March 1949

The Individual and the Cultural Process. Leslie A. White ........ 3
The Likenesses of Chapin A. Harris. Gerald J. Rose ........... 11
Editorially Expressed ........................................... 24
Research Studies in Dental History. Milton B. Asbell .......... 28

Reports of Committees:
Hospital Dental Service ........................................ 35
Necrology ......................................................... 38
Blood Donor Program of the American Red Cross. Charles M. Watson ........................................... 40
Reports from the Sections .................................... 43

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

LESLIE A. WHITE†

The purpose of this paper is to inquire into the relationship between man as an animal species on the one hand and culture as a social tradition on the other. (Note: We use the term culture here in its technical anthropological sense. Culture is a generic term by which we designate all of the civilizations of mankind: the primitive as well as the high developed, the ancient and prehistoric as well as those of the present. Culture, then, is simply man's civilizations as a whole.)

According to one view, held by a number of anthropologists, culture is the product of individual activity. Thus Ralph Linton writes: "... the individual... lies at the foundation of all social and cultural phenomena. Societies are organized groups of individuals, and cultures are, in the last analysis, nothing more than the organized and repetitive responses of a society's members. For this reason the individual is the logical starting point for any investigation of the larger configuration" of society or culture. Goldenweiser said that "every element [of culture has] had its beginning in the creative act of an individual man." According to Ruth Benedict "no civilization has in it any element which in the last analysis is not the contribution of an individual. Where else," she asks, "could any trait come from except from the behavior of a man, woman or a child?" Linton asserts that "it is the individual who is responsible, in the last analysis, for all additions to culture." Both Goldenweiser and Malinowski place the individual at the beginning and the end of the sociocultural process. And, finally, we cite Sapir's categorical dictum: "It is always the individual that really thinks and acts and dreams and revolts."

Thus, culture is pictured as a great structure built by countless individuals, much as a coral reef is produced by myriads of marine organisms during the course of time. And, as the coral reef is explained in terms of the activities of marine organisms, so culture may be explained by citing the "creative acts of the individual human mind."

This view seems plausible enough; as a matter of fact, it appears to be virtually self-evident. Anyone can see for himself that it is man, human individuals, who chop down trees, build houses, pass laws, write sonnets, worship gods, etc. But we have become a bit wary of the self-evident and the obvious: anyone can see for himself that it is the sun, not the earth, that moves. But, thanks to Copernicus, we now know better.

Obvious and self-evident though the proposition that culture is made by

*Presented as a part of the Symposium on "Human Individuality", at the meeting of the American Association for the Advancement of Science, Washington, D. C., September 14, 1948.
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individuals may appear to be, we must reject it as a means of explaining cultural processes or traditions. As a matter of fact, we regard it as an expression of the primitive and pre-scientific philosophy of anthropomorphism.

Man has been explaining things and events in terms of minds and wills, his own or those of gods or demons, for ages on end. To Newton “this most beautiful cosmos could only proceed from the counsel and dominion of an intelligent and powerful Being.” According to Plato the physical world is but an expression of ideas in the mind of God. The Hebrew deity said “Let there be light,” and there was light. In the mythology of ancient Egypt, everything came from the thinking and willing of the divine artificer, Ptah. Among preliterate peoples, things and events are explained by citing acts of will and purpose of spirits, animals or men. And, today, in line with this ancient animistic and anthropomorphic tradition, we are told that culture has been produced by the creative acts of individual minds, that “it is the individual who is responsible for all additions to culture.”

To be sure, there would be no culture were it not for the human species. And the human race exists as a series of discrete biological entities that we call individuals. It is therefore quite proper to say that culture has been produced by man, and that his activity has found expression in the form of individuals. But the purpose and intent of the authors we have quoted have not been limited to the utterance of these trite commonplaces. They have presented the individual as the prime mover, as a creator, as the initiator and determinant of the culture process. It is their thesis that the culture process is to be explained in terms of the individual. It is this proposition that we reject—and reverse. The individual is actually irrelevant to an explanation of the culture process. Instead of explaining cultures as the product of the activities of individuals, we interpret the behavior of the individual in terms of his culture.

Everyone is born culture-less. But every individual of the human species is born into a cultural environment of customs, beliefs, attitudes, implements, etc., as well as into a natural habitat of climate, topography, flora and fauna. The cultural tradition embraces each individual at birth and, as he grows and matures, equips him with language, beliefs, attitudes, customary modes of behavior, tools, and so on. Thus, Navaho Indian behavior is the response of an individual of the species Homo sapiens to a particular organization of stimuli that we call “Navaho culture.” Similarly, Zulu, English, or Chinese behavior is the response of fundamentally the same kind of organism to other cultural traditions. In each case the individual is but the locus of the culture process and the vehicle of its expression; he is not its cause. He did not create the culture; it existed before his birth, and came to him from the outside.

No two individuals are alike: the culturologist recognizes this as clearly as does the biologist. The expression of a cultural tradition through the medium
of human beings is therefore conditioned by individual biological differences. But not all variation of cultural expression is due to biological variation by any means. The cultural tradition is itself inherently variable: no two cultural elements—no two tools, utensils, or expressions of custom, attitude or belief—are exactly alike either. Consequently, some of the variation of response is due to variation of stimuli. But the highly significant and revealing thing about the relationship between biological variation on the one hand and cultural expression on the other is not the extent to which the former affects the latter, but the similarity of response of the most varied biological organisms. Thus, within a uniform cultural environment all sorts of physical types—the old and the young, the lean and the fat, ectomorphs and endomorphs, etc.—will display a high degree of uniformity of behavior in such respects as language and dialect, beliefs, attitudes, dress, food habits, and so on. A consideration of individual biological differences serves only to emphasize the role of culture as a determinant of human behavior.

Let us turn now to the question of culture growth and change. How are these phenomena to be explained? You will recall that the authors quoted earlier have said that every new cultural element originates in the creative act of an individual mind; that it is always the individual that is responsible for additions to culture. But what, actually, does this tell us about the culture process? Virtually nothing—and what is said implies a false premise. Suppose we grant that the steam engine is the product of the creative faculty of an individual mind. What then? Have we done more than to assert that we could not have engines—or culture in general—without human beings? Why was the steam engine invented in England instead of Tibet? In the 18th century A.D. rather than in 500 B.C. or in Neolithic times? To say, in reply, as William James in effect did in his famous essay “Great Men, Great Thoughts and Their Environment,” that there was no one in modern Tibet or Neolithic England who happened to exercise his creative imagination in such a way as to produce a steam engine, whereas one James Watt did, is not only empty and sterile but offers a premise that is unsound.

An invention, discovery, or any significant advance in science, technology, philosophy, or art, as an event in a culture process, is to be explained culturologically rather than psychologically, as something that is effected by the culture process itself rather than by the creative act of an individual mind. To be sure, the individual mind must be there if the invention or discovery is to take place. But instead of explaining the invention or discovery as a product of the creative act of an individual mind, we explain it as an event effected by the operative of the culture process itself. And, in the course of our culturological explanation we shall be able to throw light upon the psychological process of invention and discovery.
A cultural tradition is a stream of culture traits or elements—tools, words, concepts, customs, beliefs, attitudes, etc. These elements are in a continuous process of interaction with one another; each element reacts upon others and is affected by them in return. In this process of interaction some traits become obsolete (stone axes) and are eliminated from the stream; new elements (metals) are introduced from time to time. New combinations and syntheses of cultural elements are formed also in this interactive process. We call these new combinations and syntheses “inventions” and “discoveries.”

An invention or discovery cannot, of course, take place unless the requisite cultural elements are present and in proper conjunction, any more than a precipitation of rain can occur without a certain organization of meteorologic factors. But when, in the growing, interactive culture process, the elements requisite to an invention or discovery become available, the invention or discovery becomes not only possible but inevitable, just as a thunder shower is inevitable when certain meteorologic conditions prevail. The long list of multiple and simultaneous but independent inventions in the history of science makes it clear that when the culture process has reached a certain point in its development, a certain invention or discovery is bound to occur.

What part does the individual play in inventions and discoveries? What is the role of “the creative act of the individual mind”? In what sense is the individual “responsible” for the cultural advance? Well, the individual must be there, of course; he must exist and act, if the invention or discovery is to take place. But this is merely another way of saying that culture cannot exist without man—a self-evident proposition that should go without saying. But with reference to an explanation of the invention or discovery as an event in a culture process, the individual is wholly irrelevant. He is merely the locus of the event, and the vehicle of the culture process, not its cause or determinant.

The Law of Conservation of Energy is a synthesis of cultural elements—in ideas—in an interactive stream of tools, beliefs, and institutions, that we can trace back to the Old Stone Age. When the growing, cumulative cultural tradition had reached a certain stage of development, when certain concepts had been developed and brought into conjunction, a synthesis was effected: we call it the Law of Conservation of Energy. And, significant to note, it was effected in the nervous systems of four different men independently and in the same year, 1847.

We certainly have not explained the formulation of this law, as an event of culture history, when we say that it was the action of the creative mind of an individual—or, rather, of four individuals. And we are certainly distorting the picture when we say that these individuals were “responsible” for the formulation, responsible in the sense of causative agents as certain bacteria are “responsible” for typhoid. We explain the formulation of this law by tracing the
course of cultural development that led up to it: it was a synthesis of concepts—
of ideas, beliefs, and knowledge—gained and accumulated through thousands
of years of experience with motion, mass, materials, work, etc. The steam
engine was a synthesis of knowledge, tools, and techniques, that we can trace
back to the Paleolithic. The principles known as Darwinism are an organiza-
tion of ideas and facts gained from the fields of comparative anatomy and
embryology, paleontology, geology, psychology, anthropology, and ecology
during the course of centuries. The calculus, invented by Newton and Leibnitz,
can be traced back to calculating with calculi—i.e., pebbles—and before that
to counting on one’s fingers and toes. The behavior of the men in whose nervous
systems these syntheses took place—the “creative acts of their minds”—can
be explained in part by pointing out that they were merely responding to a
particular organization of cultural stimuli. They did not originate these cultural
elements. The cultural traditions existed independently of them; they were
merely born into them. When certain cultural elements impinged upon them
and interacted within their nervous systems, a synthesis was effected. The
creative acts of their minds were thus functions of the cultural traditions rather
than the other way around.

Let me assure you that I do not regard the human organism itself as a purely
passive thing. It does not receive cultural material from the outside in a purely
passive way, like a cup into which coffee is poured, nor does it reflect this
material like a perfect mirror does an image. The human organism is a dynamic
system. It not only receives cultural elements from the outside, it acts upon
them. By virtue of the action of the neuro-sensory-glandular-et cetera system,
the cultural elements that impinge upon the organism are made to act and
react upon one another, producing modifications, eliminations, additions,
combinations, and syntheses among themselves. The human organism thus
acts as a catalytic agent upon the cultural materials received from the outside
world; it makes the culture process possible and effects the interaction of its
elements. We recognize also that one individual, one organization of nerves,
glands, sense organs, et cetera, may be a better catalyst, or a better medium of
expression of the culture process, than another, and that, other factors being
constant, significant discoveries and inventions will take place in superior
organisms. But in the man-culture system or process it is culture, not man, that
is the determinant; the individual—the average, typical, individual human
organism—is a constant, the culture variable. To explain the human behavior
of man—as distinguished from mere primate behavior—therefore, we need to
consider the cultural factor only. If the human organism is stimulated by one
cultural tradition it will think, feel, and act in a certain way; if stimulated by
another culture it will react in a corresponding manner. Thus the proper study
of mankind—at least as human beings—turns out to be not man at all, but
culture. And the study of culture is the business of culturology, not psychology.

Let us now turn to Sapir's dictum that "it is always the individual who really thinks and acts and dreams and revolts." This statement not only distorts the picture of human behavior; it inverts it as well. Note the structure of the statement: "the individual" is the subject of the sentence; it is he who "really" does things, initiates and executes action. The thoughts that he thinks, the dreams he dreams, the deeds he performs, the tools he makes and uses, constitute culture, the object of the sentence. Now in an ordinary, everyday, anthropocentric sense, it is permissible to say that it is the individual who "does" the thinking, feeling and acting, just as it is permissible in a non-scientific conversion to say that the sun "rises." But as a basis for the explanation of a system of human behavior, Sapir's premise is not merely inadequate; it is upside down.

Human thinking, feeling and acting, i.e., a kind of behavior peculiar to man as distinguished from other primates, are not functions of individual biological organisms at all. They are processes of socio-cultural systems. Human individual organisms have their existence within cultural systems and derive their human behavior patterns from them. The beliefs that the individual, the typical, normal, average individual, holds, the thoughts he thinks, the attitudes he takes, the way he behaves, and so on, are determined not by himself but his culture. And no individual ever has a chance to do any thinking, feeling and acting as a human being apart from a cultural system. Thus, the human individual is a function of a cultural system, not its originator or determinant. It is culture, not man, or the individual, that is the subject of our sentence. In a realistic, scientific and non-anthropocentric sense, it is culture that thinks, feels, acts, and revolts. It does these things through the medium of human organisms.

*I may be guilty of overstatement at this point as the social psychologist, Dr. Muzzafer Sherif, one of the discussants in the Symposium, has asserted. If thinking, feeling, etc., are by definition neuro-sensory-glandular-etc. processes, then of course it is improper to say that it is culture that thinks and feels. But, even so, the processes of human thinking and feeling are determined—i.e., initiated and given their form and content—by the extrasomatic cultural tradition rather than by "the individual." Human thinking is something done to the individual—done to him by his culture—as well as something that he does. In short, there are two factors in human behavior, a somatic, or biological, factor and an extrasomatic, cultural factor: Somatic factor x Cultural factor Human Behavior. In this formula it is the cultural factor that is significant rather than the biological factor, for it is the determinant; the somatic factor may be treated as a constant; the human behavior is a function of the cultural stimulus; the behavior varies as the culture varies.

My phraseology in the text above may indeed be an overstatement in a strict technical sense. But if it serves to make the relationship between man and culture more clear, and to demonstrate the role of culture as the determinant of human behavior, the deviation from conventional semantic usage may perhaps be excused.
To say, for example, that "it is always the individual" who speaks the English language is merely to indicate the locus of the linguistic process and to specify the mechanism of its expression; it tells us nothing whatever about the linguistic process itself. To understand the English language, both as structure and process, we must study the linguistic process itself, and this we do without reference to any individual or even to the human species. Sapir would have been just as realistic and infinitely more illuminating had he declared that it is always the English language that speaks, that is, exercises itself as an extrasomatic tradition in accordance with philological rather than psychological principles, and finds its expression through the medium of human neuro-sensory-muscular tissue.

We may now summarize our discussion somewhat as follows:
1. In the man-culture system man may be regarded as a constant; culture, a variable.
2. We cannot account for differences of culture in terms of biological differences among groups of men.
3. Culture may be regarded as a suprabiological, extrasomatic continuum, a tradition that flows down through time from one generation to another and horizontally from one people and region to another.
4. The culture process behaves in accordance with its own principles and laws, and is therefore explainable only in culturological terms, not with psychological or biological concepts.
5. Every individual of the human species is born culture-less, but
6. Every individual is born into a cultural tradition from which he receives and acquires both the form and content of his human behavior.
7. The picture of the individual as a prime mover, as an originator and determinant of culture, is an anthropocentric illusion; it leads to unwarranted psychological interpretations of culture and tends to obscure the possibility of realistic and illuminating culturological interpretation.
8. Relative to cultural systems, the individual is merely a catalytic agent; he makes the culture process possible but does not determine its content or affect its course.
9. Instead of being the god in the machine, a super-primate who could say "let there be culture" and there was culture, man, the human individual, is merely the place where culture happens and the medium of its existence.

REFERENCES


Chapin Aaron Harris, the great contributor to dentistry, accomplished much of his memorable work at a time when portraits by photography were new and stylish. Because Harris was actively and prominently engaged over a long period in the promotion of dental organization, literature and education, a relatively large number of portraits of him were executed, many of which are in existence at the present time. It is the purpose of the writer to present copies of all known Harris likenesses and to give, when possible, explanatory notes about the painters, sculptors and photographers who executed them. This effort marks the first publication of the collected portraits of Harris, and it is hoped that they will form an interesting and valuable contribution to Harrisana.

I—THE HARRIS MONUMENT

Situated near the United States Marine Hospital and the Johns Hopkins University in Baltimore is a granite pedestal surmounted by a portrait bust of Harris. The sculptor of this highly regarded work is Edward Berge, a Baltimorean, who was commissioned by the Maryland State Dental Association. The monument was unveiled on June 1, 1922, at North and Linden Avenues. In 1940 it was moved to its present attractive location. William Rusk, a recognized authority on works of art in Baltimore, said of it: "The head gives a pleasant profile from every possible angle."

II—THE HARRIS-HAYDEN MEMORIAL PLAQUE

In 1895 it was proposed by the dental profession to honor Harris and Hayden by the erection of memorial tablets in the Baltimore College of Dental Surgery and in the Dental Department of the University of Maryland (separate schools at that time). Ernest W. Keyser, a Baltimore sculptor, modeled portrait busts of the two men while he was in Paris. These designs were accepted by the committee and \textit{alto relievo} busts were incorporated into the two tablets. One now hangs over the entrance to the museum of the Baltimore College of Dental Surgery, Dental School, University of Maryland; the other is at the Thomas W. Evans Museum and Dental Institute of the University of Pennsylvania.

III—THE SARTAIN ENGRAVING OF HARRIS

This steel engraving by the famous artist-engraver-publisher, John Sartain of Philadelphia, is a copy of the photograph presented as Number IX in this
series. The Sartain reproduction is known to have appeared in only one publication—as the frontispiece of the Pennsylvania Journal of Dental Science for January of 1874—for which it was probably expressly done. The original of this engraving is not known to exist, and we may conclude that no copies were made other than for the immediate publication purpose.

IV—SEMI-PROFILE OF HARRIS

One of the most attractive photographs of Harris, this was taken by an unknown photographer about 1840. Although the portrait is particularly effective in presenting Harris as the scholarly type of man, it has never before been used in print. It hangs in the halls of the Baltimore College of Dental Surgery, in the founding of which Harris and Hayden were the prime movers.

V—THE DENTAL CENTENARY MEDALLION

Louis Rosenthal, internationally recognized as a sculptor, designed this medallion in commemoration of the centennial of the dental profession celebrated in Baltimore in March of 1940. On the obverse side is Saint Apollonia, the patron saint of dentistry, seated between the bust figures of Harris and Hayden. The reverse shows the motif of the Dental Centenary. Rosenthal’s representation of Harris is generally considered to be a poor likeness.

VI—THE COMMEMORATIVE ETCHING OF HARRIS AND HAYDEN

Sponsored by the Dental Centenary Committee this etching was both etched and printed by the well-known Baltimore artist, Edwin Tunis. Only 250 copies of this etching were printed.

VII—THE MIDDLE-AGED HARRIS

The best known of all the Harris likenesses is this portrait photograph taken about 1850. It has appeared in periodicals and books much more frequently than any other picture of him.

VIII—PROFILE OF HARRIS

This is the only known profile portrait of Harris. It was taken about 1855 by an unknown photographer, at a time when the profile angle was seldom used in photography. This picture has been used infrequently, possibly because it is a relatively dull presentation of the subject. The copy published here was made from the one used in Koch’s History of Dental Surgery.

IX—THE ELDERLY HARRIS

Probably the last portrait to be made of Harris, it was chosen by Sartain for his engraving (Number III). The portrait and a crayon copy of it are in the collection of the Baltimore College of Dental Surgery.
LIKENESSES OF CHAPIN A. HARRIS

X—THE WOODWARD PAINTING OF HARRIS

David Acheson Woodward painted life-size portraits of many of the eminent men of his day. The Harris painting was done in 1853, five years after Woodward came to Baltimore to teach in the recently organized Maryland Institute. As Woodward was an inventor of many items of photographic equipment, it is possible that one of the photographs of Harris was taken by him. The portrait is one of the most highly prized possessions of the Baltimore College of Dental Surgery.

XI—THE JOHNSON PORTRAIT OF HARRIS

Returning to the United States in 1858 after a long period of study and painting in Europe, Jonathan Eastman Johnson (1824–1906) opened a studio in New York. He soon gained recognition and fame as a painter of portraits and genre subjects, a reputation that increased steadily throughout his career. Johnson painted many eminent Americans—Daniel Webster, Henry W. Longfellow, Edwin Booth, Ralph W. Emerson, Presidents John Q. Adams, Arthur, Cleveland and Harrison, to name but a few. This portrait was presented to the Baltimore College of Dental Surgery in 1948 by the Blakiston Company.
I—THE HARRIS MONUMENT
II—THE HARRIS-HAYDEN MEMORIAL PLAQUE
III—THE SARTAIN ENGRAVING OF HARRIS
IV—SEMI-PROFILE OF HARRIS
VII—THE MIDDLE-AGED HARRIS
VIII—PROFILE OF HARRIS
The American people have developed a system of public school education throughout all the states which is meant to provide for all the educational needs of all the children of all the people. It is based on the assumption that the enlightenment of the individual is essential to intelligent and effective citizenship. As a consequence, public education for all children has been a matter of serious concern in every community; and, through the diligent efforts of the people involved, the public school has advanced to a high degree of quality on the local level, under local administration and as a result of local financial support. The sufficiency of this national public school program, as it operates under local direction, is attested by the facts that in 1945–46, of the country's estimated 19,763,877 population of elementary school age 89.4% were enrolled in the public schools; and that of the country's estimated 8,780,023 population of secondary school age 64% were enrolled in the public schools. The operation of this vast educational program for the year 1945–46 cost the people for maintenance and instruction a total of $2,906,886,000.

Higher education in the United States began with the founding of private institutions of learning, Harvard College, founded in 1636, being the first. These private colleges grew in number and continued alone for many years to serve the educational requirements of the people before the advent of the state supported and controlled college. The need among the people in the early days for opportunities to pursue courses of study in the field of higher learning was recognized, but the relatively small number of people who sought a liberal or special education was not sufficiently large to attract widespread public
interest or to command adequate public support for the establishment and the
maintenance of educational institutions on the college level. These conditions
and attitudes gradually changed, and in the early part of the nineteenth century
the state university made its appearance and moved forward very rapidly
until the end of the century when almost every state had established a uni-
versity, and frequently one or more additional state controlled or supported
colleges. In this pattern of growth the private and public institutions of higher
learning have progressed side by side, the one supported by philanthropy
the other maintained by tax moneys, each making its contribution to the
vocational, scientific and cultural development of the people of the United
States.

Professional education developed under still another type of sponsorship
and support. The organizations of medical and dental education were largely
on a proprietary basis and their successful administration depended upon the
resourcefulness, the ingenuity and the personal sacrifices of the leaders of the
respective professions. Their programs of education were organized for the
most part independently of recognized colleges and universities, and they were
administered as much with the thought of making the projects self-supporting
through student fees and clinic receipts as they were for the purpose of per-
petuating the knowledge and skills of the professions and of supplying com-
petent physicians and dentists as health workers to satisfy a public demand.
There were exceptions to this plan of organization in which an occasional
medical or dental school was included as an integral part of a private or state
university. But even in such instances, the health service schools had a liberal
degree of autonomy which imposed on them the necessity of almost total self-
support. As time went on philanthropy and state support contributed sub-
stantial financial aid to the advancement of medical education in some of the
colleges but offered very limited if any aid to the improvement of dental
education.

During the last quarter of the nineteenth and the first quarter of the
twentieth century almost all the medical and dental schools of the country
became integral parts either of well-endowed private colleges or of tax-
supported public colleges and universities under arrangements that ensured
some support from the parent organizations. But even under these arrange-
ments parent institutions have not been able to give the amount of financial
aid necessary to support adequately these programs of education. As a conse-
quence many medical and dental schools have continued to operate at an
educational deficit because of inadequate buildings and equipment and because
of lack of funds that would make it possible for the schools to secure and to
hold highly competent teachers. Efforts to acquire sufficient appropriations for
the proper maintenance of medical and dental education are made difficult by
the fact that the maintenance of education in the health service field is, in the
nature of the problem, very costly. As a result of their peculiar problems medici-
cal and dental education have been required to exist largely on funds derived
from student fees and incomes from hospitals and dental clinics.

During the present century, public and private support of dental education
has increased, and noticeable gains have been made in standards in dental
education; but it has not yet recovered from its impoverished condition and
has not been able to reach a universally satisfactory high standard of quality
in its educational program. The growing need for more dentists to meet an
increasing effective demand for oral health care has added to an already difficult
situation. Many of the fourteen state controlled and supported dental schools
have been improved through additional equipment and maintenance appropri-
ations, but there still remains much to be done to bring all of them up to a
truly high standard of quality. The twenty-six private dental schools have
attempted to advance their standards of instruction while meeting the rising
costs of operations out of a static or relatively declining income. It is apparent,
even to the casual observer, that additional financial support must be provided
the dental schools of the United States out of university resources, or else new
sources of income must be found to maintain the present quality of the dental
graduate and to increase the quality of dental personnel which is being de-
manded by the public.

Since dental schools cannot be maintained on local and state levels in all
the states, and since the existing dental schools located in twenty-four states
are expected to supply dental personnel for all the states, it seems apparent that
in the interest of the health of the people of the country, something must be
done from the national point of view to improve the general efficiency and ade-
quacy of the dental schools. Additional revenues must be found to provide
more adequate teaching facilities and to support enlarged and improved teaching
staffs; to ensure an increase in the number of dentists by constructing addi-
tional dental schools, where necessary, or by expanding the capacity of existing
dental centers where practicable; and to make possible effective advances in the
quality of undergraduate education, improvements in opportunities for gradu-
ate and postgraduate study, and the extension of activities in dental research.
It has been proposed that the situation may be met by the Congress in provid-
ing Federal support for medical and dental education.

Federal support of special education is not a modern idea. In 1863, the
Congress passed the Morrill Act which granted certain lands (and later appro-
priated special funds) to state-owned colleges for the purpose of providing a
"liberal and practical education of the industrial classes." This act stimulated
the development of the land grant colleges which now exist in all the states, and
which have had a tremendous influence upon the developments of higher and
special education in America. The Smith-Lever Act of 1914 appropriated funds
“to be distributed among the states to foster agricultural extension instruction, and to disseminate information on subjects relating to agriculture and home economics among people, not attending land grant colleges.” In 1917, the Congress passed the Smith-Hughes Act, which provided Federal funds to be distributed among the states for the promotion of vocational education. The theory underlying these grants is that certain types of education are matters of more than local interest, that their support is not a matter of mere local concern, and that, therefore, in their broader meaning they are to be encouraged as state or local projects partially supported by the use of Federal funds.

In all instances which have been described where the Federal government has provided support to states for the several types of special education the benefits have been extended as grants-in-aid without any interference by the government in programs of education or in the internal administration of the beneficiary schools. Proposal for Federal aid to medical and dental education should, if approved, follow this same pattern. Possibilities of governmental interference with the general administration of dental schools, with their plans of curriculums, their policies of admissions or their procedures in teaching should be clearly guarded against. Complete freedom of choice and action in the administration of programs of dental education must be preserved.

The dental profession has not yet officially defined its position on the question of Federal aid for dental education. At a special meeting held in Chicago on February 6, 1949, the American Association of Dental Schools received a progress report from a special committee which had conferred with representatives of the Federal Security Administration about the essential features of a proposed bill for Federal aid to dental education. The Association authorized the committee to continue its conferences with the Federal agency and to keep in close touch with any developments in the Congress that would involve Federal support of dental education. But it did not declare its attitude on the principle of Federal aid. So far the American Dental Association has not been called upon to state its position, nor has the Council on Dental Education of the American Dental Association considered the proposal for Federal aid from the standpoint of formal action. Since there is a strong sentiment in the Congress to provide Federal aid to education, particularly as it relates to the health professions, and since there appears to be strong support of the principle among many leading medical and dental educators, it is quite clear that the proposal is a problem of first magnitude, and that a statement of its character and possibilities should be presented to the House of Delegates for its information and for whatever action the delegates may care to take. The position of the American Dental Association on all such questions is authoritative and because of the urgency of the current situation, a decision as to policy should soon be reached.
RESEARCH STUDIES IN DENTAL HISTORY

III—SYMPHORIEN CHAMPIER (1472–1539): His Contribution to Renaissance Dentistry

MILTON B. ASBELL

Camden, N. J.

One of the finest examples of the humanist in medicine during the sixteenth century is Symphorien Champier. Like other physician-scholars of the Revival of Learning he divorced himself from medieval authority and returned to the study of classical languages and the doctrines of Hippocrates, Galen, Celsus and Avicenna. He was a voluminous contributor to the medical humanistic literature of the Renaissance. Recently a check-list of his writings has been compiled by Ballard and Pijoan which number close to one hundred editions. It is to his Practica nova in medicina, variously attributed to the dates between 1498 and 1520, that our attention is turned; for it is this work, Chapter 15, which treats of the disease of the teeth, gums and mouth.

Champier (sometimes called Campeggius, which is an allusion to Cardinal Laurent Campegio) was born at S. Saphorine-le-Chateau at Lyons, France, in 1472. During this period Lyons was one of the intellectual centers where Greek Science was re-born; it is this influence which is so much reflected in his life’s work. Graduating with a medical degree from the University of Pavia (9 October 1515) he returned to his native city to found a medical college and other institutions. Such was his reputation that he became preceptor to the finest physicians of the day and the personal physician to Charles VIII, Louis XII and the Duke of Lorraine. Garrison speaks of him as “one of the last of the conciliators of Greek and Arabist doctrines.” He died in 1539.

The translation given below is from his Practica nova in medicina; it deals with the nose, teeth, gums and the mouth. The text is a brilliant example of his plan to bring the Greek and Arabic methods into a harmonious relationship. His discourse is divided into several categories, those of the ancients and then the summary of contemporary studies:

“Section 1. From the tradition of the Greeks and Romans

“Section 2. From the tradition of the Phoenicians and Arabs

“Section 3. From the tradition of the recent authors.”

He reviews the treatments for the various types of odontalgia; ulcers of the nasal passages, lips and nose; epistaxis, loose teeth, bleeding and abscesses of the gums, fetor ex ore, pathology of the tongue, bruxomania, and discusses various preparations for dentifrices, mouth washes and pain relievers. The entire chapter portrays the type of dentistry practiced by the Renaissance.
physician and provides evidence that our profession during the Renaissance derived from men of scientific and professional achievement in the healing arts and not from the quack or charlatan.

Translation from Practica as contained in “Collectanea Medica,” Chapter 15: Concerning the diseases of the nose, teeth, gums and mouth. From the tradition of the Greeks and Romans:

The more prominent part of the face is the nose; it is cartilaginous. It begins from the bone which is between the eyebrows; and we call it húmus; it ends in a little ball; it is moved in man by the motion of the upper lip; in dogs, the ducts of their nerves are moved and are contracted; by this organ we inhale and exhale air; by it sneezes are produced since it has a set passage to the brain. Polypus and ulcers (carcinomata) infect the nose. If the vein of the nose is cut, then sometimes it bleeds indefinitely so that there is not means of stopping it.

Some say that dens is derived from the verb “to eat” as it were—the eater. Others say that it is derived in another way. “For pain of the teeth—moreover which indeed can be counted also among the greatest tortures—many cures are accepted by physicians.” For them see Celsus in Book VI, Chapter IX. “But rustics have discovered by experience that when a tooth aches, catmint ought to be torn up by the roots, put into a basin with water poured over it; and placed next to the patient who is sitting covered all around with a garment; then, hot stones are to be put into the basin so as to be covered with the water and the patient, covered all around, should inhale the steam with the open mouth. For profuse sweating follows and a continuous flow of phlegm flows through the mouth; and this remedy affords good health for one year, frequently longer.”

Moreover, ulcers which are in the nasal passages cure more simply. Adronius, Pasion, Polydes, Antonius Musa and Bythimus have discovered the use of medicines by sometimes dissolving pastils in sweet wine; at time, in dry wine; sometimes, in wine-vinegar or tart wine according to where the disease occurs. Moreover, Archigenes used fats in such [preparations] by dissolving the slag of lead with old wine and myrtle wine; with equal parts of whichever he pleased, he cooked it in an earthen vessel moving it constantly over the coals. When the medicine became thick and oily, he took it out and kept it in a lead container.

Oribasius for ulcers of the nose: Use 6 drachma of lead heated and washed; myrrh, aloe each 2 drachma; drachma of castor oil with old myrtle wine. Another prescription of the same man for less complicated ulcers of the nose: 6 drachma of litharge; 8 drachma of cerussa; 4 drachma of the bark of pomegranate; 3 drachma of split alum; dissolve in wine and put in myrtle oil; keep in a lead container and use.

Appollonius, moreover, for the flow of blood from the nose says to tie the big
toe of the foot and you will stop much of the bleeding. But this does not check bleeding. Hold rainwater in the mouth; apply and take away a cup at the base of the occiput. Apply a large cup to the abdomen [to catch] the blood if it flows on the right side to the liver and if it flows on the left side to the spleen.

For all ulcers on the lips from irregular habit: Put on oysters dried and ground up; and indeed, some say that they apply them ground up but not dried and they get the results they want.

For treating loose teeth and bleeding sums, it also stops the flow of phlegm and makes the teeth white: 4 unciae of split alum; 1 unciae of mastich; 4 drachma of frankincense; 3½ (?) drachma of leaves. Put far into the affected tooth with pain, and keep it there until the mouth is soaked with sputum; then, spit it out. For keeping the cheekbones without decay and immobile: 1½ pounds of juice of leaves of white bryoni; 6 unciae of the bark of mulberry; cook so that it is only one-half the quantity; and give it, while it is hot, to be held in the mouth. Who uses this is not bothered with toothaches.

FROM THE TRADITION OF THE PHOENICIANS AND ARABS

Sometimes men suffer very bad stenches in their noses which seem to come from many causes: for they arise from salt and fetid fluids descending from the head, or from other fluids not salty, and from sores with pus or from abscesses which are fetid. Sometimes blood flows from the nose; sometimes this is helpful. Sometimes this is not helpful, as it happens in the case of fever and delirium and in menses and catarrh from the movements of nature and of blood. The flow of blood is not good if it is from too little heat in the body internally; [the flow of blood is not good] which, when it bubbles up, makes gas rise to the upper parts of the head and filling the veins breaks them and makes them run. Sometimes, in veins broken by it, there occurs the flow of blood. And sometimes, the lips are cracked and suffer pustules or sores which occur as a result of sour fluids and are to be cured by rose oil or violet oil and with wax and rose oil. If the pustule is wet, smear on the lips rose oil mixed with gum, with sandalis, red rose, Arabian gum, cerussa mixed with rose water. If there is a great hollow, anoint the lips with the grease of a goose, of a goat or of bone marrow.

AVICENNA

The mouth is the universal organ of speech in man and of making an outcry in the rest of animals which make an outcry by breathing out. Moreover, the tongue is one of the organs of speech and of chewing food, and the fashioning or carving of the voice and the utterance of sounds and the discernment of taste. And, indeed, roughness of the tongue results from dryness and smoothness from moisture. And, indeed [medicines] appropriate to the tongue are
drunk more suitably after eating. And, sometimes, the tongue is abscessed on account of drinking poison; for instance, *fungus* or opium. Once there was a person who had an abscess on the tongue, and he dreamed that he was holding in his mouth the juice of lettuce; and he did that, and was entirely cured. When, in a high fever, black pustules appear on the tongue, the sick man dies on the second day. And, he advises bleeding for all hot diseases of the mouth. If, however, the cause of a bad smell in the mouth is a bilious fluid which has putrefied in the stomach or in the whole body, then he applied nothing else than quince and fasting.

Moreover, the teeth arise from the top of the bones; in them there is feeling because of that which comes to them from the small nerves which lead from the brain. And there occur numbness and kinds of pains in the teeth. And there occur kinds of abscess and that is not amazing. For everything that grows with an increase in nourishment is not lengthened unless it has growth accompanied by superfluous waste matter. Leeks (?) greatly harm teeth and gums by their nature. If there is pain in a tooth, it is removed by pulling the tooth, and when there is pain in the nerve, sometimes it is removed by extracting the teeth and sometimes not. Gritting the teeth in sleep is like a spasm, and when it happens many times it indicates apoplexy or epilepsy or spasms or worms in the stomach; and this [i.e., worms in the stomach] has many bad effects. Congelation is a kind of numbness occurring in a tooth because it is kept in. It is astringent and sour arising from within or externally, and sometimes, it comes from the imagination which is conceived when a man is present who chews something sour by chewing over and over again (?). And, this is the eighth fen of Avicenna.

When, moreover, the gums do not stop swelling and are abscessed and do not heal, then it is necessary to cauterize. The two lips are created to work together; the mouth and the teeth for beauty and for keeping in saliva, and in man, for talking.

**RHazes**

The flow of blood from the nose is on account of a crisis. Symptoms of it are: it occurs after a bad fever and it is not necessary to stop it unless there is too much of a flow. It occurs without fever because of the sharpness of the blood which flows from it. Symptoms of this are: that it occurs little at a time and in a very thin stream. It occurs on account of the great amount of blood in the body; wherefore, the veins and arteries which are under the brain are broken and it is a difficult [disorder] for which, perhaps, there is no cure. And symptoms of it are: a raging headache and a dominant redness in the face and eyes and especially in those who use much wine, and it diminishes the extravasation of blood and comes with great force. Sometimes, it is profitable in this case to drop in the nose snow-water.
The preparation of medicine for pain in the nose: Myrrh, oak gall, colcothar, bark of a pomegranate, sweet calamus, Caryophyllus are triturated and the nose moistened with lint dipped in fragrant wine. Then breathe in it, roll up the lint and introduce it into the nose.

Preparation for the flow of blood from the nose: Aloe, frankincense, flower of wild pomegranate, calcium oxide, powder of a mill, gypsum, oak gall are triturated with alcohol. Breathe into the nose and put lint into the nose.

For bad breath, Rx: The end of moist myrtle, cinnamon, emblic, cyrus, spice, bark of citrus, leaves, squinanthis, mastich, each. Oak gall, Caryophyllus, musk, cubeb, ginger each a half drachma (?). Knead them together with pure paste which is double the whole amount, and take it with a fragrant wine like a nut. Let this be after vomiting and the loosening of the stomach several times. Abstain from viscous foods and fats.

Preparation of medicine for heaviness of the tongue: Aromatic salt, pyrethrum, stavisacre, mustard, pepper, acorus, each is triturated and rubbed under and on top of the tongue many times each day.

Preparation for falling uvula: Oak gall, wild pomegranate, aromatic salt, each. Let them be blown upon it [uvula] and placed on a spoon and raised with it.

Preparation of thyriaca for the teeth: Assetopium (?) myrrh, castorium. Prepare each with honey.

Preparation making the teeth so that they won’t decay: Fill them with coral and mastich.

Preparation of dentifrice which makes firm the gums and teeth and resists redness in them: wild pomegranate, ashes of rose ground up, carmesich (?), alum. Make it so that it adheres to the gums.

FROM THE TRADITION OF RECENT AUTHORS

The nose is called an olfactory organ which is composed of four parts: of certain lumps of flesh with nerves descending from the fore part of the head which are like the nipples of breasts. Those lumps of flesh are the principal and main part of the organ; second is the hollow opening through which enters the air bringing odors; third, the cartilaginous part which binds together and modifies the air with odors; fourth, is the opening through which air is drawn in, inhaled and exhaled. The cartilaginous parts, moreover, are called nostrils. Also, the group of these four parts is called nasus—nose.

Galen in the Fifth Book Concerning Simple Medicines says that no remedy is better than a mixture of aloe and frankincense. Let them be added in turn to albumin of sheep. He says that when every remedy for checking bleeding fails, do not be afraid of aloe even if the veins are open. This has a nature
shown only internally; externally, it has a coagulating effect. The juice of basil silicon by its nature cures [bleeding of the nose] when it is breathed through the nostrils. Dung of asses dried out and reduced to a powder and breathed into the nose also is effective. It can be incorporated in albumin of sheep and dropped in as above. Also shepherd’s purse is effective around the pain in the teeth caused by cold food. First let it be dissolved with pilularis cochlii [?]. A substance with heating power which is very effective is panic-grass of camomile vinegar, absynth, millet, salt. A solution, with hot wine or vinegar, is made from boiling sandarac or dry pyrethrum, from origanum, pepper [and] mustard. It is very effective. The tooth in which there is pain is rubbed with thyriaca. Also a solution for the mouth is made with vinegar from boiling colocynth or alum or pyrethrum or saxifrage or the covering of roots of the caper bush or from vinegar which has been boiled a lot in a vessel with colocynth.

For a bad odor of the nose or a fluid or decay within, Rx: starthistle of the smaller genus, one measure; boil in wine or water until dry; afterwards put in the nose. This is a remedy of Avenzoar.

For bad breath, the mouth is washed with vinegar of a decoction of mint and of wild pomegranate or of privet or of fennel and is rubbed with a rough rag so that nothing may remain there. Let the seed of solis [?] be held in the dry mouth every morning. Thyriaca with mithridate mixed with the juice of mint is rubbed on the mouth. Use pills which settle the stomach for bad breath, and which weaken the odor. Take pink musk, cinnamon, mace, each 7 drachma; red samdalisis 6 drachmas; cubeb, 5; bitter cress 4; signaloe 1; gall musk [?] 5; make into a powder mixed with juice of mint in the form of pills like peas; hold one or two under the tongue. Likewise powder is made from the best aloe and mixed with the juice of absynthe like a syrup; take three spoonsfull of this in the morning; after taking it, take three other spoonsfull of honey immediately; do this every day. By this alone many are cured. When bad breath comes from bad teeth, rub them with powder of the burnt horns of deer; or take the fluid of a canker, a kind of aromatics, and camphor. Generally, all electuaries and warm aromatics are effective against bad breath.

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Note: I am greatly indebted for valuable assistance and translation to Anna S. Benjamin, B.A., M.A., Thomas Day Seymour Fellow, American School of Classical Studies, Athens, Greece.
One of the first committees on hospital dental service appointed in any dental society was appointed approximately ten years ago in the American College of Dentists. The various American College of Dentists Hospital Dental Service Committees laid the groundwork for the action of the House of Delegates of the American Dental Association three years ago, when that body of the Association established a Special Committee on Hospital Dental Service.

In view of the fact that the chairman and a large percentage of the membership of the A. D. A.'s Committee on Hospital Dental Service are Fellows of the American College of Dentists, the report of that Committee represents, in a large measure, the activities of the American College of Dentists' Hospital Dental Service Committee.

Your Committee feels that a brief review of the assignments to the A.D.A. Committee and its activities to date will be of interest to you.

The special assignments of this Committee were, first, to establish and periodically revise basic standards of hospital dental service required of hospitals seeking approval by the Committee on Hospital Dental Service of the A.D.A.

Second, to receive applications from hospitals desiring to obtain a certificate of approval for their Department of Dentistry; to examine these departments; and, if the basic standards of hospital dental service are met, to issue to these hospitals a certificate of approval.

Third, to compile and issue periodically a list of hospitals whose dental departments meet the basic standards of hospital dental service required of approved hospitals.

Fourth, to establish a roster of dentists in the United States holding hospital staff appointments.

**RESUME OF THE COMMITTEE’S ACTIVITIES**

First, with the cooperation of the Council on Professional Practice of the American Hospital Association, basic standards of Hospital Dental Service were established. The Council suggested that since it would be their member hospitals that would have to observe these basic standards, it would be to the advantage of both organizations to work out mutually satisfactory basic requirements. We were only too glad to do so. Over the course of a year, and after several meetings, these two groups worked out basic standards of hospital dental service.
dental service which were approved by both bodies, the American Hospital Association and the American Dental Association.

Since these standards have been adopted, and without any publicity on the part of the A.D.A. Hospital Dental Service Committee, because we just didn't have the money to do the job we wanted to do, the Committee has received 256 applications for approval of hospital dental departments. The Committee has examined 55 of these hospitals and has issued certificates of approval to 50.

Third, to encourage participation in the activities of the A.D.A. Committee on Hospital Dental Service, state dental societies were asked to appoint state hospital dental service committees; 45 states have done so.

Fourth, at the request of the Council on Dental Education we surveyed hospital dental internship and residency training programs in those hospitals whose dental departments we were examining. We recommended the approval of fifteen such training programs, and the Council on Dental Education has notified those hospitals that their training programs have been approved.

Fifth, a roster of dentists holding hospital staff appointments in the United States is now being compiled. While this work has only just begun, the roster already contains over 3,000 names and 268 hospitals. Nobody knows as yet how many dentists in the United States do hold hospital staff appointments. We are trying to find out. We are certain now that it will be quite a large figure. If, for example, we know that in 268 hospitals we have over 3,000 dentists who hold staff appointments, and that there are 4,000 member hospitals in the American Hospital Association, you can guess we shall find that there is a large dental representation in the various hospitals of this country.

DISCUSSIONS AND CONCLUSIONS

Because of a drastic budgetary curtailment, the work of the Committee has been materially retarded. The volume of correspondence directed to this Committee is increasing daily. The membership of the American Dental Association has a right to expect prompt reply to all requests for information. Under the present situation this has been an impossibility. In addition to the specific assignments made to this Committee by the unanimous action of the House of Delegates, there have been additional demands made upon this Committee by the membership and by associated health groups.

For example, a nation-wide hospital building program, which is just beginning and which will steadily increase, has resulted in an increasing number of requests concerning all phases of hospital dental service—dental staff, dental departments in the hospital, floor plans, and so on. Fortunately we are in a position to be of aid to these various organizations.

In addition, interest in hospital dental internships and residencies is at an all-time high. While this is not an assigned duty of this Committee, much cor-
respondence concerning this phase of hospital dental service goes through our hands.

Examination of hospital dental internship and resident training programs was not an assigned duty of this Committee. However, at the request of the Council on Dental Education, as I have already stated, we willingly assumed this additional task at the time we surveyed the hospital dental departments. It was, and is, a logical thing to do.

The following excerpts from the article, "More Hospital Internships Wanted for Dentistry", published in Dental Survey, are, I think, of particular interest:

"Results of a recent poll indicate that throughout the country the impetus is decidedly in the direction of better dentistry through better training."

The following questions opened this survey: "1. Do you believe organized dentistry should work toward increasing the number of dental internships available in hospitals and clinics?" Of the dentists who answered, 90 per cent answered Yes, and 10 per cent No.

"2. If such internship opportunities were generally available for graduating dental students, would you favor extending licensing requirements for general practice of dentistry to include a year of dental internship?" To me the answer was quite surprising: 57 per cent said Yes; 43 per cent said No. This response indicates that over 50 per cent of the profession in this country favor a dental internship as a prerequisite for the general practice of dentistry.

"3. Would you require internship before specialization in oral surgery?" 89 per cent said Yes; 11 per cent said No.

Obviously there must be approved dental departments before dental internships can be established; as a matter of fact, one of the requirements for approval of dental residency training programs is that the applying hospital have an approved department of dentistry.

This Committee has recommended in the past, and does so again, that as soon as possible an executive secretary be appointed and located in the American Dental Association central office, to carry on this important work in the field of hospital dental services. Perhaps this task could be assigned to one of the existing personnel in the central office.

The importance of medico-dental relations has long been discussed and has long been recognized. Recently such a committee has been formed by action of both the American Medical Association and the American Dental Association. This is an excellent idea. However, the best place to improve and increase medical-dental understanding is in the hospitals where members of these health service groups meet most frequently. By improving hospital dental service we gain added respect from the medical colleges. An executive secretary, located in Chicago, would personally meet with representatives of the American Medical Association, the American College of Surgeons, the American Hospital
Association, the American Nursing Association and others, to discuss the many problems that we are now trying to develop by mail and by occasional personal interviews.

Dentistry has long been seeking recognition as the health service equivalent of any specialty of medicine. With this recognition dentistry must assume added responsibility. Adequate hospital dental service, rendered on the same basis as a medical, surgical and obstetrical hospital service for the community, is dentistry's responsibility.

It has been mentioned that there is a marked increase in the interest shown in hospital dental service by the membership of the American Dental Association. In Boston, in 1947, the first meeting of the Hospital Dental Service Section of the American Dental Association was held. The attendance was astounding. Many were turned away for lack of space, in spite of the fact that the amphitheaters in the hospitals seated, in one case, 150 and, in another case, 200. It should also be remembered that the hospitals were located several miles from the main meeting hall, and very poor directions were given in the program for reaching them.

Attendance records were taken, and it was found that dentists from eight foreign countries and eighteen states were present at one or more sessions of this Section.

The value of the work of the Hospital Dental Service Committee is recognized. However, there is at present an honest difference of opinion as to what group within the American Dental Association should control and handle this work. Should it be the Council on Dental Education, or should it be a standing Council on Hospital Dental Service?

Your chairman personally feels the work should be in the hands of a standing Council on Hospital Dental Service. Tomorrow the opposing views on this particular subject will be aired before the House of Delegates for their final action.

REPORT OF THE COMMITTEE ON NECROLOGY

Maj or Brook s Varnado, Chairman*

The old order changeth, yielding place to new,
And God fulfils himself in many ways, . . .
But now farewell. I am going a long way . . .
Where falls not hail, or rain, or any snow,
Nor ever wind blows loudly; but it lies
Deep-meadowed, happy, fair with orchard lawns
And bowery hollows crown'd with summer sea.

* The other members of the Committee (1947–1948) were F. T. Murless, Jr. (deceased), Raymond E. Myers, Edward L. Thompson, Russell C. Wheeler.
King Arthur spoke these words (or so Tennyson tells us) when his Round Table had fallen, man by man, and he lay dying in the ruined chapel of Lyness-ness. The origin of his story is lost in antiquity, but through mists of legend there still emerge realities—Tintagel Castle, his birthplace, yet visible in Corn-wall; the spring at Glastonbury where Joseph of Arimathea buried the Holy Grail, and the thorn tree, sprung from his staff, which still blooms on Christmas Day; the city of Winchester in Hampshire, identified as Arthur's Camelot. You can even see today, on a lonely moor, near Camelford, a rush-bordered lake, called Dozmary's Pool, where his great jeweled sword was cast in.

Other realities nurtured by Arthur in a barbarous world are with us still: integrity, honor, high purpose.

This organization has dedicated itself to furthering such qualities in our professional field. The trust is faithfully handed on, even while the old order changes, yielding place to new. Some must pass hence; others step forward to fill the ranks, continuing the labor. It is fitting that we pause to honor in mem-ory those who, like the King, have said "farewell" and gone "a long way."

The following Fellows have passed away since the report of the Necrology Committee in Boston, Mass., on August 3, 1947:

John H. Brown                    Newton, Mississippi
Clarence S. Copeland             Rochester, New Hampshire
Arthur Pue Dixon                 Cumberland, Maryland
John J. FitzGibbon               Holyoke, Massachusetts
Sheppard W. Foster               St. Petersburg, Florida
Milburn M. Fowler               Chevy Chase, Maryland
Alfred M. Haas                   Philadelphia, Pennsylvania
Madesan C. Harris               Eugene, Oregon
Leland Ray Johnson               Chicago, Illinois
Albert L. LeGro                  Grosse Point, Michigan
William E. Lundy                 Memphis, Tennessee
Compton B. Millarr               San Francisco, California
Herbert C. Miller                Portland, Oregon
John Thomas O'Rourke             Boston, Massachusetts
William Pilcher                 Petersburg, Virginia
Weston A. Price                  Cleveland, Ohio
James M. Prime                   Omaha, Nebraska
John M. Ridley                   El Paso, Texas
Harry M. Semans                  Columbus, Ohio
Edbert A. Smith                  Montclair, New Jersey
George W. Wilson                 Milwaukee, Wisconsin
Leo Winter                       New York, New York

March 4, 1947
July 9, 1948
August 5, 1947
June 4, 1948
August 16, 1947
October 27, 1947
December 20, 1947
November 23, 1947
May 29, 1948
November 1, 1947
May 7, 1948
August 12, 1947
December 20, 1947
June 3, 1948
January 18, 1948
January 23, 1948
May 29, 1948
November 7, 1947
July 29, 1948
December 8, 1947
November 11, 1947
July 6, 1948
Before speaking on our Blood Program, I want to state a few facts about the accomplishments of the Army Dental Corps during World War II. I believe they are unparalleled in the history of dentistry.

At the beginning of the War, a stupendous task was presented to the Army Dental Corps. Early Selective Service reports indicated that approximately 9 per cent of all registrants examined would be rejected for service because of dental defects, accounting for 16.5 of all rejections, or more than for any other cause. This situation made it necessary to drastically lower dental standards until they were practically non-existent; by August 1945, only 0.24 per cent of all examinees, or 9.7 per cent of all rejectees, remained out of the service because of dental defects.

During the war about 800,000 selectees who did not meet the minimum dental standards were rehabilitated by the Army Dental Corps for military service. The Army Dental Corps performed the following operations between January 1942 and VJ Day:

68,092,000 fillings
15,190,000 extractions
18,000,000 teeth replaced by 2,566,000 dentures
743,000 dentures repaired
246,400 bridges constructed

Nearly one-third of the nation’s dentists served in the Armed Forces. Of this number 18,000 served in the Army. The maximum strength of the Dental Corps at one time during the war, November, 1944, was 15,292. Over 7,000 dentists served overseas in the Army. The Dental Corps trained 9,400 laboratory technicians. This alone was a remarkable achievement when we consider that there were only 12,000 dental technicians in the United States before the beginning of the war. The Army Dental Corps trained 287 dentists as members of maxillo-facial teams for the purpose of treating disfiguring wounds of the face.

During the war there was a critical shortage of artificial glass eyes. The artificial plastic eye was made by dental officers primarily as a substitute, which turned out, of course, to be far superior to the glass eye. In the first 18 months of production, 10,000 artificial plastic eyes were made. In cooperation with

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other surgeons, dental surgeons participated in the fabrication of tantulum plates for the correction of cranium defects.

In one dental laboratory there were manufactured 350 hearing adapters per month.

During the war the Army Dental Corps developed splendid mobile laboratories and dental clinics, thereby improving dental service for combat troops. Surely you must be proud of your great and outstanding accomplishments during World War II.

Suffice it to say, that the teamwork, close cooperation and relationship practiced by physicians and dentists during the war welded the ties of the medical and dental professions closer than ever before in our common purpose: the care of the sick and injured in war and in peace.

There is an Agency, the American Red Cross, which is closely affiliated with the medical and dental professions. During the late war the American Red Cross tapped the richest bank in the world, not filled with nickels, dimes, quarters and dollars, but with the most precious commodity on earth, life-sustaining fluid—blood. Physicians and dentists returning from the war came back with first-hand information concerning lives saved through its use. Some of you administered blood at First-Aid stations. You insisted on your return that your patients in peace time receive the same service as that given during the war.

Those charged with the public health and security of the nation considered the Red Cross to be the most logical and, indeed, the only organization capable of developing and conducting a National Blood Program.

The success of the Red Cross war-time Blood Donor Service, which recruited and collected 13 million pints of blood for the Army and the Navy with a network of 3,746 Red Cross Chapters organized to cover the entire country, and the confidence that the American people have shown by their support of Red Cross service for more than sixty years, justified their reasoning and conclusions.

To insure success of the program nationally, it will be necessary for one among every 35 persons of the American population to donate 1 pint of whole blood each year.

Last year, New York City Metropolitan Hospitals used 125,000 pints of whole blood for transfusions alone. City Health and Hospital Department officials estimated that twice that amount would have been used had it been available. Statistics indicate that every 20 seconds someone in the United States is seriously injured. In Greater New York City 1,300 people are injured every day; 54 people are injured in accidents every hour. One person in Greater New York is killed in an accident every three hours. Eight people lose their lives in this way each day.
During the war more than 7,000,000 New Yorkers gave over 2,000,000 pints of blood to the Armed Services. If only one-third of our war-time Army volunteer blood donors would give a pint of their blood each year, the estimated peacetime need would be met.

The saving of a life by a blood donor in giving a pint of his blood to one critically ill or injured is just as important and effective as the rescue from fire of an individual trapped in a burning house or the heroic saving of a drowning person or the prevention of any other tragic death. The giver, in each instance, should have a great sense of comfort and spiritual peace because of his good deed.

The demand for blood has greatly increased because of the amazing discoveries made in recent years about blood itself: what it is, what it does, what things can be produced from it that will prove effective in the prevention and treatment of diseases.

Some of the uses now being made of blood derivatives include:
1. Serum albumin for shock, certain kidney diseases and other conditions.
2. Immune Serum globulin for modification of or preventing measles.
5. Red cell suspensions for treating certain anemic conditions.

Unfortunately, there is no satisfactory substitute for human blood. It cannot be manufactured in a laboratory. We must depend upon the blood donations of healthy people.

The American Red Cross Blood Program of the Greater New York Chapter recognizes the essential public service now being performed by the existing blood banks. It also recognizes that they must continue. The Red Cross hopes that by making a sufficient supply of blood available to the physicians, dentists and hospitals in New York for their patients in time of need it will have rendered the same service to the people of New York City that it gave to our military personnel during the war. The Red Cross needs your help.

Every physician and dentist should be a blood donor recruiter. Please tell your patients about our Program. Collecting blood is easy, painless and harmless to the donor.

Won't you ask us for literature that can be placed on the reading table of your waiting room; also an attractive poster, if you have a place for it in your office?

The emotional appeal that existed during the war is lacking. The public must be indoctrinated as to the urgent need. A continuous sustained drive must be carried on from person to person. Tell your patient he may save a life by giving a pint of blood. You may be indirectly responsible for saving a life by influencing another in giving his blood. Give yourself and see how simple it is; by so doing it will be easier for you to influence others.
REPORT FROM THE NEW YORK SECTION OF THE COLLEGE

DAVID TANCHESTER

On Sunday, December 5, 1948 the New York Section of the College held its Social Mid-Year Dinner and Meeting at the Salle Moderne of the Hotel Pennsylvania in New York City. The time and place were chosen because of the convenience to those Fellows of the College who were attending the Greater New York Dental Meeting. Ladies were cordially invited and the social feature of the evening predominated. It was also a joint meeting of the New York and New Jersey Sections.

Prior to the dinner, the New York Section acted as host of the reception and served cocktails. There were many out-of-town visitors (Fellows of the College), including Dr. Minges, President of the American Dental Association. After cocktails, the National Anthem was sung and Dean Walter H. Wright said grace. A splendid dinner was served and a talented singer, Miss McDonald, entertained us with some fine songs.

Our Chairman, Dr. Sidney Riesner, spoke a few words of welcome to the ladies present and extended our appreciation to the New Jersey Section for their splendid cooperation. He then presented Dr. J. Frank Burke and Dr. Ernest C. Roeck, Vice-President and Secretary of the New Jersey Section.

After the coffee, the Chairman presented the following outstanding Fellows of the College: Walter Henry Wright, Dean of the New York University College of Dentistry and President-Elect of the American College of Dentists; William J. Gies, a Founder and a Past President of the American College of Dentists; Jay G. Roberts, President of the New York State Board of Dental Examiners; Charles A. Pankow, Vice-President of the Dental Society of the State of New York; and Theodore C. Blutau, President of the Dental Society of the State of New York, who addressed the assembly and urged us to come to Buffalo in May when the Dental Society of the State of New York will hold its annual meeting.

Our Chairman, Dr. Riesner, announced that since our last meeting we had lost two outstanding Fellows of the College: Dr. Alfred S. Walker, of Miami Beach, Florida, who, while he resided in New York City, was an active member of our Section; and Dr. John J. Lusardi, of Jersey City, who was an active member of our New York Section before the New Jersey Section was formed. We all rose for a moment of silent prayer in their memory.

General Charles M. Walson, M.C., U.S.A. retired, of Governors Island, New York, Fellow of the American College of Surgeons, Administrator of the American Red Cross Blood Donor Program of Greater New York, was the guest speaker of the evening. He presented a talk on the blood donor program.
of the Greater New York Chapter of the American Red Cross. His very elucidating talk was received by all with much interest and pleasure.

REPORT OF THE MID-WINTER MEETING OF THE NEW YORK AND NEW JERSEY SECTIONS OF THE COLLEGE

FRANK J. HOUGHTON

On Thursday, February 24, 1949, there was a joint meeting of the New York and New Jersey Sections of the College. The New Jersey Section, the host Section, invited the New York Section to attend a group of Clinics presented by the dental interns at the Jersey City Medical Center. The program included the presentation of actual cases used in the training of the dental interns. The chiefs of the various divisions were present to explain their methods of presenting the program to the interns. The dental staff at the Jersey City Medical Center is as follows:


At the completion of the case presentations the group visited the Hudson County Dental Society Postgraduate Room, which is located on the third floor of the Surgical Building of the Medical Center. This local dental society has developed an outstanding set-up for providing postgraduate courses for its membership.

A dinner was held at Bruno's Restaurant, adjacent to the Center. The speaker of the evening was Francis A. Arnold, D.D.S., Assistant Director, Research Department, U. S. Public Health Service, Bethesda, Md., who was substituting for Dr. H. Trendley Dean, Director of Research Department, U. S. Public Health Service. Dr. Arnold explained the history and development of the fluorine study being made by the U. S. Public Health group. He discussed at great length their findings relative to placing fluorine in the drinking water of various municipalities. There was great interest displayed in this subject by all present, which brought many questions to the speaker for clarification. Dr. Arnold's conclusion in relation to the fluorides was that findings to date suggest the possibilities of three controlled methods based on fluorine vs. dental caries: 1. the addition of fluorides to public drinking water up to 1 part per million of fluorine; 2. an increase in daily fluorine intake during the first 8 years of life to that comparable with fluorine intake in areas using water supplies containing 1 part per million of fluorine; and 3. the use of topical
application of fluoride solution to the crowns of erupted teeth. None of these methods is supported by conclusive evidence and should be recommended judiciously. When it is proved to be effective the treatment of domestic water supply by the addition of fluorides will be an economical and practical method of caries control.

In addition to the officers of both Sections, the head table was graced with the presence of Dr. Malcolm Carr, past president of the College; Dean Robert Bradlaw of the Royal College of Surgeons, London, England; and Dr. Samuel A. Cosgrove, Director of the Margaret Hague Maternity Hospital, Jersey City.

It was the wish of those present that these joint meetings be repeated at least once a year.