

## DENTISTRY AS AN ORGANIZATION AND INSTITUTION

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This essay discusses American dentistry as an organizational system and as a culture of several interrelated, historical, occupational groups. The analysis is general by necessity and omits small exceptions and minor trends. It also runs the risk of being overly programmatic inasmuch as dentistry is an organization and culture largely unknown to American social science, and interesting ideas and fruitful research might go in any direction. However, this institutional approach may not be inappropriate: the study of occupations has been named by Everett Hughes as American ethnology.

The paper is organized into two parts. Part one sketches how dentistry is organized today in America. Part two speaks to some of its peculiar cultural themes by way of explaining that organization.

In America, dentistry is an independent, autonomous health service, a world to itself. It has its own social structure and is not a part of American medicine, although it presently has benign and legitimate relations with it.

All modern societies have occupations and arrangements to care for and cure oral disease, but different national styles or, perhaps, even evolutionary stages of dentistry seem to exist in various nations. Also, inter-national spheres of national dental influence exist as do some cooperative organization at the international level in the forms of the International Association of Dental Research and the Federation Dentaire Internationale.

American dentists see their own institution as unique and also as the world's standard of care, technique, efficiency, auxiliaries' use, specialization, research, training, prestige, organization and so on.<sup>1</sup>

## THE ORGANIZATION OF DENTISTRY

### *Roles*

Dentistry has a surprising magnitude by several measures. Approximately three billion dollars is now being spent annually for dental treatment. As for other forms of health care, this figure has been rising and will continue to rise. A quarter of a million people deliver this dental care. In 1965, there were 93,400 active dentists, 15,100 dental hygienists, 91,000 dental assistants and 25,500 laboratory technicians.<sup>2</sup> And, to complete the role roster by mentioning the number of dental patients, currently 46 per cent of the adult American population is visiting the dentist in a given year.<sup>3</sup> "An estimated 293.8 million dental visits, or 1.6 visits per person, were made" in the year 1963-1964.<sup>4</sup>

The immediately visible dental organization is the individual dental practice. Typically this consists of a male general practitioner and one or two women dental assistants. If two such assistants are present they may be differentiated into a receptionist-office manager-housekeeper and a chairside assistant. These assistants are wage employees, are usually trained by the dentist himself (less than 10 per cent has had formal school training), and have low prestige, low salaries and high turnover.

The practice may also include a part-time or full-time dental hygienist. Hygienists are school trained, usually in two-year courses, and are legally licensed by a state board. They give fluoride treatments, take x-rays and, above all, perform prophylaxes under the supervision of a dentist; that is, they use instruments in the mouth to clean the teeth of calculus and debris. Hygienists also have high turnover in the labor market; by state law or custom, they can only be female; they often work on a percentage basis, especially if they work part-time and in several dental offices. Hygienists make considerably more money than do dental assistants and define their occupation as a professional one. Hygienists are present in about one-fourth of dental practices, but the proportion has been growing.

The third dental auxiliary is the dental laboratory technician. The vast majority are men. They almost always work in commercial laboratories and are usually trained on the job. Upon "work authorization" of the dentist they make or repair mechanical prostheses and other appliances.<sup>5</sup> These technicians have virtually taken over the work of mechanical fabrication in dentistry. Although only five per cent of dentists employ their own technicians, almost all dentists use one or

more of the dental laboratories. A very small proportion of dentists, less than ten per cent, continue to make their own appliances.

Historically, the division of labor between dentist and auxiliaries has proceeded along familiar lines of expansion. More tasks are given to auxiliaries, more dentists use them, and auxiliaries increase in number. The auxiliary occupations are busy elaborating their identities and going down the road of professionalization, accompanied by increases in organizational membership, societies, journals, codes of ethics, formal training, recruitment programs and so on.

The reasons for this elaboration of auxiliaries are not hard to find. They are the same ones that medicine and several other professions have experienced. Between 1930 and 1965 adult utilization of the dentist increased from 20-odd per cent to 46 per cent per year. This increase in utilization was accompanied by *no* increase in the dentist-patient ratio. In fact, it has decreased. Dentistry coped with this change in demand partly by delegation of duties and creation, or rather expansion, of these three auxiliaries.

The big jump came after World War II. The statistics are startling and bespeak the power of a large and widely dispersed occupational group to cope with rapid social change.

Dental technicians in separate laboratories did not begin until the end of the nineteenth century. Growth was slow until the mid-1940's; dentists did their own fabrication. In 1959 a total of 6,600 commercial dental laboratories existed—mostly one- and two-man establishments.

The hygienists have a shorter history and an even more recent burgeoning. The first training course was established in 1913. By 1925 there were 10 schools; by 1956, 35. In 1965 there were 56: 20 schools giving a bachelor's degree, 13 with two-year and four-year programs, 36 with two-year programs only.

Dental assisting, in the sense of nonspecific help for the dentist, is probably as old as dentistry. The first assistants were men or boys, some of whom may have played an apprentice role. But latter-day assistants are almost invariably women and date from 1885. A large jump in assistants took place in the 1950's. In 1950 the assistants were estimated to number 55,200; by 1965, 91,000.

The key role of the dental practice, of course, is the dentist—the leader of the “dental team.” Only he is licensed to diagnose, operate, medicate and prescribe for oral diseases.<sup>6</sup> The dentist is perhaps the last of the free professions in the nineteenth century realities of that term. In many of the essentials of organization he has the same re-

lations as when dentistry evolved as a profession about a hundred years ago. The dental office is still the realm of the solo entrepreneur, the private practitioner with a relatively small operation—seeing about 1,000 patients per year and grossing under \$100,000, netting between \$15,000 and \$20,000 per year. As of 1960, about 85 per cent of nonsalaried dentists practiced alone. Most of the remaining 15 per cent is in some kind of association, usually on a temporary basis. “True” group practice (in which dentists, as partners, share facilities, expenses and income) is rare—involving around three per cent of private practitioners. However, group practice seems to be rising.

This individual, separate character of dental practice is the key structural feature in the entire dental institution. Dental care in America is a legal monopoly; it is dispensed in private domains at the free discretion of a wholly independent professional who performs his services under a fee-for-service contract with a private patient. It should be no surprise that sole, private practice is perhaps dentists’ most deeply held value.

### *Associations*

The dental practice, as a group composed of dentist, auxiliaries and patients, is the oldest, most intense and certainly the fundamental organization in the dental institution. However, it is not the only group. Each member of the office, with the dentist foremost, is involved in a network of groups whose exact size and complexity are unknown, but that can only be called vast.

Dentists organize themselves into a large but an unknown number of “unaffiliated” local societies: 443 component societies (several to a state) and 54 (state) constituent societies of the national American Dental Association. This is the structure based on the territorial principle and named by dentists themselves as “organized dentistry.” Its goals and functions are social control, protection and advancement of the profession’s self-interest, maintenance of the institution and promotion of dental health. Here is where the guild or union concerns are chiefly met, although it is not the only arena where internal and external dental power relations are evident. These are the groups with the general, organizational concerns, the ones chiefly involved with dentistry’s relations with its environment, the ones whose agenda is set on maintaining and extending its “license and mandate.”

However, many special dental “segments” exist whose interests form the basis of another category of groups. Here fall the national societies,

and their local counterparts, that are based in particular dental subjects, techniques and specialties, including the eight specialties presently recognized by organized dentistry and also the several nascent or aspiring specialties.<sup>8</sup>

In addition to these types of organizations are the ones based on "expressive concerns" and common fates, on prestige (e.g., the American College of Dentists), on common religion (e.g., the St. Apollonia Guild "for spiritual development of Catholic dentists"), on race (National Dental Association of Negro Dentists), on sex (Association of American Women Dentists), on dental fraternities (e.g., Alpha Omega for Jewish dental students and practitioners) and even on common means of recreation (Flying Dentists Association).

All these three types of groups (general, segmental, expressive) are relatively formal and have varying amounts of structure: they publish journals and bulletins, elect officers, hold meetings, collect dues and so forth.

However, certain informal groups within localities have both expressive and instrumental functions. They are based not only on congeniality and contiguity but also on goals of continuing education, talking shop and seeking and giving technical advice. "Study clubs" are in this class and they have a long history in dentistry.

It is worth mentioning that the family life of dentists is also bound into organized dentistry through the wives' auxiliaries, which parallel component and other local societies. This socialization of wives may begin early; some dental schools have students' wives clubs and various lecture programs—not unexpectedly in view of the fact that two-thirds of junior and senior dental students are already married.<sup>9</sup>

To give a concrete illustration of the number and variety of dentist organizations, I may mention some data collected in a study of Minnesota dentists. A questionnaire mailed to every dentist in Minnesota in 1963 drew 1,301 replies (about a 60 per cent response). One of the questions asked was the extent of membership in various kinds of dentist organizations. About 150 different names were coded for such groups. Perhaps a good number were duplications; many were informal groups and these go by a variety of names. But we conservatively estimated the existence of more than 100 different groups in a state that has about 2,200 practitioners.

The groups' names depict their bases and goals. Thus, there was one of the seven component societies of the state: the Minneapolis District Society, a part of the Minnesota State Dental Society, which

is, in turn, a constituent of the American Dental Association. Within the Minneapolis district area were local societies such as the East Side Dental Society and the Four County Society. Along specialty lines were organizations such as the Minnesota Prosthodontic Society, the Minnesota Society of Pedodontics and the Minnesota Academy of Restorative Dentistry. Some dentists were members of Alpha Omega Dental Fraternity. Some were members of a group called Institutional Dentists of Minnesota, a group that presumably included men who work in prisons, schools and so on. Also, men in the more informal groups were continuing their education under names like the Minnetonka Dental Study Club, the Orthodontic Study Club, the Periodical Study Group, the G.V. Black Club and "Swanson's Seminar."

Almost all these were groups particular to dentists in a few counties in the one Minneapolis dental district of Minnesota. Dentists in this area were also members of various national societies, some of which had chapters in Minnesota, some of which did not.

The proliferation of organizations that these data convey is not unique to Minnesota. Similar data were collected in a study of practitioners in the Chicago metropolitan area. The point seems clear: dentists practice their profession in highly individualistic style; one man to one office and one set of patients. Contrary to the physician who is impelled to colleague relations by the division of medical labor and by the necessity to practice in a hospital, dentists need not go outside their offices. But they do. American dentists have, indeed, created a vast network of voluntary colleague relations that serves a variety of group needs that even individualistic professionals feel.

In comparison, the two female dental auxiliaries have restricted themselves, by and large, to maintaining "general" societies. Thus, there are national associations of hygienists and of dental assistants, and their state and local counterparts.<sup>10</sup> These associations are clearly modeled on the dental organizations. The hygienist and assistant organizations have many formal and informal ties to their dentist counterparts. Indeed, they are often sponsored and controlled, to greater or lesser extent, by them.

The dental technicians are not yet organized as a self-conscious occupational group, at least not on a national level. The dental laboratory owners' association (National Association of Certified Dental Laboratories) runs a certification testing program and publishes a bulletin for "certified dental technicians." These efforts may or may not give rise to a separate technicians' group to parallel the other

auxiliaries. At present (1967), a dozen or so study clubs of technicians exist in as many states, but it is more likely that any technician organization will follow craft and union lines rather than a professional model.

## THE CULTURE OF DENTISTRY

So far this paper focussed on the social organization of the dental institution. This extensive and complicated dental organization has evolved, of course, to achieve its goals and to realize its values in dealing with the environment.

Perhaps the historically dominant culture theme in dentistry might be said to focus on its identity, the basis of its claim to a particular license and mandate (in Hughes' terms).<sup>11</sup> This theme might be stated: *"Dentistry is a separate and independent health service, whose practitioners (dentists) are professionals and whose services are essential to total health."*

Each element to this theme is the cause and effect of much dental history and of much current organizational and individual action.

### *An Independent Health Service*

As a group of procedures and concerns, dentistry has a history into antiquity, but as an occupational group with some system to its techniques, dentistry developed during the eighteenth and nineteenth centuries. This emergence and crystallization out of the diffuse medieval barber-surgeons occurred in France but, by the mid-nineteenth century, the center of gravity had shifted to the United States. Gies says that in the United States during the seventeenth and eighteenth centuries, "dentistry was practiced by an occasional physician or surgeon, many barbers and mechanics, and an increasing number of charlatans."<sup>12</sup>

Until late in the nineteenth century in America, most practitioners were apprentice- or preceptor-trained. Nevertheless, "modern American dentistry" usually takes its beginning in 1840 with the founding of the Baltimore College of Dental Surgery, the first dental school. In the same year came the first national association, the American Society of Dental Surgeons. (The first American dental journal began one year earlier, 1839: *American Journal of Dental Science*.) Journal, school and organization became three prongs that lifted dentistry from itinerant craft to profession.

The circumstances around the founding of the Baltimore school might be termed "symbolic events"—actions that had great historic

consequences themselves, as well as ones that portray enduring social relations.

The need for a formal education in dentistry was felt for the same reasons that it was felt in other occupational groups in their evolution to professions. At a certain level of development of craft knowledge, technique and social acceptance, a formal course of schooling permits practitioners to control access to its ranks, to socialize recruits in its own way, to build its prestige, to standardize its role, to control performance and hence give guarantees to the public and to gain a base from which to compete with established occupations and with the state for rewards.

The groups founding the first school were a mixture of dentists and physicians. “. . . Conceiving their art as a specialty of medicine, they endeavored to elevate it to that status in character, usefulness, and appreciation.”<sup>13</sup> Their intent was to found a dental department in the Medical Faculty of the University of Maryland.<sup>14</sup> This attempt by dentists and dentists cum-physicians failed in what has been termed by dental historians as “the historic rebuff.” The medical faculty expressed the opinion on dentistry that “the subject was of little consequence and thus justified their unfavorable action.”<sup>15</sup> The Maryland experience was repeated in a New York medical school where an attempt to found a chair in dentistry also failed.<sup>16</sup>

Thus was begun a split which is not yet healed. Dentistry launched itself down an independent track, but one which from the start defined itself as a medical art. However, American dentistry became prominent upon the development of its “mechanical” side to a high degree. Nevertheless, the medical ideal has always been present and the history of the profession can be viewed as an attempt to realize that ideal.

In the four generations since 1840 several unsuccessful attempts have been made to formally integrate dentistry with medicine.<sup>17</sup> The “medical presence” is not hard to explain. Medicine has served as organizational model and object of envy, as well as one base of knowledge. Further, the practitioners of dentistry are often men who have actively considered medicine as personal careers, although the size of this group is probably exaggerated by laymen. A 1957 national survey asked practicing dentists how satisfied they were with their careers. Forty-four per cent answered “It’s the only career that could really satisfy me.” The remaining 56 per cent were asked what the alternative careers were; 51 per cent of these mentioned medicine.

But there is no doubt that the physician is the dentist’s “significant



other," and that their relation, at least on the dentist's side, is a heavily charged one. Dental editorials still nettle at public figures who follow the lay language to mention "doctors and dentists" instead of "physicians and dentists; they are both doctors."

Further, dentists worry about their public image and prestige, an odd preoccupation for a group that ranks fourteenth on the last NORC study of occupational prestige, up four ranks since the previous survey. But they are still behind the doctor/physician, and there is the relative deprivation and the bind.

Today dentistry seems to have firmly developed as a separate organizational entity but with biologic and education bases similar to medicine. This similarity can only increase with the astronomic rise, after World War II, of dental research, with the building of a large cadre of full-time dental faculty and researchers, with the expansion of new facilities joint with medical schools and, finally, with the expansion of such particularly "medical" specialties as periodontology, endodontics, oral surgery, pathology and public health.

### *The Consequences of the Dental Diseases*

Part of the expansion of dental specialties is accounted for by the changing nature of oral disease and its treatment—causal factors in the organizational character of dentistry from its start to its present, and its future. Oral disease has several attributes that inevitably have shaped the division of labor for its treatment. Some of these attributes appear universal in place and time. Some have varied with social and technical changes. The following paragraphs attempt to explain dentistry as a function of dental diseases.

The main types of oral disease, at least in terms of what dentists are almost exclusively concerned with, are caries and periodontal disease ("pyorrhea" in toothbrush ads and in lay terms), really a descriptive word for a range of gum diseases.

Caries are nearly universal in the present American population. The most elaborate epidemiologic work that has been done, the Health Examination Survey of the Public Health Service National Health Survey, has recently reported figures that depict the prevalence of caries in adults.<sup>18</sup> Eighteen per cent or 20 million American adults had lost all their natural teeth. Of those who still had any teeth, "more than half of them had more than 18 decayed, missing and filled teeth." Less than one per cent of adults who had all 32 teeth were without decay or filling. Finally, the average number of DMF (decayed, missing,

filled) teeth per person was estimated at 17.9—1.4 decayed, 9.4 missing, and 7.0 filled. At any given time a “staggering” backlog exists of untreated decay.

Present estimates run around 700 million unfilled cavities in the American population. Not only does everyone have caries, but they start getting them early in life, often by age two, and they continue to get them. Caries are naturally irreversible; once started they can only get worse. Caries are not preventable absolutely, even with fluoridation, careful daily hygiene and regular professional care. Restoration of dental function is possible through professional intervention.

The other major oral problem, periodontal disease, has many of the same attributes. By early adulthood, it approaches being universal. After early middle age, it is the major cause of tooth loss. Its onset and development are insidious and are not clearly understood. Its prevention seems dependent on daily and careful hygiene practices in the home and frequent prophylaxes by the dentist or hygienist. Restoration of function is possible after periodontal attack, but successful treatment is often painful and difficult and is a problem for the specialist.

What kind of dental institution do these diseases require and produce? This question cannot be answered, at least not outside of history, because dentistry is and has developed in response to many “requirements.”

Nevertheless, the requirements of the oral diseases for a particular division of labor do set limits on dental occupations. The prevalence of dental diseases over time, space and age has required a wide dispersion of practitioners, chiefly devoted to a single biologic system, the oral cavity. The tremendous need for relatively straightforward fillings and prostheses has heavily weighted dentistry on the “mechanical” side. The effective patient demand has never been even nearly equal to the “objective” needs of the dentally ill and has been for solutions that are more engineering than biology. (In this context it is worth pointing out that prior to World War II, the amount of dental research had been relatively tiny and relatively applied; engineering rather than biology.<sup>19</sup>)

Caries and periodontal disease both are treatable outside a hospital. The instrumentation required for most care is relatively small in size and cost; the technical knowledge needed in most instances is within the ken of a single practitioner. These several characteristics have

allowed dental care to be delivered by separate, small entrepreneurs doing a general practice.

The nineteenth century dental patient wanted to be relieved of pain (by extraction) and restored to function (by false teeth). Teeth or patients did not live long enough for periodontal disease to become a problem. The rise in salience of periodontal disease is something akin to the rise into dominance of the "chronic" diseases over the "acute" diseases in medicine. Both types of diseases express changing longevity as a result of improved health care and also the rising health expectations of the American population. With increased use of the dentist and with fluoridation, people no longer need lose their teeth to dental decay; teeth last long enough to suffer periodontal attack. Caries are, in theory, now controllable.

The attention now being given to the treatment of periodontal disease is one reason that dentistry will inevitably become more biologic, whole-body oriented. This trend is accentuated in other ways. In the past few years, active attempts by government, dental schools and the profession have been made to include oral cancer in the bailiwick of dentistry. This, of course, will push dentistry further into oral medicine (and dentists into being "physicians of the mouth"), a definition and a status dentists have long sought and some dentists have always vigorously maintained. So far, these recent attempts to enlarge the definition of the dentist's role to detection and treatment of oral cancer have not entirely succeeded. Dentists say they are willing to accept responsibility for looking for oral cancer, but few dentists do biopsies. Few have adopted oral cytology.

On the patient's side, a 1965 survey showed that only 45 per cent of American adults feel "it is the dentist's job to examine his patients for cancer of the mouth;" only 29 per cent feel the dentist is "trained to deal with all mouth diseases."<sup>20</sup>

### *Services Essential to Total Health*

The final element in this stated theme is complement to much of the foregoing. However, it is central to any understanding of dental organization to consider the "meaning of dental health" to patients and society. From its start in the nineteenth century to the present, dentistry has devoted itself to defining for its public a conception of the great importance of dental (now oral) health. The effort has been a frustrating one; the vast majority of Americans does not accept the

profession's definition of oral health as essential to systemic health and to psychological well-being.

It is true that the experience of dental disease is universal, that it is painful and that people have formed clear cultural stereotypes of the dentist and his treatment. Teeth and dentists are at the back of almost everyone's mind. Fluoridation, for example, has had rough seas in community referenda partly because the merest irrational doubt over possible body ills outshouts indisputable dental benefits.

Television has no dentists akin to physician protagonists. In fact, the thought of there being any is a humorous idea exploited by an Al Capp comic strip. When writers wish to satirize a medical situation, they do so by making it dental as was done in a recording spoofing Noel Coward's "Brief Encounter."

A clown once told me that a man in a white coat running about with a gigantic pincers and a giant tooth is a stock circus routine. (He also said, however, that another routine entailed a white-coated man with a stethoscope.)

The anthropologists have yet to determine why teeth and dentists are so funny. But the psychiatrists, especially of the psychoanalytic persuasion, may already have done so. One psychiatrist defines man as a "mouthy creature" whose teeth, distinctive among body parts, enjoy cyclical rise and fall, are heavily invested in fantasy and are surrounded by magic and rituals over shedding.<sup>21</sup> The teeth of the child and the adult "are bound up with narcissism," "one's teeth are an integral part of" one's body image, hence symbolic of "one's entire being." "The teeth make the person," or to state it less as a slogan, "teeth equals body equals personality." Teething is the beginning of ambivalence; symbiosis with the mother ends, the child "begins to bite, to devour, to hate." His tooth is his badge of "expulsion from his private Garden of Eden into his life of lust and sin and travail." In dreams, teeth symbolize the nipple; also the phallus; also a baby. Defective teeth stand for self-doubt and self-hatred.

This kind and extent of significance is, of course, not the traditional basis on which dentists have sought to establish the importance of their services. They have contented themselves to point out that some body ills are mirrored and caused in the mouth and that the teeth are living tissue in a physiologically complex organ necessary to speech and ingesting food. The closest they have come to the psyche has been to assert the importance of teeth in facial appearance and to assert the psychological and social evils of malocclusion.

Dentists speak to one another of the "dentally educated" patient—one who regularly seeks dental care and accepts the "treatment of choice." This is not to say that they feel all who do not go to the dentist are simply unenlightened. The 1957 NORC study, "Dentistry and Dental Practice," asked that question. The chief reasons given by dentists were: patients' fear, lack of money, neglect and ignorance of needs, in that order of magnitude.

When asked why people do go to the dentist regularly, dentists answered that it was because they were educated in preventive care, because they were conscious of their appearance, because they were aware of the relation of teeth to general health, because they were intelligent or had the personality traits of maturity and so forth.

When asked on public opinion surveys, most people say dental health is important to them, but the majority does not feel dental disease is serious. Three-fourths of the sample in a 1963 national survey said dental disease was not a source of worry. On the basis of an earlier national study (1959), it was estimated that perhaps one-fourth of American adults could be considered to be "preventively oriented" as regards dental care; i.e., people who regularly go to the dentist for checkups.

## CONCLUSION

In general terms, this paper has sketched one picture of dentistry as an institutionalized organization, a system of occupation groups that have produced a culture as they have developed through time. Dentistry's development is a product of many factors. It has been partly evolutionary, a working out of its own early ideals and self-conceptions as an independent, important, health profession based on biologic science.

Development has also been influenced heavily by the model of medicine that has served both as a parent health discipline and as an occupational group successful in its own drive to professionalization over the past 150 years. The meaning of teeth in society and the nature of the dental diseases themselves have also shaped the dental institution by defining the kind and extent of services that patients have sought and have been willing to pay for.

Finally, dentistry is a product of the life of its own several groups. Like other occupational groups, dentists, hygienists, assistants and technicians have acted to maximize their rewards of prestige, power and income vis-à-vis one another and the public.

In short, dentistry is best defined as a product of its own history in American society, of its present situation in the medical division of labor, and of its disease, of the definition and meaning of oral health in American culture, of its own subculture's values, ideologies and technologies and of its own interactive system.

Dentistry, as other occupational groups in society, is self-conscious and sophisticated, even by social science standards. For example, the dental journals regularly print analyses of the social changes now operating within the institution. They often discuss its structures. There are periodic surveys of dentistry (the last published in 1960 cost a half million dollars; it included NORC surveys of the American population and also dentist-run surveys of students, applicants, new practitioners, deans, boards of examiners and so forth, all under the auspices of an "outside" party, the American Council on Education). These are highly organized and sophisticated enterprises. Frequently, they are dispassionately objective. They are abstract. They may even use the language of sociology. In fact, dentist analyses of dentistry by Blackerby, by Fleming, by Phillips, by several Public Health Service dentists, challenge the social scientist to do any better or as well.

The point is that dentistry attempts to make itself, while reacting to the various forces outside it and within it. This self-conscious, self-critical and rationalized aspect of occupational groups and cultures in a complex society may be what makes them unique, and by sociologic values, most interesting to study.

## REFERENCES

<sup>1</sup> This ethnocentrism is widespread and firmly embedded; it is mostly an assumption that it is carried almost casually. For example, "Although as a profession, we have done exceptionally well in developing the science and art of dentistry and have no parallel in the world in quality of dental care, we have failed miserably in the area of dental health education." Henny, F., The President's Address, *Journal of the Michigan Dental Association*, 44, 217, July-August, 1962.

<sup>2</sup> United States Public Health Service, *Health Resources Statistics*, Washington, United States Government Printing Office, 1965, p. 43.

<sup>3</sup> O'Shea, R. and Gray, S., Dental Patients' Attitudes and Behavior Concerning Prevention: A National Survey, *Public Health Reports*, 83, May 5, 1968. Unpublished data from an NORC survey in the spring of 1968 indicate the figure is up to 48 percent.

<sup>4</sup> *Volume of Dental Visits, U.S.—July 1963–June 1964*, Health Statistics, series 10, no. 23, Washington, United States Government Printing Office, 1965, p. 4.

<sup>5</sup> Instead of “work authorization” the term “prescription” has had some currency but is deliberately eschewed for giving too much prestige to a technician whom dentists insist is a craftsman, not a professional.

<sup>6</sup> The hygienist is also a licensed practitioner; however, her work in the mouth is carefully restricted by law primarily to cleaning teeth only, to giving topical fluoride treatments and to taking x-rays—and all these only under direction of dentist. However, state laws vary somewhat.

<sup>7</sup> Only component and constituent societies are officially parts of the national structure, but the town and country societies are really within it, too.

<sup>8</sup> In 1959, at an ADA Council on Dental Education meeting, 22 organizations sent representatives to discuss their interest in recognition in specialties.

<sup>9</sup> For an insight into the wife’s scope in initially selecting a practice location, an office and even a specialty; in building, staffing and maintaining a practice; in relating to other dentists, to patients and to the community, see Grothaus, J. M., *Your Role as a Dentist’s Wife*, a paper given before junior and senior dental students and their wives during the Chicago Dental Society’s Midwinter Meeting, 1965.

<sup>10</sup> According to the 1964 edition of the DIRECTORY OF ASSOCIATIONS, the American Dental Hygienists Association has 4,000 members in 48 state groups and 58 local ones. The American Dental Assistants Association has 12,000 members in 52 state-level groups and 374 local ones.

<sup>11</sup> Hughes, E. C., *MEN & THEIR WORK*, Glencoe, Illinois, The Free Press, 1958, p. 78.

<sup>12</sup> Gies, W., *Dental Education in the United States and Canada, a Report to the Carnegie Foundation for the Advancement of Teaching*, Bulletin no. 19, New York, Carnegie Foundation, 1926, p. 28.

<sup>13</sup> *Ibid.*, p. 38 ff.

<sup>14</sup> Horace Hayden made the first attempt to teach dentistry in an educational institution by giving a series of lectures to medical students at Maryland in 1837–1838; cf. Gies, *op. cit.*

<sup>15</sup> As quoted in Gies, *op. cit.*, p. 39.

<sup>16</sup> Richard Shryock has offered as one explanation the state of medicine’s own development. “Dentistry, in effect, was one of the first medical specialties, and the medical schools of the 1840’s were not yet sympathetic with specialization in the modern sense.” See Introduction to McCluggage, R. M., *A HISTORY OF THE AMERICAN DENTAL ASSOCIATION*, Chicago, American Dental Association, 1959, p. 14.

<sup>17</sup> See Asgis, A., *Professional Dentistry in American Society*, New York, Clinical Press, 1941, for references to the “stomatological movement” of the 1920’s and 1930’s.

<sup>18</sup> *Decayed, Missing, and Filled Teeth in Adults*, Health Statistics series 11, no. 23, Washington, United States Government Printing Office, 1967.

<sup>19</sup> It has been estimated that dental research has expanded 1,000 times since the late 1940's!

<sup>20</sup> National Opinion Research Center, survey 868, October, 1965.

<sup>21</sup> Adams, P. L., Dental Symbols and Dream Work, *Journal of Florida State Dental Societies*, 34, 1963.