental in framing the first bill to regulate the practice of dentistry in the District of Columbia, enacted into law in 1892. He was prominent also in the National Dental Association and in the Federation Dentaire Internationale, attending the national meetings regularly and serving the national organization in numerous capacities such as secretary and chairman of the important legislative committee (4).

Dr. Donnally was such a powerful advocate of armed services dental legislation that it seems incredible that career dental officers could serve for many years without hearing of his efforts. Perhaps the crowning evidence of nonrecognition of this gentleman was the publication in a "chronology" of the Naval Dental Corps in 1962 of his photograph over the name of another person. More about this later.

The four outstanding military dental legislative successes in which Dr. Donnally so competently participated covered a period of approximately fourteen years of continuous devoted service to the dental profession. His first achievement, while William McKinley was President, was the effective part he took in the movement which resulted in an Act of Congress dated February 2, 1901 authorizing the appointment of the first thirty dental surgeons in the U.S. Army. They were known as contract dental surgeons and were accorded the privileges of officers, but wore an Army uniform without insignia of rank.

Dr. Donnally's second, third, and fourth legislative achievements were: March 3, 1911, August 22, 1912, and March 4, 1913. These Acts made provision for one-grade commissioned officers in the Army Dental Corps, the Naval Dental Corps, and the Navy Dental Reserve Corps, respectively. These last three Dental Corps laws were approved by President William H. Taft.

An interesting sidelight of Dr. Donnally's career was that, although the Navy Dental Reserve Corps law of March 4, 1913 prescribed age limits of twenty-two to thirty for appointees, he was the first Navy Dental Reserve Corps officer appointed on April 23,
1913, although he was a little over sixty-two years of age. On September 15, 1913 he was appointed president of the first Navy Dental Reserve Corps Selection Board, convened to recommend appointments under the new reserve law.

While directing attention to the great contributions of Williams Donnally in securing Army and Navy dental legislation, I am aware of the magnificent efforts of the pioneers and progenitors in this field for more than half a century, as early as 1850, starting with Dr. Edward Maynard, the dentist-inventor, and others such as Drs. Chapin Harris, C. McQuillen, H. J. McKellops, G. H. Perine, W. E. Driscoll, Emory A. Bryant, and many associations and societies. They sowed the seed for the establishment of dental corps in the Army and Navy. But, their strenuous efforts in contacting and securing help from Presidents of the United States, cabinet members, members of Congress, and many others during this long period failed to secure favorable action by the Congress.

It is regrettable that several lengthy published articles relating to the history of the Army and Navy Dental Corps, written by Dental Corps personnel, do not even mention Williams Donnally. A large picture of Dr. Donnally, copied from one procured by the writer for the Navy files, appears on page 13 of a widely distributed Naval Dental Corps historical chronology, carrying under it the name of E. A. Bryant (5). Although Dr. Donnally's contributions to the advancement of dentistry in the Army and Navy were many, the writer never has noticed a Donnally photograph displayed in grateful appreciation at any Army or Navy dental installation.

A few quotations and notes relative to Dr. Donnally's achievements are submitted:

"Of great importance to the profession was the organization in 1901 of the first Army Dental Corps, consisting of thirty contract dental surgeons without military rank. The Executive Council appropriated $500 to Williams Donnally, secretary of the committee which had successfully promoted passage of the bill in Congress, to reimburse him for expenses incurred therein. The members further moved that an earnest effort be made to secure a like corps for the Navy, preferably of commissioned officers" (6). (The Navy never had legislation for the appointment of contract dental surgeons.)
"The Association continued to increase its efforts to improve the status of dentistry in the military services—the chief burden of this responsibility fell on the Committee on Army and Navy Dental Legislation. The Association, not unappreciative of the Committee's labors, presented a vote of thanks to Chairman Donnally and his committee members plus $200 to Chairman Donnally to help reimburse him for whatever money he may have expended in the interest of dental legislation" (7).

Dr. Richard Grady, a competent, nationally respected dental surgeon, was asked by a member of the Executive Council of the National Dental Association, on account of his experience and knowledge of affairs relative to the need for service legislation, to draft a bill providing for dental surgeons in the Navy. He declined due to an executive order prohibiting any action by Government employees to secure legislation by Congress. During this period he was a civilian Government employee as resident dentist at the U.S. Naval Academy. However, he strongly recommended Dr. Williams Donnally for this task as he thought highly of his ability respecting this matter and stated: "I have often wondered how he could carry all he knew concerning legislation and enlighten members of Congress themselves, outside of dentistry, as he did at the hearings before the military committee" (8).

Dr. B. Holly Smith of Baltimore, past president of the National Dental Association, in a letter dated November 2, 1907 to the editor of the Dental Cosmos stated: "I am glad to say, Mr. Editor, that I am no longer Chairman of the Legislative Committee, nor would I under any circumstances undertake it again. I firmly believe that it is necessary for the chairman of the committee to be a local man, and I know of no more efficient and influential person in Washington than Dr. Williams Donnally, the gentleman whom the Executive Council selected as chairman" (9).

"The year 1911 marks one of great accomplishment for dentistry—one in which the Association can take pride and credit. On March 3, 1911, the Congress of the United States approved legislation establishing the Dental Corps of the Army and stipulating that dental surgeons . . . would receive commissioned rank. . . . Once again the credit for achieving this victory, which surpassed the gain of the Army bill of 1901, fell to the politically astute
Williams Donnally of Washington, D.C., and his alert committee" (10).

During the proceedings of the annual meeting of the National Dental Association (Southern Branch) in 1911 Dr. William Crenshaw, Chairman of the N.D.A. Committee on Legislation, remarked: "I wish to make a statement with reference to this legislation, and will also ask Dr. Donnally to give his views. Dr. Donnally is in Washington, in close touch with congressmen and knows more about the status of affairs than all of us combined" (11). This statement related to the 1911 Army bill which originally had three grades of rank: Lieutenant, Captain, and Major. The last two grades were struck out.

Dr. Donnally replied: "I am sorry the time is so limited, as I consider this subject worthy of very much more attention than can be given to it in twenty minutes. . . . The effect of the opposition to which I refer was that two of the three grades of rank for which the dental profession has contended for nine years were omitted, and thus our measure, enacted several times by the Senate and approved by the House Military Committee, was reduced to a one-grade Army Dental Corps. This was done in the secrecy of the conference committee through the extraordinary efforts of the War Department, not only officially through the Secretary, the Chief of Staff, and the Surgeon General, but by such means as a lobby of commissioned officers in citizens’ clothes buttonholding members of Congress at the Capitol, and asking them not to give dentists any rank at all. Medical men tried to defeat this legislation, and a remark of a former medical officer, now the Chief of Staff of the Army (the writer identifies Leonard Wood), was substantially that the more dentists we have, the fewer surgeons we will have in the Army, and therefore he would not do for Army dentists as he had previously indicated he would.

"As to the Navy legislation that has been pending in Congress for a number of years, we have different conditions to deal with. We have the Surgeon General and all the other bureau chiefs who have anything to do with recommending this legislation, fully committed, and all willingly agreed that three grades of regular rank is the minimum with which the navy dental corps should be started in the service, and we have their promise that they will continue
to advocate that measure, notwithstanding the efforts of certain of
the War Department officials to get to the Navy to reduce the
Navy Bill to a one-grade bill.

"There is no official more dependable than Surgeon General
Stokes of the Navy. The Chairman of the Senate Committee told
me a day or two before I left him that he would renew the effort to
pass the bill at this special session of Congress. This should be done
even though the House of Representatives should defer action un-
til the next regular session . . ." (11).

With reference to the promotion of the image and prestige of
the dental profession during the establishing of the service dental
corps, as mentioned early in this article, the following statement by
Dr. M. F. Finley of Washington, D.C., President of the National
Dental Association 1905-06, before the Maryland State Dental As-
sociation and the District of Columbia Dental Society annual
meeting in Baltimore, June 9-10, 1910, is enlightening: "The rec-
ords and merits of the dental profession have too long been ig-
nored. . . . An example of the social position of the dental profes-
sion in Washington is that the D.D.S. degree is not considered a
sufficient qualification for membership in the University Club,
while the LL.B., the M.D., and other degrees from almost any in-
titution in the country are considered sufficient—some of these
being colleges one never heard of before. I claim that dentistry has
done as much for the world at large as any other profession" (12).

During the proceedings of the National Dental Association
(Southern Branch) 14th annual meeting in Atlanta, April 4-6,
1911, Dr. Finley stated: "Undoubtedly, the greatest step of all in
recognition of our profession, in its far-reaching effect, is the cul-
mination of twelve years of effort in securing commissioned rank,
with provision for retirement, for the Army Dental Corps in the
closing days of the Sixty-first Congress. There has been misguided
opposition in the ranks of our own profession, even admittedly
personal spite, and revenge sought, which delayed this legislation
and has prevented higher grades of rank being secured, namely
those of Captain and Major" (13).

Williams Donnally, along with Surgeon General Stokes, did all
the testifying during the greater part of the hearings before the
Committee on Naval Affairs, Sixty-second Congress, second session,
on the Naval Dental Corps bill which finally was passed by the Congress and approved by President Taft on August 22, 1912. During Dr. Donnally's magnificent testimony he quoted what President Taft, when Secretary of War, had said: "I have some knowledge of the unsatisfactory relations that exist between the Contract Surgeons and the Army. There are no persons who learn so quickly the difference between a real and a 'Mex' officer, if you may call him such, as the enlisted men. The life of a contract surgeon, especially one who is at all sensitive, is taken up in resenting slights. It is not a healthy attachment to any branch, but a collection of men who are neither fish, flesh, nor fowl, and I think the esprit de corps of the whole service would be much better if the contract surgeon could be entirely eliminated" (14).

Dr. A. R. Melendy of Knoxville, President of the National Dental Association, paid high tribute to Dr. Donnally's great efforts in his address at the sixteenth annual meeting in Washington, September 10-13, 1912. In reference to status of the Army and Navy Dental Corps, he said: "By an act of Congress approved March 3, 1911 and another approved August 22, 1912, the nondescript and odious 'contract' position of our dental representatives in the Army and Navy has been removed, and a grade of regular military rank common to all staff corps is accorded. . . . All honor is due to the present Legislative Committee and to all of the legislative committees who have labored so assiduously during the past years for this cause, and I take this opportunity to acknowledging my indebtedness to and expressing my appreciation of the untiring efforts in behalf of national dental legislation made by Dr. Williams Donnally, to whom more than any other man we are indebted for the passage of these Acts by Congress; for, whether as a member of the Legislative Committee or in cooperating with it, his interest and unselfish devotion has never waned; no personal discomfort has been too great for him" (15).

A committee headed by Past President James Truman of Philadelphia, in a report on President Melendy's address, wrote: "The act of Congress of August 22, 1912, giving rank and precedence to the dental corps in the same manner in all respects as in the case of appointees in the medical corps of the Navy, is of such importance that it merits special notice. . . . To the self-sacrificing
character of Dr. Williams Donnally's work, through 14 years of unceasing effort, is due this success, and your committee heartily endorses all that the President said on this subject” (16).

During the same session Dr. Truman, who was 86, recalled an incident in 1906 relative to charges against Dr. Donnally, of whom he said: “I do not think that this profession throughout the United States comprehends what that man has done for its elevation through fourteen years of sacrifice. I say, I do not understand it. I therefore want my views to go out through this report to the farthest extent of this country” (16).

When asked to give an approximation of his expenses in legislative work, Dr. Donnally replied: “Over $5,000, without hope of reward.” Dr. Truman then offered a resolution: “WHEREAS . . . Resolved, That it is recognized by this body that the success attending this prolonged effort, through fourteen years, is mainly due to Dr. Williams Donnally of Washington, and this has been fully recognized by this committee and past committees in charge of this responsible duty; therefore be it Resolved, That inasmuch as this has not been accomplished except through large money outlay and sacrifice of time, resulting in serious loss and some financial embarrassment, in the past, to Dr. Williams Donnally, the Executive Council be requested to take this into consideration and devise a plan to reimburse the said Dr. Williams Donnally for the lavish sacrifice of his private means, and that the said council report the result of its conclusions to a future sitting of this body during its present session” (17). Dr. Truman moved adoption and his motion was carried.

The proceedings of the Northeastern Dental Association on Wednesday, October 21, 1908, published in the May, 1909 Dental Cosmos, reveal that legislative results did not please everyone. Dr. M. L. Rhein of New York, later selected by Dr. Donnally’s Board for Dental Reserve Corps appointment, opposed reappointment of Dr. Donnally for three years as Legislative Committee Chairman, saying: “I understand a great many men of the corps (contract dental surgeons) wrote to the Executive Council of the National Association requesting they not reappoint Dr. Donnally because, they claimed, he did not represent real interests of the corps.” The Council did not like this attitude; called it petty political business. Dr. Rhein continued: “Dr. Grady told us legislation must be
under direction of the department, of the Army or the Navy. This is contrary to what Dr. Donnally has been giving out for years, that we will get our legislation with or without consent of the War Department... it has always seemed to me almost impossible to obtain this legislation without sincere War Department cooperation... one member of the Senate... opposed to this legislation is Senator Hale... I visited him at his home in Washington... and told him I wanted his support as Chairman of the Naval Committee... but his reply was 'Never, Never, Never!'"

Disappointment of some members about inadequate results obtained for the contract dental surgeons brought unfavorable remarks about the efforts of the legislative committee. Dr. Donnally challenged these remarks at the National Association Meeting in Buffalo, July 25-28, 1905. He said: "I should like this opportunity, since the objects committed to this Committee on Army and Navy Dental Legislation have been debated, to say a word. I have been a member of this committee for seven years; have handled all the correspondence, have drawn all the bills presented to Congress; also presented the profession's claims for commissioned rank to the War and Navy Departments and to the committees of Congress, and have endeavored to keep the profession well informed in regard to the methods of promoting the profession's interest in the premises. The committee has had the hearty and continuous support of the officers and Executive Council of this association, of a large number of influential and earnest members of the profession, and of university presidents and college faculties. Only a few, perhaps not more than a half dozen in the profession, have antagonized or interfered with attainment of this object of the profession. The attainment of the object involves judicious conception of most intricate and delicate problems and demands perfect concurrence on the part of all concerned.

"The Surgeon General of the Army has advised interested persons who called on him that all should work together with the National Dental Association Committee to gain anything at all. How can we hope to gain even the simple and modest provisions of the Army dental bill, reluctantly consented to by the Surgeon General and reported against by the General Staff, by the present and former Secretary of War, while there is discord in our ranks, in the face of the fact that the Army Medical Bill failed of passage
notwithstanding that it was supported by the American Medical Association, by the representatives of each state medical association, and directly by more than 2,300 county medical societies, by the Surgeon General, by the General Staff, by Secretary Taft and ex-Secretary Root, by the Senate and House Committees on Military Affairs, and by President Roosevelt in a special message to Congress.

"How many realize the significance of what has been accomplished in spite of powerful opposition? . . . Remember that the War and Navy Departments never supported the proposed dental legislation. . . . Your committee has been for seven years your servant, doing your will at a sacrifice with no hope of reward in this world. If it faithfully represents you, support its efforts; if it does not, discharge it and lift the burden . . . interference and effort have already retarded and made more difficult the attainment of the object. No one on the committee has any personal interest whatever in the result, nor has the committee at any time consented to terms less favorable than are possible of attainment . . . realizing the force of the warning of the War Department officials that the more we ask the less likely we are to get anything at all" (18). The committee's work was upheld by the association.

Dr. Donnally's contributions to the advancement of dentistry by securing Governmental recognition legislatively, by favorable Congressional action and Presidential approval of two Army and two Navy dental bills were outstanding achievements for the entire dental profession. Although the Committee did not get all provisions requested, the writer knows from personal observation from 1942 to 1952 that they were fortunate to get any legislation under conditions existing at that time. The Committee members, and especially Dr. Donnally, are entitled to our lasting gratitude.

Dr. Donnally died August 16, 1929 in Washington, D.C. His remains were interred in the Arlington National Cemetery in lot number 4031 Section 3 on August 19, 1929. As a tribute to Dr. Donnally's outstanding contributions to the advancement of dentistry, this writer visited his grave on January 24, 1957.

REFERENCES


RESEARCH METHODOLOGY IN ORAL DISEASE

(Continued from page 231)

And You Lived Happily Ever After*

SHELDON ROVIN, D.D.S., M.S.†

I WONDER if the thought of living happily ever after is in your minds on this very happy day. More important, though, I wonder if each of you is thinking about the meaning of this phrase. It is as thoroughly an American sentiment as one can find and yet is only found at the end of fairy tales. The key item in the phrase is happiness. The word happiness conjures up the storybook notion of comfort, tranquility, absence of problems—not to mention financial security, status, and so forth; in short, total gratification. Is this the type of happiness you are thinking about or want? If it is, I will suggest that you will be disappointed. Ironically, as John Gardner writes, "Having enough of everything isn't enough. If it were, the large number of Americans who have been able to indulge their whims on a scale unprecedented in history would be deliriously happy."

To me, happiness is having a sense of self-meaning or a reason for being; it includes the idea of being relevant to our world throughout a lifetime and entails an ability to change in order to sustain that relevancy; and happiness also means the full use of one's powers and talents in striving to attain meaningful goals, goals which have value for others as well as for oneself.

These concepts of happiness—what happiness is and how it may be achieved will serve as the substance of my discussion.

An attribute of a happy man is that he possesses a reason for being. Such a man has found a meaning for his life which transcends immediacy and exists above and beyond his material well being. This man has attained a reality which brings him a sense of permanence, a feeling of being a significant part of all existence. He has found an identity as a contributor to an ongoing and ever changing series of events and understands that he can alter and influence his environment by his actions and his ideas.

* Presented May 12, 1969 at the convocation exercises of the graduating class of 1969, University of Kentucky, College of Dentistry, Lexington, Kentucky.
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I am not defining a stoic. Life's pleasures are meaningful and necessary; they serve as rewards for man's efforts and as reminders of his goals. Neither am I describing a person who is willing to die for a cause—it is far better to live for that cause. I am talking about a man who places everything in its proper perspective as it is related to his entire existence, a man who understands that the striving, the working towards solutions to problems that can't be solved in his lifetime is worthwhile and that the striving itself serves to link him with history and helps to establish his identity.

Already, you have made considerable progress in the pursuit of self-meaning. By choosing to enter the dental profession you have joined the ranks of those who work toward solving problems which are unsolvable in a single lifetime—in your instance, the unsolvable problem is the elimination of oral disease. In addition, you have worked hard and long to develop the skills and talents which will enable you to contribute to the well being of others. This, too, is a significant step toward finding an identity. But I caution you to remember that a true sense of self-meaning is based not on job performance alone, but as I shall point out later, on a broad spectrum of contribution.

By virtue of being a dentist you possess a certain degree of relevancy to the needs of the world. As long as there is a need for oral health care, those who provide it will be relevant to society. But the type of relevancy that provides man his happiness and self-meaning is broader than job accomplishment alone; relevancy is assured through a commitment to the search for answers to society's major problems.

The psychiatrist-philosopher Victor Frankel writes that the basis of mental disease in the western world is inability to find a meaning for one's existence or a need for relevance.

It is my feeling that the source of the turmoil and ferment experienced by the young adults of our country is predicated on this search for meaning. Today the young adult is asking the questions and pondering concepts that used to be considered by those twenty years older. If my eleven-year-old daughter is discussing the atom and the computer with her pals in the sixth grade, what will she be discussing in the twelfth grade? Since the youngsters in the early grades are coming to grips with the mechanical aspects of the technologic revolution, is it so surprising that they, as teen-
agers, are considering the social and moral problems that have arisen as a by-product?

There is an increasing body of young adults who, at a much earlier age than ever known in American society, are challenging the hypocrisies of the adult world. These persons are looking for meaning which transcends job accomplishment and material gain. They are looking for a place in the sun, not a seat on the gravy train; the magnificence of the young is that they don't know what the obstacles are.

It is obvious to them that technologic advancement has brought an attendant group of serious if not threatening problems, the more exigent of which include overpopulation, threat of nuclear destruction, pollution, and mental and physical decline due to increased leisure time. It is equally obvious to them that the marvels of technology are not marvelous enough to be applied to solving some of these social and political problems. Moreover, it should be obvious to all of us that some of these problems may prove unsolvable unless new ways of dealing with them are found.

Jean-Jacques Servan-Schreiber, author of The American Challenge has said if America is in turmoil, this is not the proof of decay, but the price of progress. America seems in crisis because Americans have reached the point in social transformation where they are raising and debating fundamental questions long buried in tradition and dogma: the relationship between

rich and poor
black and white
parent and child, and
structure and spontaneity

Servan-Schreiber is right! If we are to progress it is imperative that many of those concepts held fundamental to our society be examined for their current social or moral value and for their relevancy to the technologic revolution now taking place. The technologic imperative needs an accompanying sociologic imperative.

Our society has need of systems which have built-in mechanisms for change, systems which constantly maintain their vitality through constructive criticism of the present, through discarding the obsolete and irrelevant and which innovate for an ever present future. I would stress that change itself is far less important than
having and sustaining a climate in which constructive change can take place.

But no such climate or system can be sustained unless the individuals in this system insist on constant, constructive change as a way of life. Earlier I claimed that a happy man is one who possesses an ability to change. Man is not static and if anything is universal about his life, it is the continuous change that confronts him. It is necessary for each of us to build into our lives some degree of flexibility in order to accommodate to the constant flow of change. We must arduously try to avoid the peril of settling into what John Dewey called "an inertia of custom: the resistance that acquired habits offer to change after they are once acquired."

Let me make an analogy between the value of change to the mind, and the value of exercise to the blood vessels of the body. Hardening of the arteries will occur sooner in the absence of exercise because the blood passes through the same tube, in the same way, at the same rate, all of the time. The vessels don't have much experience responding to variations in blood flow and as time goes on they have less capacity to do so and they harden.

Similarly, doing the same thing, thinking the same thoughts and living the same way give rise to cerebral rigidity. As time goes on a mind which has had minimal experience responding to variation or change will become petrified. It will then be difficult, if not impossible, to accept other ways and ideas even if they are superior to one's own. And, I don't believe that cerebral rigidity is necessarily a function of age; there are many young stoneheads just as there are many adaptable old brains.

The flexible man, be he young or old, knows that a new idea is neither good nor bad because it is new, but rather because it either has or doesn't have merit. He knows that the rejection of what is new or different because it can't be understood is the repudiation of rationality.

All of us have a constant need to undergo personal changes and venture into new regions. If we are to maintain our vitality, our reason for being—in addition to new attitudes we must acquire new skills, new uses for our senses and in some instances, new careers. We must also be possessed of a courage to fail—for if we want to achieve we must be prepared to take risks.
It is through venture and risk that accomplishments are made and ideas are promulgated. In today's world there are innumerable strongly held beliefs which at one time were considered radical departures from accepted custom. The franchise for women, the idea of education for all citizens and the land grant college, of which Kentucky is one, are examples. We should be comfortable in following unproven avenues because if these ventures prove unsuccessful—we do not remain defeated forever, we try again.

Clearly, a man well prepared for modern life is one prepared for change, a man who understands and easily accommodates to change. Samuel Coleridge put it well when he said, "In a higher world it is otherwise, but here below to live is to change and to be perfect is to have changed often."

I have pointed out that a true sense of self-meaning is based on relevance to the existence of others, to the world as a whole, present and future, and on our ability to change so as to remain relevant. In addition, I believe that happiness involves the full use of one's talents in striving to attain meaningful goals.

Relevance, I believe, can be achieved through a broad spectrum of contribution, which is based on different levels of ability, but which can bring self-fulfillment at all levels. The spectrum of contribution is as broad, and the range of goals is as wide, as the diversity that exists among the members of this class. All of you have dissimilar backgrounds and different levels of ability. There are also, I feel certain, varied expectations of what dental practice will be like, just as there will be differences in how you conduct your practices. Dentistry and life will be different for each of you. But your happiness will depend upon the extent to which you use your individual talents and powers in making contributions and striving for goals, at whatever level you are capable of.

You may, for example, make a contribution by raising your children in an environment of love, justice, tolerance and learning so that they can take their place in a changing society with a broader sense of relevance and identity than we have. An example of working toward meaningful goals which will not be attained in our lifetime is to teach our children to judge a person by his deeds and not by his color or religion or creed, and to show them that differences among people are sources of strength—not cause
for abuse. Man's animosity to man will not be eliminated by those in this room, but if we teach tolerance and justice to our children, and they do the same—this lofty goal can be achieved eventually.

For those of you who might ask how we should teach these precepts to our children, I would answer, "by example." How you live your life will surely influence your children's lives. If you are tolerant, they will be unbiased; if continuous learning is part of your life, they will desire education. Reading, music, and art may be taught in school, but their enjoyment is taught at home. In short, your children will largely be a reflection of what you are. Their best teacher should not be in a school room—but at home.

Advancing yourselves as individual practitioners and furthering your profession as a whole is another degree of contribution. Professional contribution includes more than being good practitioners. It includes exercising leadership in the governance of the profession and, especially for you, graduates of a dental school which has been an innovative leader, it includes helping to make and implement innovations and changes which can advance dental practice. Too often professionals tend to resist change, especially change which threatens to disrupt an existing comfortable pattern of practice. As John Gardner has said, "Professions are subject to the same deadening forces that afflict all other human institutions: An attachment to time-honored ways, reverence for established procedures, a preoccupation with one's own vested interests, and an excessively narrow definition of what is relevant and important."

If dentistry is going to keep itself relevant and responsive to societal needs it will require changes, some of which will considerably alter existing patterns of practice. The ideas of expanded duties for auxiliaries, group practice, shorter dental education and earlier specialization are nearing the end of their conceptual phases. Some are already in experimental trials. Will you weigh these changes carefully and evaluate them for their merit? Will you examine them for their benefit to society and worth to the profession? Or will you oppose them because they are contrary to what you have been taught or to your present perception of dentistry?

The major objective of your dental education has been to attempt to give you the tools and background on which future judgments can be based. This objective may or may not have been
met; but regardless, to dismiss future changes or innovations solely on the grounds that they are different and without considering their pros and cons is to abrogate the meaning of your education.

A third level of contribution is one that transcends your involvement with dentistry. This is the level of contribution which can be made by people, such as you, who have been the objects of a formal educational process far and above that which the average person receives. Because of your educational background, you have the opportunity to dip deep into the well of human fulfillment, and therefore, it is incumbent upon all of you to contribute to the society which made it possible for you to do so.

I would urge you at the beginning of your professional careers to give some thought to pursuing additional goals—those of a nature which will bring your considerable talents to bear on some of our more pressing civil and social problems. For a number of you there may come a time when dentistry, by itself, will cease to hold your primary interest. Self-fulfillment, then, will come at least in part from working at broader levels and contributing toward solving some of the problems of community and national scope that I mentioned earlier.

There is a need for leadership at all levels of our society and through your education, you are in a position to provide that leadership. There is a price in time and effort to be paid for attaining the goal of leadership, but though the cost may be high, the return in self-fulfillment can be higher.

How each of you registers on the scale of contribution will depend on your capability and motivation and I strongly suspect that the latter is more important. But regardless at which level you contribute or what goals you aspire to, I urge you to do so to the best of your ability. Perhaps the greatest source of happiness is the striving for excellence. By reaching for excellence, whether by being a husband, father, dentist or community leader, self-meaning and fulfillment can be achieved. Each person should take pride in his own accomplishment at his own level. There is no need to compare levels of contribution or productivity because our society has need of and, in fact, is structured for different levels of contribution. What is needed is excellence at all levels and in all facets of life.
Perhaps equal to being excellent is recognizing and encouraging excellence in others. I would venture that this task is made easier if we, ourselves, attain or strive to attain, some form of excellence. The old saying—it takes one to know one—seems to be applicable here. Our country has a desperate need for leadership at all levels from persons of excellence; we must learn to acknowledge such persons, help them to excel and at the very least—we should not impede them. When Alexander the Great visited Diogenes and asked whether he could do anything for the famed teacher, Diogenes replied, "Only stand out of my light." Everyone cannot be a Diogenes, but everyone can recognize one. Men of excellence are in need of understanding and help—even if only to allow them to pursue their goals. The recognition and encouragement of excellence are contributions of no small measure.

My remarks this afternoon represent my concept of happiness and the pathways to fulfillment and self-meaning. I have a great belief in man and his ability; his greatness lies in his ability to achieve and contribute. Unfettered by the restraints of immortality, ignorance, prejudice and rigidity, there is no limit to his potential and no end point to his productivity.

I remind each of you in the Class of 1969, that today marks that point in your lives at which you have the maximum opportunity to contribute and fulfill your reason for being. You have just today completed the formal educational process which is the most significant contributory factor toward reaching your potential. It has been said that it is probably the nature of man to come face to face with his potential, only to disclaim it. I implore you to reject this thesis. I urge you to grasp your opportunity closely and to claim your potential; so that the exhilaration of contribution—a true reason for being—may be yours.
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The Objectives of the
American College of Dentists

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

(a) To urge the development and use of measures for the control and prevention of oral disorders;
(b) To urge broad preparation for such a career at all educational levels;
(c) To encourage graduate studies and continuing educational efforts by dentists;
(d) To encourage, stimulate, and promote research;
(e) To encourage qualified persons to consider a career in dentistry so that the public may be assured of the availability of dental health services now and in the future;
(f) To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient through sound public dental health education;
(g) To encourage the free exchange of ideas and experiences in the interest of better service to the patient;
(h) To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public; and
(i) To urge upon the professional man the recognition of his responsibilities in the community as a citizen as well as a contributor in the field of health service;
(j) In order to give encouragement to individuals to further these objectives, and to recognize meritorious achievements and potentials for contributions in dental science, art, education, literature, human relations and other areas that contribute to the human welfare and the promotion of these objectives—by conferring Fellowship in the College on such persons properly selected to receive such honor.

This is from the Preamble to the Constitution and Bylaws of the American College of Dentists.