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The Dental Student

By

Douglas M. More, Ph.D.

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Preface

Several years ago the Committee on Recruitment of the American College of Dentists, after considerable study, came to the conclusion that any effort that had for its objective the interesting of young men and women in a career in dentistry would be aided greatly if more information were available on what motivated a person to consider such a professional career.

The few limited studies on motivation that had been made up to that time offered valuable suggestions and gave encouragement to the desirability of broader efforts in this field.

In the Spring of 1958, the then Chairman of the Committee on Recruitment—Dr. J. Wallace Forbes of Philadelphia—and the Secretary of the College, consulted with Dr. Nathan Kohn, Jr., of NK and Associates, Inc., of St. Louis. Dr. Kohn previously had indicated an interest in the recruitment problem in a discussion with a committee of the St. Louis Section of the College relative to recruitment in Missouri.

The result of the conference with Dr. Kohn was to recommend to the Board of Regents that such a study be undertaken for the College by Dr. Kohn and his associates.

In the early weeks of the opening of the 1958-1959 school year, with the cooperation of the deans and faculties of the dental schools, questionnaires were sent to the Freshman students to find out why they had chosen dentistry as a career. This effort was unusually successful in that returns were received from more than 99 per cent of all the students entering the dental schools in the Fall of 1958.

Subsequent discussion with deans, teachers, students (including upper classmen) made available a mass of information that should prove to be most valuable in determining what factors play important roles in the motivation of students for a dental career.

In the material that follows Dr. Kohn and his associate Dr. More have analysed the various factors presented, and have offered suggestions that should help the dental profession in any recruitment efforts having for their objective the securing of a fair share of the qualified young men and women for a career in dentistry.

Douglas M. More and Nathan Kohn, Jr. are members of the St. Louis firm of NK and Associates, Inc. They are psychologists and

personnel consultants. Their organization, approved by the American Board for Psychological Services, has an extensive background in management consulting, organizational appraisals, executive counseling, recruiting and assessment of personnel, and motivation market research.

Dr. More holds a degree in physics and the Ph.D. degree in Human Development, with emphasis in psychology, from the University of Chicago, receiving the latter in 1951. He has taught at the University of Chicago, Washington State College, University of Kansas City, and Northwestern University. His publications include studies in occupational psychology and sociology of salesmen, bankers, engineers, pharmacists, and foremen in industry.

Dr. Kohn, a director of NK and Associates, Inc., has been active in industrial personnel consultations, psychological research, attitude and motivational studies, and psychological testing. He holds the A.B., LL.B., and Ed.D. degrees from Washington University, and the M.A. degree from the University of Minnesota. He has held a number of positions as a director and social worker in research, church, and youth groups. He is a faculty member at Washington University.

—O. W. B.

Survey of Entering Dental Students

The best allocation of manpower to meet a society's need is one of the more complex and serious problems of a modern nation. A "planned" society can ignore individual liberty to choose a career and can assign available manpower to solve its determined needs in accord with its master program. In a "free" society the movement of young people into occupations tends to follow more closely the principles of supply and demand as these are reflected in the total labor market. As such a free labor market develops a shortage in one sector, there begin to arise increased inducements and appeals for young workers to enter that sector, and these young workers increasingly see this as an improved opportunity to insure a successful career. But, characteristically, in a free society, we do not begin to offer inducements until the need becomes apparent. The professions and skilled crafts, however, demand four to eight or even more years of intensive training before we can realize the potential of these men answering the call. This lag intensifies the problem at hand and often results in further social-occupational imbalances. We may resort shortsightedly to over-inducements, or we may turn to forms of planned allocation to and utilization of persons in skilled and professional categories resulting in long-range losses of fundamental liberties.

It is within this context that we raise the fundamental question of the future for dentistry. Does it receive its fair share of the available manpower pool? Can dentistry meet existing and projected demands placed on it by society as a whole for adequate care? Are those entering dental training each year exactly those members of the labor pool who are best suited (physically, mentally, and emotionally) to be the dentists of the future? These kinds of questions can be answered only by first specifying the underlying requirements and resources.

If we wish to do no more than maintain present standards of dental care, as represented by an over-all ratio of one practicing dentist to 2,000 of the general population, then the rate of producing new dentists per year must be sharply increased. If we wish, further, to achieve an improved geographic distribution of dentists, and to extend adequate care to that 40 per cent of the population in lower socioeconomic groups, the shortage projected will be al-

most double that of just maintaining present ratios. This, however, relates to the future and is beyond the scope of these papers. It remains for the using public and the dental profession to work out what level of dental care will be demanded and in turn provided.

Looking backward we may now say that dentistry has at least held its own in getting students. While the dental population has not been increasing at the rate of the total population, we need to remember that the supply of young people reaching college age decreased in actual numbers from 1940 to 1951, and did not regain its 1940 level until 1958. Our country's population explosion has been more recent, and a sharp increase in the actual number of available candidates to the professions cannot be expected earlier than the years 1961-62. The demands for all kinds of professional services are increasing and the competition among the professions for the available candidates is becoming sharp. Dentistry must exert wise efforts to remain competitive in this developing recruitment. Dentistry has some advantages in this recruiting struggle and we will indicate these at appropriate points in later papers.

The 1958 Study of Dental Students

Concern along lines indicated, especially as to the adequacy of entering students in both quantity and quality to fulfill dentistry's future needs, led to a survey of the entering class, Fall 1958. Questionnaires were completed in 53 schools in the United States, Canada, and Puerto Rico. There were 3,578 usable questionnaires returned to St. Louis, the bulk of the information was coded and punched on IBM cards and some additional items were hand tabulated. Summaries of these data form the core of succeeding sections.

Supplementing and enriching the statistical data, 1,250 students in 20 institutions were seen in free-discussion small group interviews. Over a third of these group interviews were with senior classmen. Such open-ended discussions do not provide data that can be easily tabulated, but they did provide insights and meanings into the dynamics underlying our numerical findings. No systematic account of these interviews can be attempted in these pages.

Basic Concepts of the Study

A man's work is of central importance to his life; it is a major determinant of not only his occupational role but of his total social

role. It provides him a position in the occupational stratification of his community, affords a certain level of income, and to an appreciable extent correlates his friendships and memberships. The community comes to have rather generalized expectations about the types of people in certain jobs. We may hear such a phrase as, "He is a born salesman," and at other times hear surprise expressed when someone much different from the stereotype of an occupation is found to be successful in it. To persons in the dental profession, one dentist is as different from the next as one citizen is from another. Yet, were we to poll the public, we would certainly find stereotypic images of the dentist, not all of them flattering and some perhaps embarrassing. There are reasons to expect some similarities among dentists which differentiate them *as a group* from persons in other well-defined occupations. The subtle differences between one man's practice and another's may impress the dentist; the lay observer sees better the gross similarities.

It is possible that the practice of dentistry produces some of the commonalities we observe in dentists, just as Willard Waller many years ago observed perceptively in *What Teaching Does to Teachers.* Similarly, the entering dental student is by no means a dentist—in four years he must not only acquire a smattering of specialized knowledge and particular manual skills, he must become, through some deeper transformation, a professional man. This process remains to be studied, and a serious waste of time, funds, and data will be entailed if we cannot find means to do this with the 1958 freshman class on whom we have so much initial information.

At this point our aim is to describe common features of entering dental students. We indicate the socioeconomic and educational level of the home from which he came, and at one point compare his father's occupation with those of physicians, engineers, sales representatives, bankers, and business leaders on whom information of similar kind is available. Subsequently we report on patterns of motives to enter dentistry, fears and anxieties about it, and beliefs about public attitudes toward the dentist. Finally we indicate what these entering students felt about their future practice, income, type of work, teaching, research, and specialization.

In all that follows, however, we follow only the simplest statistical procedures—in fact, little more than enumerative ones. It has been impossible, with the resources available, to pursue many scientifi-

cally important questions on which our data bear. The original questionnaire contained 120 numbered questions; it was feasible to punch some, but not all, of the information from 70 of these on two 80 column IBM cards. The possible correlations and patterns within these data alone is enormous. When we say there were 120 questions, this tells little of the total data problem; one item alone, if fully treated, would have taken up 50 columns of a card, another 17 columns, and a third 32 columns.

However much our scientific interest may have been aroused by these possibilities, we have ruthlessly had to pare our interests to the minimum to achieve such results as we may offer here. Some of these questions which are of importance to the social scientist must not be lost from sight. We record a few of them here, along with some practical implications for dentistry where the answers seem relevant.

1. Persons entering dentistry are in one of the more upwardly mobile groups in our whole society. They enter a profession of high status and earning capacity. If we compare the motives of those who enter dentistry from homes in labor and semi-skilled classes with the motives of those from homes in which the father already has equivalent status to a dentist (dentistry itself, medicine, law, engineering, business leaders), will we find distinct differences between patterns of motives of these groups of students? If there are, we can add, dentistry, when recruiting, should approach a high school in the suburbs differently from one in the city factory district!

2. A very large group among these entering dental students come from homes in which the mother had appreciably more education than the father. Clearly, a detailed comparison of sub-groups in which parental education was equal, father much more than mother, and mother much more than father could reveal important relationships between hypergamy and motives to enter dentistry.

3. The statistical summaries reveal a fairly homogeneous picture of an entering student who is healthy, intelligent, and sociable. But, the open-ended psychological material presents many distinct "personalities." An important study would provide for depth, clinical analyses of these data and personality ratings from them. These subsequently should be correlated with checklists and sociological materials, and definitely related to the individual's progress in dental school. The cost of such a project for the total group would be pro-

hibitive, but a 10 per cent sample might be accorded this treatment for less than $40,000.00.

4. One of the great opportunities our data afford is the study through time of shifts in attitude in dental school. We need follow up with this group now and after graduation to learn more about the total process of becoming a professional man. Repeating several items now available could permit detailed analysis of attitudinal shifts. Further depth interviewing will be required, but, on this point, only limited sampling could be feasible.

Appendix

Some comments on "The Dental School Applicant," William R. Mann and Grace Parkin, *Journal of Dental Education,* 24:16-21, March 1960:

Many of the items summarized by Mann and Parkin from the survey of the dental school applicant are identical with those in the current study of accepted students. Some divergences in findings lead to need for caution in interpreting the *applicant* survey as providing results relevant to the dental student.

In general, the findings reported in the Mann and Parkin paper are congruent with, or at least highly similar to, those found on our survey of accepted students. In occasional tables we find some wide divergences in percentages. Some of these are sufficiently great to lead to differences in interpretation.

Mann and Parkin express some concern that "Recently, it has been said by some that dental students . . . are motivated primarily to study dentistry in order to obtain prestige and status." They advance, as an alternative, the view that "a number of those who apply for dentistry may have made a conscious or subconscious decision not to attempt the study of medicine because of scholastic records that were not competitive for admission to medical school." Our position is that a complex *pattern* of motives especially suited to dentistry is at issue. It strikes us that their interpretation of persons seeking dentistry simply because they couldn't enter medical school is an instance of negative analysis, and it begs the question of what array of positive motives were at play (see the chapter on "Some Motives for Entering Dentistry").

Our findings on "Choice of a Career in Dentistry" lead to a broad assertion that an applicant has a far better chance of acceptance as

a dental student if there is some influence of a dentist working in his behalf. He is more likely of entry if there has been contact with dental students. May we also emphasize that there may be "selective perception" by admissions committees when the following is studied:

Father a:	*Applicants* %	*Accepted Students* %
1) Dentist	7.5	8.2
2) Physician	4.1	2.6

Indeed, as we began to note such fine differences between the survey of applicants and the survey of students, we were impressed that a systematic comparison should reveal many of the artifacts of the admission process—those aspects of candidates' records which somehow resonate with the probably unconscious biases of admissions committees.

Background Characteristics

The young man entering dentistry comes from a family and educational background much above average for the total population. Further details on this point are contained in the following chapter, "Social Origins of Future Dentists." There seems to have been a rather general influence on the part of parents to stress the importance of getting higher education and making good grades. Over 60 per cent of these students indicate their parents felt that making good grades in school was "necessary," "important," and "very important."

While educational interest is stressed, these students do not seem to think of their parents as being active in community or social affairs. Over 40 per cent indicate no community participation for their parents; and, the combined frequencies of "church," "YMCA," and "Scouting" reaches only 24 per cent. The second largest category for parents' participation is 17.5 per cent for "community drives, civic organizations, and PTA." Thus, there does not seem to be a strong family example for the dental student to become active in the community himself. Perhaps we may see a similar tendency in these students to avoid participation. Only 6.7 per cent list a recent membership on a committee of any kind, 44 per cent indicated no participation in campus or community activities. These latter actually answered "none" or "nothing," and an additional 10.5 per cent left this inquiry blank. On the other hand, there seems to be a latent desire for leadership, even though this is not carried into action. For example, 58 per cent say they would like to be chairman of a group, 44 per cent are willing to do the detail work while being chairman, 38 per cent would prefer organizing the work so others do the detail, and only 22 per cent state they would rather someone else organized and directed the group.

Table 1 presents the frequencies of activities and offices held in high school and college. The decrease in participation and leadership between high school and college is striking, but this kind of a trend also seems true of other college groups. The impact of this table comes out in the fact that we gave credit in our tabulation of answers for anything listed—such items as member of a church choir, chairman of a fraternity dance committee, patrol leader in Boy Scouts, and any type of athletics.

TABLE 1

FREQUENCIES OF EXTRACURRICULAR ACTIVITIES AND "OFFICES HELD" AS REPORTED BY ENTERING DENTAL STUDENTS

Number Listed	*Activities*				*Offices*			
	HIGH SCHOOL		COLLEGE		HIGH SCHOOL		COLLEGE	
	N	%	N	%	N	%	N	%
"None"	287	8.0	734	20.5	1,505	42.1	2,070	57.9
1	398	11.1	798	22.3	931	26.0	810	22.6
2	672	18.8	814	22.8	636	17.8	424	11.9
3	842	23.5	652	18.2	314	8.8	161	4.5
4	654	18.3	311	8.7	112	3.1	59	1.6
5	392	11.0	174	4.9	34	1.0	13	0.4
6	190	5.3	49	1.4	15	0.4	6	0.2
7	62	1.7	18	0.5	4	0.1	3	0.1
8	37	1.0	9	0.3	3	0.1	1	—
9 and over	32	0.9	4	0.1	2	—	0	—
No Answer	12	0.3	15	0.4	22	0.6	31	0.9
Totals	3,578	100.0	3,578	100.1	3,578	100.0	3,578	100.1
Average	3.1		2.0		1.1		0.7	
Median	2.5		1.3		0.3		0.0	

At another point in the questionnaire we provided a considerable list of activities and asked respondents to check those in which they had participated in the past month. Table 2 lists frequencies of these by major groupings. "Active sports" includes golf, tennis, fishing, hunting, and other active games. Under "sedentary group activities" we placed card playing, parties, barbecues, and informal group games or activities. "Sedentary solitary activities" include watching TV, reading, gardening, and the like. Under organizations we coded community, church, professional, and service groups. Of these four classifications, the highest average frequency is for sedentary solitary activities, and the lowest participation is in organizations. There are moderate frequencies of active sports and of sedentary group activities.

Table 3 gives the military status of these students. These figures deserve comparison with those for the total applicant group. Sixty-three per cent of applicants have had no military service and are subject to future service. After admission we find almost 10 per cent fewer in this classification among accepted students. If we assume the group that Mann and Parkin studied produced the 1958 group

TABLE 2

FREQUENCY OF TYPES OF ACTIVITIES AMONG ENTERING DENTAL STUDENTS

Number Mentioned	*Active Sports* N	%	*Sedentary Group Activities* N	%	*Sedentary Solitary Activities* N	%	*Organizations Community and Professional* N	%
0	149	4.2	110	3.1	10	0.3	166	4.6
1	1,048	29.3	1,081	30.2	253	7.1	2,098	58.7
2	1,074	30.0	1,557	43.6	775	21.7	598	16.7
3	648	18.1	546	15.2	1,064	29.7	85	2.4
4	207	5.8	2	0.1	840	23.5	21	0.6
5	55	1.5	—		438	12.2	1	—
6	—		1		147	4.1	—	
7	—		1		3	0.1	—	
Data missing	397	11.1	280	7.8	48	1.3	609	17.0
Total	3,578	100.0	3,578	100.0	3,578	100.0	3,578	100.0

we surveyed (strictly speaking this is not exact), then of 3,212 applicants in this classification only 1,905 are admitted, eliminating 1,307! These figures are merely illustrative, and we do not think they are precisely accurate. They do indicate a very strong preference among admissions committees for the veteran or reservist. There are some obvious justifications of this; the veteran tends to be older, more mature and stable, more certain of his vocational choice, and less apt to be lost to his school. Nonetheless, some unconscious (or conscious) bias must be at work when we find that of

TABLE 3

MILITARY STATUS OF ENTERING DENTAL STUDENTS

	N	%
Veteran, no reserve commitment	492	13.8
Veteran, in reserves	633	17.7
No service, but in reserves	202	5.6
No service, must complete in future	1,905	53.2
No service, exempt status	272	7.6
Data missing	74	2.1
Total	3,578	100.0

those rejected for dental school, 85 per cent have the label "eligible for future military service."

Of the 3,578 students studied, 1,244 (35 per cent) were married at the time the questionnaire was administered. Only 25.6 per cent of applicants were married. For reasons similar to the preference for veterans, here we observe a preference for the married student. Of the married group 73 per cent (26 per cent of the total student body) expect the wife to work. Clearly this will ease the financial burden of their professional education. Beyond the 35 per cent married on entry, another 25 to 30 per cent expect to marry before finishing dental school. While the wife may constitute an appreciable support, 1,203 of these married men state they will have to work at least part time or Summers to finance themselves. A somewhat smaller proportion of the single students, about 85 per cent compared to 97 per cent of married students, say they expect to have to work through school.

In this section we have listed and commented on some of the common background features of entering dental students. We have compared some of these findings with comparable ones for applicants in the same period covered by our questionnaire. Some differences found permit raising questions about the validity and objectivity of admissions procedures.

Social Origins of Future Dentists[1]

This paper explores some aspects of family background among men who are now entering dentistry. This occupation, among the professions, exhibits remarkable homogeneity so far as the nature of the work performed by members is concerned. Less than 4 per cent of all practicing dentists are listed as specialists.[2] Another small percentage of dentists may prefer to limit their practice in one way or another, but there still is far less tendency in dentistry toward extensive sub-fields than is found in law, medicine, engineering, or even accounting. This particular type of occupational uniformity affords the sociologist a rare opportunity to explore for possible regularities in social background, career choice patterns, motivations and other personality factors as related to occupation.

The questions we deal with here are sharply restricted to a few portions of the available data related to mobility. In regard to occupational mobility we will outline: a) extent of occupational inheritance from father, b) extent to which professional status of fathers (not dentists) is maintained, and c) extent of influence to enter dentistry by dentist family members other than father. Secondly, we will outline the extent of educational mobility of those who enter dentistry.

Rationale for the study. Unscientific as it may sound, we did not "select" this remarkable profession for study to test any hypotheses derived from any general theory of professions. The study "fell" on us because members of the American College of Dentistry expressed concern about the number and calibre of young men entering dentistry and they wished to explore the reasons for entering the field so as to be able to focus and intensify their efforts at recruitment into the professional group. Thus in Merton's[3] statement, "What is considered occupational choice from the standpoint of the individual becomes the process of recruitment from the standpoint of the profession and the allocation of personnel in various occupational statuses from the standpoint of society. What the in-

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[1] Reprinted by permission from *The Midwest Sociologist,* July 1959, Vol. XXI, No. 2, pp. 69-76.

[2] American Dental Association, Bureau of Economic Research and Statistics, *Facts About States for the Dentist Seeking a Location, 1958,* Chicago, May 1958, p. 7.

[3] R. K. Merton, G. G. Reader, and P. L. Kendall, eds., *The Student-Physician,* Cambridge: Harvard University Press, 1957, p. 68.

dividual defines as a promising opportunity afforded by the labor market, the profession defines as an 'acute shortage' (say, of doctors or engineers or nurses), and the society defines as an imbalance of occupational distribution." We were charged in the research to address the central of the three points of view.

Our data from individuals, however, was couched by them in the first terms as though they were free agents making a reasoned choice from the field of available types of work. This impression may have been strengthened in many of them because dentistry was very recently a second, third, or even more remote career choice. And we also learned in a coordinate study that vocational counselors both in college and high school rarely encourage men toward dentistry. More often they seem to discourage going into dental training, or think of it only when the prospect may have been unable to gain admission to medicine or engineering, often for some academic reason or other. The legerdemain of hindsight casts a happy glow over these circumstances, for these students now have come to realize that they have work motivations quite unsuited to such other occupations.

The unfortunate consequences of the foregoing series of events are rather obvious. Even though it requires an equivalent dollar outlay per student to train a dentist four years to that needed to train a physician, dental schools in fact must select from an academically more poorly qualified population. The investment of professional pride in a last ditch choice can hardly be expected to equal that reserved for one's first love, though the psychology of this matter needs further exploration. Both medical and dental students are expected in their first two years to cover the same basic courses in physiology, anatomy, biochemistry and pharmacology. Yet the general public, while begrudgingly according the dentist high community status, still considers him something of a mechanic in a white coat. At the same time the physician seems to be considered a sort of super philosopher who, because he happens to like people, willingly directs his wisdom to solving assorted human miseries from dandruff to ingrown toenails.

Dental specialization has been fairly recent, but we were somewhat surprised to learn that less than 4 per cent of all practicing dentists practice a distinct specialty, such as orthodontics or oral

surgery. By contrast, it is getting so hard to find an old-time G.P. in medicine that hapless young couples now search for an internal medicine man who is willing to make house calls! Thus dentistry presents a striking homogeneity of job performance, compared with most other professions or even subprofessions. This occupational homogeneity has special sociological and psychological implications, for it may be possible here to find more clear-cut correspondence between social and psychological factors and the occupation as a performance area of life than it is possible to find in studying other more heterogeneous work groups. We raise here the question, though it remains to be explored, whether there may not be some fundamental regularities relating trends toward specialization in both extent and intensity and such other phenomena as status and prestige, income, professional attitudes, and propensity for community service.

The recruitment problem, mentioned before, is not to be dismissed as unimportant—even though it is no more than a bit of data from the point of view of general sociological theory of occupations. It comes home in a shocking, personal sense, however, when we learn that the average age of the practicing dentist is over 50, that the current national ratio of dentists to public is about 1:2,000, and that the rate of increase of the general population currently is over one and a half times as great as the rate of growth of the population of dentists. In Minnesota, for example, the average age of practicing dentists is over 55, and there is a current ratio of 1:1,500. By 1975, present trends holding (i.e., since the end of World War II—now nearly fourteen years), we can expect a ratio of 1:3,000! The situation for that nearly one-fourth of the population who are Negro, Mexican, Puerto Rican, and Indian (those of Chinese and Japanese groups may fare somewhat better) is quite as atrocious as it is for other services of sociological interest. There is, therefore, some pertinency to this inquiry.

We are jolted to learn on the other side of the picture that office practice of dentistry leaves much to be desired so far as efficient handling of clients is concerned. And some 40 per cent of the dentists in a major metropolitan survey indicated they would be overjoyed to have more patients. The maldistribution of service so indicated is greater than that for the medical profession. For the bulk

of persons of lower socioeconomic status there not only is relatively little inexpensive dental care available, but they do not seem to use what is present. The commonest picture in all groups below that of the mythical average man in income is use of dental facilities only for curative purposes. A tooth is permitted to disintegrate until simple pain drives the patient to have it pulled. This is repeated until it is no longer feasible to chew steak. Then all the remaining teeth are pulled and cheap full plates sought. Interestingly, it now seems most likely that change in this will come from three sources, all designed to combat in their separate ways a "European" form of socialized medicine. These are company dentistry, union-sponsored medical clinics with a full-time dentist, and low-cost night time clinics run by small groups of dentists who band together to give a night every week to two weeks to such work.

Another factor affecting the use of dentistry by the public is its very high portion of work which must be classed as cosmetic. Estimates here range from 25 per cent to 40 per cent. This aspect combined with the generally inconvenient hours dentists maintain so far as the working men are concerned may account in large part for the relatively higher portion of women who have dental work. Some people guess that the male-female ratio for adults may be as extreme as 40:60. We probed in some interviews to learn if this cosmetic feature detracts from the status of the dentist—moving him in the public eye further from the physician and more toward the druggist purveyors of lotions and suntan creams, or even toward the barber and beautician. Such probes, to put it mildly, are met by very mixed feelings by the students with whom we have talked!

It is within this broad background that we have attempted to find a few regularities of sociological interest. The group as an occupational entity has come to intrigue us as investigators, because it simultaneously enjoys very high professional prestige[4] and seems to be lacking in some of the essential motivations, ethics, and forms of conduct we have elsewhere come to associate with the notion of the very high status professional man.

Data. The data were secured by a questionnaire filled out by entering freshmen in the 52 accredited dental schools of Canada,

[4] C. C. North and P. K. Hatt, "Jobs and Occupations: A Popular Evaluation," *Opinion News*, September 1, 1947, pp. 3-13.

the United States and Puerto Rico in Autumn, 1958. One school failed to return all the material in time to be included in this paper, but it will be reported in subsequent studies. We have the remarkable coverage of 100 per cent on a questionnaire—99 per cent of which is available for this treatment. We have learned also in our study that slightly less than 5 per cent of all who enter dentistry ever fail for any reason to become dentists, thus justifying, in our opinion, the phrase "future dentists" in our title. Supplementing the questionnaire data are group and some individual interviews conducted by Dr. Nathan Kohn and the writer with 1,260 freshmen and 275 seniors in 20 of the represented schools. Considerable question was raised early in the study about possible regional differences, so care was taken within the United States to interview in schools in each region.

The questionnaire itself covered twelve pages including an enormous range of material. It has been possible to code and punch about two-thirds of this information on two IBM decks, and only a small portion of the material on deck. No. 1 is treated here. The bulk of the coded results and syntheses of the interviews will be available later this year.

Findings. The occupation of father was requested on our original questionnaire, and we summarize in Table 1 the occupational groups among fathers of entering dental students, as compared with entrants to other occupations and the general population. The data are collected here in major groupings, such as professional, managerial and official, clerical and kindred, and the like.

We include in Table 1 data from a variety of sources of comparative purposes. This makes feasible the observation of some gross differences in social origin among six major white collar groups and the frequencies in the general population for the same categories as those used in determining the frequencies for the Dental Students column. This is important to note, because the frequencies in the General Population column obviously do not accord with sums for the named categories in the census figures, and an unusually large residual row results. A similar practice seems to have been used for the Medical Students so that these three columns are probably comparable within rough limits.

Overtly this tabulation indicates there is foundation to the gen-

TABLE 1

OCCUPATIONAL GROUPS AMONG FATHERS OF ENTERING DENTAL STUDENTS, COMPARED WITH ENTRANTS TO OTHER OCCUPATIONS AND THE GENERAL POPULATION

Fathers' Occupations	*Percentage of Entrants*						
	DENTAL STUDENTS	M.D. STUDENTS[a]	EXECUTIVES[b]	SALESMEN[c]	ENGINEERS[c]	BANKERS[c]	GENERAL POPULATION[d]
Professional	23.5	28	14.0	12.3	19.0	15.6	5.6
(Dentist)	(8.2)	(2)					
(Physician)	(2.6)	(11)	(2.2)				
Semi-professional	1.7	3		(Included in professional group)			1.2
Managers, proprietors and officials	25.8	30	48.5	24.7	28.9	27.1	10.6
Sales	8.9	7	5.9	13.3	9.4	9.7	6.1
Clerical and kindred	3.1	2	2.5	11.1	5.6	14.2	6.1
Farm	5.6	4	8.6	4.9	6.0	5.9	15.2
Skilled, craft, etc.	16.1	7	13.4	18.0	24.3	19.8	28.5
(Foremen)	(2.2)	(2)					
Semi-skilled and operators	1.7	4	4.5	15.7	6.8	7.7	6.8
Unskilled	2.2	2					5.0
Service	2.9	2	—				14.9
Other and not classified	8.5	11	2.6				
Total	100.0	100	100.0	100.0	100.0	100.0	100.0
N	3,578	756	8,300	1,342	499	288	

[a] Adapted from Helen H. Gee and John T. Cowles (Eds.), *The Appraisal of Applicants to Medical Schools*, Chap. 8 by H. H. Gee, "The Student View of the Medical Admissions Process," Assoc. of Amer. Medical Colleges, Evanston, 1957, p. 143.

[b] Warner, W. Lloyd, and J. Abegglen, *Occupational Mobility in American Business and Industry*, Minneapolis: University of Minnesota Press, 1955.

[c] More, D. M., "The Derivation of Hypotheses Relating Occupational Mobility and Job Performance," *The Midwest Sociologist*, Vol. XIX, No. 2, May 1957.

[d] 1950 U. S. Census of Population: Detailed Characteristics, U. S. Government Printing Office, 1953.

erally observed phenomenon of occupational "inheritance" (enormously true for top level executives). It is clear additionally that the familiar white collar-blue collar distinction holds, in that the preponderant group of white collar recruits are drawn from families already in a white collar classification. The smallest propensity to draw from the blue collar groups is for Medical Students (19 per cent), the greatest is for Sales (38.6 per cent), with Dental Students (28.5 per cent) and Executives (26.5 per cent) about midway on this continuum.

Moving to somewhat finer detail we may note that the overall profile of frequencies for Dental Students is most nearly matched by that for the Engineers. Insofar as the dentist's work entails a high level of mechanical skill, this finding does not offend common sense. Scrutiny of finer detail in the Engineer's data (unpublished in the original paper) led to some important differences, e.g., over 10 per cent of Engineers have fathers in the Foremen group, 2.2 per cent for the Dental Students. Hence, the "common sense" of our observation here might not stand under closer analysis.

In an overall sense Table 1 indicates a general upward occupational mobility of 76.5 per cent for persons who enter dentistry. Thus, approximately three-fourths of these dental students are entering professional status from families which did not explicitly have it. This upwardly mobile group may well see entering dentistry as a facile means of enhancing their prestige and status in the community.

Table 2 presents in further detail the possible influence of immediate and extended family on the choice to enter dentistry. The degree to which dentists influence sons, grandsons, nephews, etc., to enter dentistry is such that about one person in five entering this field may be seen as responding to the presence of the profession in the field of interaction in the extended-kin group. Similarly one in four may be seen as striving to maintain and solidify professional family status. Rogoff found at the University of Pennsylvania that 45 per cent of entering medical students came from families in which either the father or some immediate kin was an M.D. This implies a marked difference between these two health services in family origin; but, because there is evidence of atypicality in the University of Pennsylvania situation, we hesitate to pursue this comparison further.

Table 3 presents the picture for the educational advancement of these future dentists vis-a-vis their fathers and mothers. In Table 3 we have drawn a subtotal after the college freshman year. The purpose of this subtotal was to determine the percentages of parents whose education actually would be less than that of our students at the time of their entry into dental school and, in fact, for the bulk of our sample we could possibly have included the sophomore and junior college rows as well. We are safe, however, in saying that at the time of entry into dental school our students had achieved greater education than 65 per cent of all of their parents. Four years from June, 1958, the bulk of our sample will have exceeded

TABLE 2

FAMILY INFLUENCES TOWARD DENTISTRY

Category of Influence	*Dental Students*[a] N	PER CENT
1. Father a D.D.S.	293	8.96
2. Father M.D. *and* D.D.S. in family	16	0.49
3. Father M.D., *no* D.D.S. in family	77	2.35
4. Father other "professional" *and* D.D.S. in family	60	1.83
5. Father other "professional," *no* D.D.S. in family	389	11.89
6. Father "White Collar" *and* D.D.S. in family	195	5.96
7. Father "White Collar," *no* D.D.S. in family	1,225	37.45
8. Father "Blue Collar," *and* D.D.S. in family	108	3.30
9. Father "Blue Collar," *no* D.D.S. in family	908	27.76
Total family D.D.S. influence	672	20.54
Total family D.D.S. and M.D. influence	749	22.89
Total "professional" influence	835	25.52
Total "White Collar" influence	2,255	68.93

[a] N equals 3,271 for computations of percentages in this table; data missing for 307 records.

the attainment of all but 14 per cent of the fathers and less than 1 per cent of the mothers.

Table 4 presents a further elaboration of the information concerning the education of parents. We compare here the education of mothers and fathers for each grade level reported. Both Lloyd Warner and Carson McGuire, somewhere in the neighborhood of a decade ago, impressed the writer with the notion that in their opinion upward social movement of young men was frequently stimulated by their mothers. This tendency to stimulate sons to go

TABLE 3

EDUCATION MOBILITY OF FUTURE DENTISTS

Grade Level Attained	*Fathers'* N	PER CENT	*Mothers'* N	PER CENT	*Total Parents'* N	PER CENT
8th and less	652	18.50	465	13.20	1117	15.84
9th	139	3.94	110	3.12	249	3.53
10th	181	5.14	207	5.90	388	5.50
11th	124	3.54	158	4.48	282	4.00
12th	882	25.02	1,314	37.29	2,196	31.15
College Freshmen	152	4.32	175	4.96	327	4.68
Subtotal	2,130	60.46	2,429	68.95	4,559	64.70
Sophomore	232	6.59	360	10.21	592	8.39
Junior	72	2.04	108	3.07	180	2.55
Senior	412	11.70	434	12.30	846	11.98
Subtotal	716	20.33	902	25.61	1,618	22.92
Advanced Degree	497	14.10	31	0.88	528	7.49
Data Total	3,343	94.89	3,362	95.44	6,705	95.11
Data Missing	180	5.11	161	4.56	341	4.89
Total	3,523	100.00	3,523	100.00	7,046	100.00

further than fathers was seen, in their opinion, as being at least in part a reflection of the fact that mothers in such instances tended to have higher educational attainment than the fathers. We are delighted to be able to add weight to this hypothesis at long last on a highly homogeneous and extraordinarily mobile group. In the columns listing the mothers' education with respect to the fathers' education at each grade level, we find that mothers in considerable portion had the same education, but in every instance down to and including graduation from high school, the average mother in the group had more education than the father. Upon graduation from high school and with one year of college, the percentage figure abruptly reverses. However, we again take our subtotal at the level of the college freshman for the same reason we did earlier. For this total, including fathers who went to one year of college, nearly 40 per cent of the mothers had more education than the fathers, whereas only slightly less than 17 per cent had less education than fathers. We again take a final total at graduation from college and exclude from our evi-

TABLE 4

COMPARISON OF MOTHERS' AND FATHERS' EDUCATIONAL ATTAINMENT

Father's Education GRADE	N	*Mothers' Education*[a] SAME N	SAME Per Cent	MORE N	MORE Per Cent	LESS N	LESS Per Cent	SUBTOTAL	MISSING
8th and less	654	273	42.3	372	57.7	—	—	645	9
9th	139	32	23.2	82	59.4	24	17.4	138	1
10th	181	33	18.2	110	60.8	38	21.0	181	—
11th	125	37	30.0	58	47.2	28	22.8	123	9
12th	882	524	60.1	179	20.6	168	19.3	871	11
College Freshmen	152	22	14.5	34	22.5	95	63.0	151	1
Subtotal	2,133	921	43.7	835	39.6	353	16.7	2,109	24
College Sophomore	232	48	21.0	39	17.0	142	62.0	229	3
College Junior	72	8	11.3	11	15.5	52	73.2	71	1
College Senior	412	136	33.6	7	1.7	263	64.7	406	6
Subtotal	2,849	1,113	39.5	892	31.7	810	28.8	2,815	34
Graduate Degree	497	19	3.9	—	—	465	96.1	484	13
Total	3,346	1,132	34.3	892	27.1	1,275	38.6	3,299	47
Missing	117							→224←	
Grand Total	3,523							3,523	

[a] Percentages in these columns computed from the row subtotals.

(Fathers' national median 8.9 years) U. S. Census 1950. (Fathers' median 11.25 years; Mothers' median 11.8 years) Our sample.

dence on the hypothesis those whose parents have a professional degree or an advanced degree of some sort or another beyond which our subjects could not be mobile. Even the subtotals, however, of college graduates indicate 31.7 per cent of the mothers with more education than fathers and only 28.8 per cent with less education than fathers. In this instance, given the large figures with which we are working, the difference here is significant and in our particular group we confirm the hypothesis that highly upwardly mobile young men will in general tend to come from homes in which the mother has more education than the father. We may note also, in passing, that this is a group of people from families in which the average education is quite high. The national median for fathers is 8.9 years of education for men in the range of 45 to 49 years of age, and the median education for mothers nationally is 9 years for for the same age group. We selected this particular age group for comparison because that would be normally the average age of the parents of these young men entering dental school. In our sample the median education for fathers is 11.25 years, and the median education for mothers is 11.8 years. Incidentally, with a sample of well over 6,000 mothers and fathers, even this small difference of a half a year in additional education for mothers probably will be found to be statistically significant, though there seems to be small point in running this kind of a test at this time.

Summary. The present paper has presented background and general findings on the entering dental class of 1958. We refer to this class as future dentists because within four to five years approximately 95 per cent of this sample will enter dental practice. We can summarize our findings in brief as follows:

1. Roughly 75 per cent of them are upwardly mobile in the occupational hierarchy.

2. Twenty-two per cent of them appear to be influenced to some degree to enter into their profession by reason of their father's profession, his professional status as a physician, or his professional status plus the fact that there may be a dentist elsewhere in the family, or that their father is not of professional status but there is a dentist in the immediate family. Thus, roughly 78 per cent of our sample can be seen as entering dentistry without any background of immediate familial influence.

3. Future dentists are seen as people who tend to attain far more

education than their mothers and fathers. On the average these dentists will be attaining roughly seven years more of education than their mothers and fathers. At the time of entering dental school they have already attained more education than 65 per cent of their parents. In fact, only about 7½ per cent of their parents will ever have the same amount of education as these students will have attained when they graduate as dentists.

4. We have tested the hypothesis that among a group of young men who have very high occupational and social mobility, as represented by status striving and status aspiration, the mother's education will tend to be more than that of the father. This hypothesis has been strongly confirmed for the total group and especially with respect to all parents with no more than high school education.

The indications presented here must be considered merely the first step in our analyses of these data. An enormous variety of factors remain to be analyzed, either by themselves or in conjunction with the elements indicated in this paper. Some of the aspects of our data have strong implications for counseling and guidance workers; some of them have very strong potentiality for testing a variety of questions regarding the psychology of occupations both at superficial and at depth emotional levels; and because of the remarkable homogeneity of the sample, as regards its occupation both at superficial and at depth emotional elevels; and because of the remarkable homogeneity of the sample, as regards its occupation characteristics, provides us with the opportunity of testing many sociological hypotheses within the data itself. These subtler analyses are planned for the near future. Certainly also the findings of this study and subsequent studies will have important bearing on the general problem of the utilization of highly trained personnel in our society. If, for example, we are to hope to maintain adequate dental care in the United States in the future, we necessarily must recruit into dentistry an enormously larger percentage of young men than are currently entering it. It already begins to appear inevitable that the dental profession will face a crisis in balancing between some opposing forces. On the one hand there is need to maintain high academic standards for entry into the schools and still attract a large number of people. Secondly, there seems to be no necessary relationship between motivation to enter dentistry and academic qualifications to perform in dentistry. Lastly, some of the motivations for

entry into the field are not precisely in accord with the currently published and accepted codes of ethical standards for the profession itself. All of these differences will have to be ironed out within the next decade in some way so that an effective program for meeting the ever increasing demands of the public for dental health services can be accomplished.

Choice of a Career in Dentistry

The decision to follow a certain vocation is one of the more serious choices a person ever makes. Rarely do people make an early, clear-cut selection of a highly specific occupation; generally they undertake training in a broad, diffuse area, such as business administration, mechanical work, or engineering. Only after some years of training and, ordinarily, tentative exploration of a field in two or three jobs do young people gradually sharpen their vocational interest. The trial work period ends for most men between ages thirty and thirty-five, and they enter a stable work career—say as a purchasing agent, a Diesel engine repair mechanic, or a ceramic engineer. Young entrants to the labor market have only a vague awareness of all the kinds of jobs open to them; thus, while they may move toward broad "job-families," they hedge their vocational bets by leaving open the possibilities for a considerable number of shifts and readjustments of vocational goals as they mature and gain in knowledge of the work world.

This situation is repeated even in the higher professions which require great investments of time, money, and emotions in years of advanced education. The varieties of jobs in business, finance, labor, and government that are open to candidates with legal training are so great that only about 50 per cent of men so trained ever practice law. Similarly, the young persons who early conceive a burning desire to become a physician actually find that the four years in medical school are heavily devoted to sensitizing them to what kind of specialized internship they will seek. Three-fourths of graduating medical students now move into some area of specialized practice.

From this perspective we can see at once that dentistry presents some sharp contrasts. Dentistry affords highly specific rather than diffuse vocational training. The opportunity to hedge one's vocational bet as he proceeds in professional school is narrow; that is, we may almost say, that dental training prepares a person only to be a dentist. Unlike medicine, law, engineering, or social work, only about 4 per cent of dentists enter distinct specialties. In spite of the anxieties expressed by students about completing their professional degree, medicine and dentistry are alike in that 95 per cent of entrants in both do complete. Expressed another way, once a person gains acceptance to a medical or dental school the risk that this voca-

tional choice will not pay off is extremely small compared with choices of the other possible professions.

Both medicine and dentistry explain their ability to graduate such a high per cent of entrants by pointing to the high standards for admission. These health service schools feel that this care in screening and selection assures them of student bodies in which virtually everyone is capable of becoming a physician or dentist. *Medicine and dentistry experience an applicant to entry ratio of about 2:1, less than law (3.2:1),* in which the freshman year drop out is 15 to 20 per cent! The argument for dentistry is weakened by our finding that nearly 39 per cent of those admitted to dental schools state they earlier preferred a career in medicine, and one out of every four has applied or attempted to apply to medical school and been rejected or dissuaded. The unavoidable inference is that dentistry recruits an insufficient number of high calibre applicants for the profession to be able simultaneously to maintain high standards and to grow.

With this preamble, we turn to some empirical findings on when students choose a dental career, and what outside influences helped stimulate this choice. Table 1 shows the frequencies of decision to enter dentistry for succeeding developmental periods. In spite of the occasional assertion that dentistry is a second or "last ditch" professional selection, we find that appreciably more decided on this vocation in high school, or earlier, than in college and after completing college. Recalling that most high school graduates have only

TABLE 1

PERIOD OF CHOICE TO ENTER DENTISTRY

Period	*N*	*Per Cent*	
Before 9th grade	361	10.1	
Early high school	553	15.5	46.2
Late high school	737	20.6	
College	954	26.6	
After college	193	5.4	42.8
In military	388	10.8	
Subtotal	3,186	89.0	
Left blank	392	11.0	
Total	3,578	100.0	

vague notions about job families they may wish to enter, this strength of early selection of a specific vocation is a striking finding. Seventy-four per cent of the class surveyed stated in answering another question that some dentist had given them counsel during high school, college, or while in military service to enter this field. Clearly, then, *one way to encourage more potentially qualified candidates will be to increase the breadth and intensity of personal contact by dentists with young people.* Aiding the dentist in this endeavor is the highly specific nature of the vocation as well as its many enticing features.

An apparently neglected area of recruitment is indicated in Table 2. Over twice as many dental students come from white collar homes

TABLE 2

FAMILY BACKGROUND

	White Collar		*Blue Collar*		*Total*	
	N	PER CENT	N	PER CENT	N	PER CENT
Early decision	1,178	37	473	15	1,651	52
Late decision	1,010	32	525	16	1,535	48
Total	2,188	69	998	31	3,186	100

as from blue collar homes. Even though the differences may seem slight in the table, statistical analysis indicates that significantly more of the white collar group tend to make an "early decision."

Most practicing dentists today come from white collar backgrounds; they communicate more easily with the young person from a similar home. Some men from blue collar families become superb mechanics, and this group contributes a heavy portion of persons to engineering. About half of our working population is in the blue collar group, and we must realize that the brains and abilities needed for dentistry are *not* distributed in our society according to fathers' shirt colors! To recruit young people from the blue collar homes, practicing dentists must make redoubled efforts to meet, talk with, and reach boys in this grouping.

Influence on Choice

We pass now to the question of who influenced the choice of a dental career. A number of checklists and open-ended questions in

the survey gave respondents an opportunity to mention some influence, other than personal motives, which stimulated choice of dentistry. Two checklists and four open-ended items contribute this kind of information. In the following it is important to realize that far more respondents are apt to check an item given for them than are apt to come up spontaneously with such a response on an open-ended item, which they must complete with a sentence or short essay. First we examine the checklists.

Item 46 in the questionnaire is: Factors influencing your selection of dentistry as a career: (Check as many as apply)

1. ——Discussions of dentistry at a career day at high school
2. ——Aptitude testing and counseling services of your predental college
3. ——The booklet, *Careers in Dentistry,* or similar publications
4. ——Desire to be my own boss
5. ——Interest in the content of the profession
6. ——Desire to work for and with people
7. ——Prestige of the profession
8. ——Monetary advantages of the profession
9. ——Desire to work with my hands
10. ——Better chance of getting into dental school than into school of my first choice
11. ——Because my own teeth are poor
12. ——Other (write in below)

The first three listings represent outside influences, and on the average only one person in five checked such an item (the combined total for 1, 2, and 3 reaches 61.3 per cent). On the other hand, 74 per cent checked listing 8 alone! Four out of five checked number 7, the motive of "Prestige of the profession," and even more checked number 6, "Desire to work for and with people." In brief, the influences of career days, testing and counseling, and literature about dentistry are seen as very weak influences by these students as compared with their own feelings and motives about the kind of vocation they desire.

The effect of personal influence on prospective candidates is seen further in this essay question: "I believe I was influenced in choosing dentistry as a profession. Please tell the story as to how you decided to come into dentistry, being specific as to events, causes, and people who had an effect on you." Ten lines were left open for a short essay response. In addition to mention of a variety of personal motives and experiences, the following people (or events) were mentioned by half of those answering as shown in Table 3. *Again the*

dentist is the outstanding individual who influences choice of a dental career. It is also of interest that 10.3 per cent mention the decisive nature of their experiences in military service. This closely parallels the 10.8 per cent who, on another item, said they made the decision to enter dentistry during the time they were in service.

TABLE 3

PEOPLE WHO INFLUENCED ENTRANT'S CHOICE OF DENTISTRY

	N	*Per Cent*
Dentists	815	45.5
Relatives[1]	490	27.3
Associates[2]	215	12.0
Military experiences	184	10.3
Instructors[3]	89	4.9
Total	1,793	100.0

[1] If parent or other relative is a dentist, he is recorded in the dentist category.
[2] Friends, acquaintances, and the like, especially those among dental students.
[3] Including high school and college counselors.

There are considerable variations among these responses from one region to another. Careful scrutiny of our data reveals, however, that these are not variations by geographical region, but are variations produced primarily by differences in philosophy and activity between individual schools. Only one general trend of a neglected resource, the use of the dental student body for vigorous recruiting, can be noted here for the following regions: North East, Middle East, South East, Central, and Far West. It is a definite possibility that more and better candidates could be obtained if student bodies in these regions exerted greater efforts to bring qualified friends and younger acquaintances into the profession.

Finally we turn to a lengthy checklist of factors which might have influenced choice of dental school. It read: Factors influencing your selection of the dental school which you wish to attend: (Check as many as apply)

1. ——I do not prefer any one school
2. ——My family dentist or another dentist whom I know
3. ——My father or another relative graduated from that school
4. ——The reputation of the university or college
5. ——It is near my home
6. ——It is in my state

7. ——It will cost me less
8. ——Because of my religion
9. ——My high school counselor
10. ——My college predental adviser
11. ——I selected it without much information
12. ——Contacts with dental students
13. ——Advice of parents
14. ——Study of school catalogues
15. ——I can get a job there
16. ——My wife can get a job there
17. ——My girl goes to school there

The percentages of responses to these items differed very considerably between United States, Canadian, and Puerto Rican schools, and on Item 8 between schools having religious or secular sponsorship. Table 4 exhibits these differences and indicates country totals and the grand total. Since the great bulk of all students (76 per cent) are in the United States' non-religious schools, they clearly dominate the over-all percentages in the grand total.

Although it deals with choice of dental *school,* Table 4 does permit us to see certain influences not elsewhere available. The highest mention is given, "The reputation of the university or college" (Item 4), a vague category conveying little definite meaning. Three items obtained more than 50 per cent responses: "5) It is near my home, 6) It is in my state, and 12) Contacts with dental students." Thus location and capacity to interact with students in a school are fairly powerful influences. *The influence of a dentist on choice of school is important* (but evidently much less so in Canada, and not at all in Puerto Rico). The cost of dental education is also important in the total; but, when religious preference is at issue, the relative importance of cost is diminished sharply.

That (3) father or another relative was an alumnus, and (13) advice of parents received some mention. But, these students felt that a comparative study of school catalogues was more often influential! Several other factors were mentioned less than one time in ten: Items 1, no preference; 11, selected with little information; and 15, 16, the possibility of work; or 17, a personal association.

It is evident that vocational counsel in high school (Item 9) is very unimportant. Once the actual choice of a dental career has been made, the influence of the college-level adviser on what school to attend increases rapidly (Item 10) over that of the high school-level counselor. We emphasize that this finding in no way indicates that

TABLE 4

CHECKLIST OF FACTORS INFLUENCING CHOICE OF DENTAL SCHOOL

Percentages within each column

Checklist Item	*United States*			*Canada*				
	NON-RELIGIOUS	RELIGIOUS	TOTAL	NON-RELIGIOUS	RELIGIOUS	TOTAL	PUERTO RICO	GRAND TOTAL
NUMBER OF CASES	2,716	604	3,320	176	51	227	31	35.78
1. No preference	8.2	9.6	8.4	23.9	11.8	21.1	12.9	9.3
2. A D.D.S. influenced	42.7	39.7	42.2	23.3	21.6	22.9	0.0	40.6
3. Father or relative a graduate	12.1	11,1	11.9	6.3	19.6	9.3	3.2	11.7
4. School's reputation	85.1	80.6	84.2	66.5	82.4	70.0	32.3	82.9
5. Near my home	53.9	41.4	51.7	64.8	41.2	59.5	80.6	52.4
6. It is in my state	55.8	32.3	51.8	23.3	31.4	25.1	71.0	50.3
7. It will cost me less	40.9	13.9	36.0	36.4	13.7	31.3	64.5	35.9
8. Because of my religion	1.4	43.9	9.1	0.6	37.3	8.8	0.0	9.0
9. My high school counselor	1.1	2.5	1.4	3.4	3.9	3.5	0.0	1.5
10. My college predental adviser	15.0	20.5	16.0	4.0	13.7	6.2	29.0	15.5
11. Selected with little information	3.6	5.3	3.9	5.7	5.9	5.7	9.7	4.1
12. Contacts with dental students	53.5	51.5	53.1	40.9	47.1	42.3	25.8	52.2
13. Advice of parents	22.2	24.2	22.6	21.0	19.6	20.7	29.0	22.5
14. Study of school catalogues	34.1	28.3	33.1	17.6	27.4	19.8	12.9	32.1
15. I can get a job there	3.9	4.1	3.9	5.7	2.0	4.8	0.0	3.9
16. My wife can get a job there	6.9	7.3	7.0	5.1	0.0	4.0	0.0	6.7
17. Girl friend goes there	1.1	0.7	1.0	1.1	0.0	0.9	0.0	1.0

the college adviser influences choice of a dental career—merely the school selected after one is enrolled in a predental curriculum.

In summary of Table 4, we are again struck that the most important points of contact with the perspective candidates are dentists and dental students. Clearly, also, greater efforts must be made to enlist constructive aid in recruitment from counselors and teachers at both high school and college levels.

Summary

This paper has discussed a variety of influences on young people which lead them to dentistry. Several avenues in which further efforts could result in an improved quantity and quality of applicants have been suggested. The role of the practicing dentist is a central and powerful one, but he must make far more effort to recruit talent from the blue collar family background.

Bringing the full story of dentistry and its opportunities to the person of high school years—and doing this on a person-to-person basis—will be increasingly important in future years, because of the intense competition all professions are entering to gain the best young people they can.

The specific nature of a dental vocation (as contrasted with the vague, general nature of most others) is a distinct advantage in presenting this story to young aspirants. Finally, every effort must be made to recruit systematically through the student bodies of the dental schools. These young men who have "made the choice" are probably the most effective, enthusiastic persuaders of succeeding classes.

Some Motives for Entering Dentistry[1]

ABSTRACT

The importance of five aspects of dentistry in motivating choice of career is assayed with data from 3,578 entering dental students. The relative attractions in dentistry, as compared with other professions, of prestige, money, service, autonomy, and the opportunity to use manual skills are considered. Interviews with a third of the polled group support the conclusions that a patterned balance of these motives, and probably of others not studied, is needed to produce optimum interest in dentistry as a career and that the need for autonomy is central.

The reasons for choosing a vocation probably are fairly complex. A thorough explanation would require an intensive analysis of each individual's life-history to find not only the positive forces behind his choices but also why each potential alternative was not selected. In our study of survey data from a large sample of entrants to a vocation such detailed analyses were not possible; necessarily, then, our findings are incomplete and not applicable to every case.

Our alternative approach was to outline some apparent features of the occupation and then ascertain to what degree they attract persons entering it. The data on these points were gathered in a lengthy questionnaire completed by over thirty-five hundred students entering dental training in the fall of 1958. On the basis of past dental-school experience, roughly 95 per cent of this group can be expected to complete training and enter dental practice in the next four or five years.

Dentistry as a profession has some general features which are important in answering the needs of young people attracted to it. There undoubtedly are other vital features, but we limit attention in this report to the following list:

1. *Prestige.* The occupation carries the title "Doctor," and in the community at large it has high status.[2]

2. *Financial earnings.* The dentist in private practice generally en-

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[1] Reprinted from *The American Journal of Sociology,* Vol. LXVI, No. 1, July 1960, pp. 48-53. By permission of The University of Chicago Press.

[2] Cf. C. C. North and P. K. Hatt, "Jobs and Occupations: A Popular Evaluation," *Opinion News,* September 1947, pp. 3-13.

joys a good income, well above average and only slightly less than that of the most highly rewarded professional man—the physician.[3]

3. *Human service.* Dentistry directs its efforts in large part to the relief of suffering and dysfunction.

4. *Autonomy.* As a profession, dentistry permits great independence to members in their own activities. As with most other professions, the dentist's conduct as such is, within the limits of legal licensing, subject only to the jurisdiction of his professional peers. To a very considerable extent, the dentist can establish his own fees and the hours and conditions of his work.

5. *Manual skill.* Dentistry, since it requires a high level of manual skill and dexterity, offers satisfaction to those who have such talents.

Together, these five features of dentistry provide an initial basis for analyzing some attitudes of entering dental students toward their chosen profession. Within this scheme we will also observe how they rank dentistry compared with some other professions.

In the questionnaire a checklist of eleven items (with a twelfth write-in space) inquired of respondents "factors influencing your selection of dentistry as a career (check as many as apply)" (Table 1). Five of the checklist items are relevant to our analysis, and the remaining items are grouped under "outside" and "internal" influences as footnoted. We need to take special note here of the phrasing of the first item in the table, because as it stands it does not necessarily imply "human service" and could as easily apply to sales, waiting on table, or any other work involving a great deal of interaction with people. Likewise we must recognize that the desire to be one's own boss is only one aspect of autonomy.[4]

In Table 2 are summarized responses to an open-ended question about what the students would stress in advising a younger person, the assumption being that the respondent actually is revealing his own motives. The idea of satisfying one's own desires is most often mentioned. To a certain extent this is related to being autonomous, a point specifically covered in the sixth category. It is notable, how-

[3] Median income for dentists seems to be in third rank behind physicians and lawyers (Bureau of the Census, *1950 United States Census of Population,* Bull. P-C1 [Washington, D. C.: Government Printing Office, 1953], Table 129, "Detailed Characteristics," pp. 1-279).

[4] For the definition of autonomy implicit in this study see R. F. Winch and D. M. More, "Does TAT Add Information to Interviews?" *Journal of Clinical Psychology,* XII, No. 4 (1956), 316-21.

TABLE 1

SOME FACTORS INFLUENCING CHOICE OF DENTISTRY AS A CAREER

Reason Indicated in Check List	*Checked*		*Not Checked*	
	N*	PER CENT	N*	PER CENT
Desire to work for and with people	3,201	89.5	377	10.5
Desire to be my own boss	2,998	83.8	580	16.2
Prestige of the profession	2,843	79.5	735	20.5
Desire to work with my hands	2,651	74.1	927	25.9
Monetary advantages of the profession	2,647	74.0	931	26.0
Other "outside" influences†	2,192	61.3	1,386	38.7
Other "internal" influences‡	3,146	87.9	432	12.1

* Total N = 3,578 in each row.

† Includes respondents to any of three items: (1) discussions of dentistry at a high-school career day; (2) aptitude testing and counseling in college; and (3) the booklet, *Careers in Dentistry,* or similar publications.

‡ Includes respondents to any of four items: (1) interest in content of the profession; (2) "because my own teeth were poor"; (3) "better chance of getting into dental school than into school of my first choice"; and (4) other (write in.)

ever, that the students seldom give first place to autonomy (2.45 per cent), prestige (2.23 per cent), money (1.89 per cent), or service (1.31 per cent). Having the necessary skills (which, in their thinking, may include manual skills) and possessing the necessary intelligence are both more often given first place.

The influence of prestige was checked as important in determining choice of the dental profession by nearly 80 per cent of our sample (Table 1). For the material reported in Table 3, respondents were asked to rank the six given professions as to "how you feel people in the community value [them]." The exact phrasing here is important because the underlying reasons why a student thinks of others as "valuing" a particular profession may or may not include the idea of the status or prestige of the occupation. He might see it as being "valued" because of the income it provides, its relative service to mankind, its power to control others, or a variety of other reasons. The assumption is, therefore, only partly justified that the relative rankings given in Table 3 are indicative of perceived relative occupational prestige. On this assumption we would say that the entering dental students see the dentist as having lower status than the physician and higher status than the lawyer. The prestige scores obtained

TABLE 2

RESPONSES TO ITEM ON COUNSELING*

Category of Response	*N*	*Per Cent*
Following one's personal interests, motives, likes, and desires	1,757	48.95
Aptitudes for the work; having the particular abilities it requires	395	11.01
The intelligence needed	321	8.94
Courses and grades needed	263	7.33
The need to begin early in life	127	3.54
Independence (autonomy) to do as one wishes in his work	88	2.45
Prestige; status the work confers on one	80	2.23
Financial rewards of the job	68	1.89
Serving others; wanting to work with people	47	1.31
Security (job tenure)	31	0.86
All other responses	269	7.49
Left blank	143	3.98
Total	3,589	99.98

* "If I were counseling a high-school senior about choosing the right vocation, I would stress these factors." Space for four comments was provided; only the first response is tabulated here.

by the National Opinion Research Center study by North and Hatt indicate much the same ordering, except that they found that dentistry and law were equal in prestige in the eyes of the general public.[5]

When the students were asked, "What other professions have you considered?" 38 per cent named medicine; 10 per cent, teaching; 9 per cent, engineering; 4 per cent, law; and less than 0.5 per cent, any field of social science. Similar results were obtained from the question, "If you could choose any career you wanted except dentistry, what would you choose?" Most often mentioned was medicine (39 per cent), second was teaching (7.5 per cent), and farther down the list were engineering (4.6 per cent) and the law (3.2 per cent), but social service was not mentioned. In effect, prestige is important, but the predominant choice is between medicine and dentistry. The other professions mentioned are seen as acceptable alternatives in such small percentages that they probably have not been accorded really serious consideration by the majority sampled.

[5] *Op. cit.*

TABLE 3

RANKING OF PROFESSIONS BY ENTERING DENTAL STUDENTS

Rank Assigned	*Physician* N	PER CENT*	*Dentist* N	PER CENT	*Lawyer* N	PER CENT	*Engineer* N	PER CENT	*Teacher* N	PER CENT	*Social Worker* N	PER CENT
1.	2,684	91.8	180	6.2	27	0.9	13	0.5	69	2.5	13	0.5
2.	193	6.6	2,079	71.2	437	15.2	99	3.5	121	4.3	19	0.7
3.	31	1.1	533	18.3	1,472	51.1	459	16.3	399	14.1	45	1.6
4.	4	0.1	107	3.7	549	19.1	1,361	48.5	604	21.4	178	6.4
5.	3	0.1	16	0.5	231	8.0	617	22.0	1,436	50.9	466	16.7
6.	9	0.3	5	0.1	163	5.7	259	9.2	193	6.8	2,072	74.2
Subtotal† ..	2,924	81.7	2,920	81.6	2,879	80.5	2,808	78.5	2,822	78.9	2,793	78.1
Missing†	654	18.3	658	18.4	699	19.5	770	21.5	756	21.1	785	21.9
Total	3,578	100.0	3,578	100.0	3,578	100.0	3,578	100.0	3,578	100.0	3,578	100.0
Mean rank ..	1.1		2.2		3.4		4.2		4.3		5.6	

* Percentages for ranks (1-6) are calculated from subtotals.

† Percentages for "Subtotal" and "Missing" are calculated from totals.

Table 4 reports on the students' conceptions of other goals. They were confronted with three statements:

1. "Dentistry provides opportunity for greater human service."
2. "Dentistry makes it possible to make money more easily."
3. "Dentistry as a profession offers the most independence."

Reading down appropriate columns in Table 4, it is clear that they regard the physician as contributing more and the lawyer and the

TABLE 4

ENTERING DENTAL STUDENTS' COMPARISON OF DENTISTRY WITH FIVE OTHER PROFESSIONS

Profession Compared	*Dentistry Provides:*	*Relative Opportunity for Human Service* N	PER CENT	*Making Money* N	PER CENT	*Autonomy* N	PER CENT
Law	More	2,468	71.9	1,086	31.0	1,986	58.1
	Less	310	9.0	1,861	53.0	658	19.2
	Same	657	19.1	563	16.0	777	22.7
	Subtotal.	3,435	100.0	3,510	100.0	3,421	100.0
Teaching ...	More	995	29.1	2,929	85.5	2,922	83.5
	Less	1,239	36.2	421	12.3	388	11.1
	Same	1,188	34.7	76	2.2	188	5.4
	Subtotal.	3,422	100.0	3,426	100.0	3,498	100.0
Social Work .	More	1,316	38.5	2,913	85.1	2,852	83.3
	Less	1,016	29.7	437	12.8	443	12.9
	Same	1,085	31.8	71	2.1	129	3.8
	Subtotal.	3,417	100.0	3,421	100.0	3,424	100.0
Engineering .	More	2,684	78.1	1,558	46.0	2,634	76.9
	Less	290	8.4	1,204	35.5	504	14.7
	Same	463	13.5	626	18.5	286	8.4
	Subtotal.	3,437	100.0	3,388	100.0	3,424	100.0
Medicine ...	More	141	4.1	426	12.5	1,689	49.4
	Less	1,507	43.9	2,011	59.0	549	16.1
	Same	1,783	52.0	970	28.5	1,178	34.5
	Subtotal.	3,431	100.0	3,407	100.0	3,416	100.0

engineer less to human service than their own profession. As to human service, opinion seems to be split uniformly when the students compare dentistry with teaching and social work. Strictly, they would see themselves in third place and behind teachers by a plurality among the six professions.

As to making money, the subjects clearly regard the physician and the lawyer as being ahead of them and the engineer, social worker, and teacher below them. The exact phrasing of our question leaves

some doubt here, for we did not ask about the relative *amount* of money earned but rather about the relative *ease* of making it. The allied questions of hours worked and effort expended per dollar of potential return may have influenced some respondents.

In relative opportunity to control one's own destiny in his career, the students definitely place dentistry first. Even the physician, who is seen as having higher prestige, making more money, and being of greater service to man, is regarded by nearly half the sample as having less personal autonomy than the dentist. In the interviews supplementing the questionnaire frequent mention was made of the physician's duty to make night calls, to serve in emergencies of all sorts, and to accept responsibilities not placed on the dentist. Many of those interviewed said that their final choice between medicine and dentistry was influenced by the desire to avoid such responsibility. Our data in the questionnaire do not permit us to distinguish the importance of autonomy as compared with avoidance of responsibility.

To the question, "Has previous success in using your hands in hobbies or mechanical work helped you to decide to apply for admission to dental school?" 63 per cent of the 3,459 who answered this item checked "Yes." To another item only 6 per cent indicate among their "fears about studying dentistry" that they really lack sufficient mechanical aptitude. Less than 3 per cent list a lack of the necessary manual skills as a reason why they think that people do not apply to enter dentistry.

The five motives here discussed clearly are not unique to dentistry; moreover, we have not delved into other, perhaps vitally important, aspects of the work. We have not, for example, looked here into compulsiveness—dentistry's demands for exactness in detail, care, orderliness, and cleanliness. Likewise, the intellectual demands in the study of dentistry surely may have attracted many students to it. If we were to parcel out the total "attraction" of dentistry among its many components, the five elements would in all likelihood account for an appreciable share, but there would remain without question a considerable "unexplained" variation.

It is something of a leap to assert that some overt feature of work motivates a person to choose a given occupation. This may not be the case for any individual in our study sample. A detailed study of the material summarized in Table 1 is being undertaken to determine what, if any, predominant patterns of features appear in the

items checked. These in turn are being checked against students' essays on reasons for entering dentistry. From the evidence reported here a predominating pattern can be deduced.

Although "desire to work for and with people" is a frequently selected item, its intensity as a possible desire for altruistic service is weakened by the extent to which conflicting motives are selected. However the apologists of business may argue, the motive of pure service is at least slightly incompatible with the acquisitive drive, with striving for prestige and status, and with insistence on being to a large extent independent of many of the usual constraints of occupations. To this degree, then, we may posit a built-in conflict among the patterned forces inherent in the requirements of the work. Part of training for dentistry is the student's resolution of such conflicts, at least partially. One common solution, though a debated one within the profession, has been to maintain a flexible fee-service system. For example, charging some patients modest to very high fees is justified, they believe, if the dentist gives time to low-cost clinics or accepts some partly charitable or "research" cases.

In Table 2 by far the largest group stressed "following one's own desires." This notion may include any of the other more sharply specified motives, but in a broad sense it implies a need to be autonomous and to become self-directing and self-gratifying in one's own actions.

The dental students' expressed unwillingness to follow directions imposed by authority figures, as would typically be required of company employees, may indicate some degree of inner-directedness. They do present some features in common with the small, independent entrepreneur. Mixed with this is a pronounced conformity in religion, politics, and memberships but some atypicality in marital pattern. Also the students and practicing dentists interviewed reveal a striking unwillingness to participate in aesthetic community activities or social betterment to the same extent as physicians and lawyers. As one respondent put it, "Sure, I want this status, but I'm not going to give up my free time to all these organizations that come around." They want to hunt, fish, and do workshop projects. In this sense they conform, but they do not conform to the role of public benefactor which is often ascribed to those enjoying the title "Doctor."

We can readily argue that prestige and financial independence are handmaidens to the more basic drive for autonomy: behavior alleged to satisfy one need may, in fact, be satisfying another. Ordi-

narily, the covert need will be less acceptable socially than the overt one masking it. In the present instance we see the service motive as the most obviously acceptable one for a person in a dedicated health profession. However, for the motives of status-striving, independence, and material acquisition, if kept within bounds, we also have strong positive sanctions: in our culture it is "right" to strive to get ahead,[6] to want material possessions,[7] and to seek maturity in outgrowing emotional dependence on others.

What draws the young man into dentistry must be seen as a complex pattern of motives, each of which may be related to a well-defined characteristic of the occupation. (We are not considering here some rather obvious influences, such as parental pressure or vocational counseling in high school and college.) Our main assertion is that, of the five motives considered here, the need for autonomy is the most decisive. None of the other four motives is unnecessary, but without autonomy they seem insufficient. Our interviews provided repeated evidence that entering dental students would accept a career with less prestige, less money, and less opportunity to serve than the physician's because dentistry would afford them greater independence.

Any campaign to enlist more applicants to dentistry could ill afford to ignore symbolic or even direct appeals to the possible candidates' desires for social status and occupational prestige, for financial return with concomitant material security, for the opportunity to give genuinely needed service to mankind, and for the chance to make creative use of manual talent. Above all, it seems necessary to point clearly to the potential of dentistry to provide practitioners with great independence in determining their own life-styles.

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[6] See, e.g., W. Lloyd Warner *et al., Democracy in Jonesville* (New York: Harper & Bros., 1949), esp. chaps. i and xvi.

[7] *Ibid.*, pp. 294-95.

A Qualitative Summary of Student Reasons to Enter Dentistry

The immediately previous section has reported on motives to enter dentistry as these were revealed on checklists. Such lists provide the student with "ready made" answers, but none of the items offered is necessarily in the exact words the student would have used. Nonetheless, the easy thing to do is to check one or more of the given answers which seem reasonably close to the students' own attitudes. Rarely did these subjects write in their own statements in the blank provided at the end of the checklist. This kind of information reveals validly the motives and attitudes of subjects only to the extent that the designer of the questionnaire has skillfully provided appropriate statements. Some doubt always remains of the accuracy of checklist information when we try to assay fundamental aspects of personality.

On the other hand, some of our questions were of an essay type. The student could feel free to phrase his answers to these in any way he pleased. Because of this open-endedness, we can expect these essays to exhibit considerable variability and individuality. It is possible to code essay materials into many of the same categories used for checklist data. This process involves judgment and frequent interpretation of meaning on the part of the coder. In borderline instances the decision to code a statement in one of two possible categories actually may err in recording the "real" intent of the student who wrote it.

With these cautionary statements in mind we turn to three essay questions:

A. "Dentistry attracts me as a profession because _____."

B. "I believe that I was influenced in choosing dentistry as a profession. Please tell the story as to how you decided to come into dentistry, being specific as to the events, causes, and people who had an effect on you." (Ten lines were left open for this answer. We have reported in the section on outside influences regarding people and events mentioned in these answers. In this section we will deal only with personal motives and interests.)

C. "The profession of dentistry represents for me a _____."

In tabulating responses to these we have been able to go beyond the limits set by checklists. For example, we were unable to distinguish in the checklist whether "Desire to work for and with

people" is selected because of its sociable implications or its indication of giving human service. In coding these free responses we have tried to distinguish these aims. Additionally, we have included tabulations of some motives not found elsewhere. These include such features as: creative (esthetic) interests involved in the cosmetic aspects of dentistry; desire for knowledge and understanding, the intellectual challenges of dental study; desire to limit one's hours of work; and personal dental problems.

Table 1 lists the percentages found in coding these essays for the categories of motives listed.

TABLE 1

MOTIVES TO ENTER DENTISTRY AS CODED FROM OPEN-ENDED ESSAYS

The Motive of:	*Percentage in Essay*[a] A	B	C
1. Service to people	31.9	5.6	33.1
2. Desire for money	32.1	4.4	29.5
3. Work with hands	19.3	11.0	3.1
4. Desire for prestige and status	26.1	3.4	18.1
5. Need for independence (autonomy)	14.1	5.0	8.2
6. Sociability	12.8	2.7	4.5
7. Knowledge and understanding	6.7	3.1	2.5
8. Limiting own hours	6.9	2.5	2.4
9. Creative—esthetic	3.6	—	1.7
10. Vague positive answers	25.6	—	35.6
11. Individualistic responses	9.0	9.1	—
12. Left blank	1.3	1.0	7.6

[a] Percentages do not total to 100 per cent because persons may have been coded in more than one category. In column "B" many responses not listed here are reported elsewhere.

The categories are listed here for the first 9 rows in order of total response to all three essay questions. It now becomes clear that the desire to help people is far more important in determining choice of dentistry than the social relationships involved in the work. Desires for money and working with one's hands here emerge as more potent than desires for antonomy or prestige, reversing the effect found on the checklist. Our main purpose, however, in this section is to bring the reader a sampling of the actual statements of the students. These we feel give life and meaning to the statistical summaries which numbers cannot convey.

In the following quotations, we will follow the order given in the table.

Service to others, nurturance:

"I chose dentistry because of the desire to help and serve people and my community."

"I decided to enter Dentistry because it is one of the healing arts and a public health program which can greatly aid society in keeping healthy and physically well off. If one has pain and can put his confidence in you to allow you to relieve that pain and you do it I think this is a great feeling of service and accomplishment."

"When we were children we had no dental care. This stressed upon me early in life the need for dentists. . . . A desire to aid people in a medical capacity."

"Because of the richness of a truly great service to humanity."

"Because of an opportunity to enter the battle against poor oral conditions among a large number of people."

"It offers an opportunity to be of help to people directly."

"I had poor teeth as a child and teenager and this is a chance to help others in the same situation."

"Because of the idea that I would be aiding and giving service to people. This idea is very gratifying."

Acquisition, desire for money:

"My father suggested it as a good profession because dentists make lots of money."

". . . practice with average or above average income."

"I talked with my dentist and got the financial view and opportunities and decided Dentistry was for me."

"It affords one a sound financial income."

"Provide a good income for my family in the years to come."

"MONEY."

"Means of provision for me and my future family."

"Good money."

Manual skills, desire to work with one's hands:

"My mechanical ability is encouraging."

"I like to work with my hands."

"Manual work is a necessary complement to a balanced life."

"My hands can be utilized and this is what I enjoy."

"It involves a specialized type of mechanics."

"I always liked to work with my hands, making things or fixing things."

"My hands were the biggest factor."

"I have a good sense of manual dexterity."

"I also enjoy very much working with my hands, whether it be work on my car, radio building, photography, or doing lab work in my father's office."

Desire for status and prestige:

"Because it affords an acceptable place in society."

"I just became sincerely interested in Dentistry through visits with the family Dentist. He is well respected in the community."

"I felt it was one of the professions where I could hold such a high place in the community."

"Most dentists are highly respected members of their community."

"It is a profession which is respected as the members are known to render a great service to society."

"It (dentistry) yields considerable prestige."

"Being looked up to by laymen as a *professional man* because of the ability to help others."

We need to note that some of these statements mention respect and prestige as a goal, but they also imply this must be earned through genuine service.

Desire for independence, autonomy:

"I wanted an independent way of life, probably as a result of my life on the farm, but I knew I would not make a successful farmer."

"Since my father is not his own boss, I see the difficulty of working for someone."

"I was influenced in choosing dentistry because of watching persons who worked for others. I saw the limitations of their life and the opportunities presented to them."

"I like the profession because you are your own boss and do not have to depend on other people to do your work for you."

"I will work for myself and also have much personal freedom."

"It lets a man practice without an overseer."

"It offers an independence from bosses."

"I will be my own boss with no overseer."

"You are your own boss and can work at your own discretion."

Sociability, work that involves interaction with people, need for affiliation:

"I like to be with and work with people."

"I was also very interested in a profession which would allow me to work with and help people."

"The idea of meeting new people, children and adults, and being able to service their needs by doing constructive work thoroughly convinced me."

"I enjoy the different people I can meet."

"It gives opportunity to meet many different kinds of people."

"Because of its contact with people and I like working with people very much."

"There is opportunity of meeting people every day."

"Mainly the chance to work with people of the same interest."

(Note that some of these also involve the idea of helping others.)

Desire for knowledge and understanding, intellectual challenges, cognizance:

"I have always had an interest in science courses in school. So I decided on a career in the field of science which happened to be medicine."

"I have always been interested in a profession which offers opportunity to pass useful knowledge to the public."

"The main reason is the fact that I have always been interested in the physical aspects of the human being. Dentistry gave me a chance to learn about the body and to also learn a profession."

"My concern with the problems of a chemical and biological nature attracted me to the healing arts."

"It is a favorable challenge to my mind."

"It offers the opportunity to a person to become a greater thinker."

"Because of its scientific alliance."

"Because of the need for research within the field."

"I have a great love for science."

Capacity to limit one's hours of work (This is actually a special aspect of being independent, and autonomous):

"Both parents teach school. Frequently I arrived home before they did and waited for them. This occurred in 7th and 8th grade. It struck me how nice it would be if my Father was a dentist. His hours would have been shorter."

". . . and set my own hours. I wanted to be free for other activities such as church and community affairs."

". . . good life he leads (dentist)—easy hours, sufficient time for recreation and pleasure."

". . . go into Dental School to lead a better life and not kill myself."

"Because of regular hours—no night calls."

"It has the advantage of being able to set own working hours."

"Because of more time to spend with family."

Creative and esthetic desires:

"It gives the opportunity to improve an individual's esthetics as well as his general health."

"Artful work."

"I like working and creating useful things."

"I feel that I will enjoy doing creative work and seeing what I have accomplished."

It is our feeling that even the small sampling of statements we are able to give here presents the basic reasons why students select dentistry in far greater force than our statistical summaries. These comments were extracted during the coding simply as representative of the given categories.

In addition to the above material, on essay B alone we found 8.8 per cent mention that dentistry was a second choice. Samples of these kinds of statements are:

"I was becoming dissatisfied with the caliber of people being turned out as teachers. I felt I did not want to be a part of a profession that required so little. Several of my close friends were Dental Students and their enthusiasm convinced me to become a Dentist."

"It was a second choice the first being Medicine. Since I became ill in the School of Medicine I dropped out."

"I was not accepted to a medical school; so the closest thing to the field of my choice was dentistry."

". . . perhaps I should enter a course which had an easier life than medicine. Despite warnings by my Dentist that I would find the work boring and that I would be better off in Medicine I applied."

"After the first two years of College, my interest in medicine with all its gory scenes and hospital odors was on the decline. I considered teaching English, but this held no great appeal, and I still felt that I wanted to work with my hands. Dentistry seemed an ideal compromise for a "sometimes scientist" who liked manual labor and still wanted time to read his books."

Finally, again on essay B alone, we found 5.2 per cent mention of personal dental problems.

Summary

The strongest motive these students state to enter dentistry is a general desire to be of service to one's fellow man in the field of health. In addition to this motive we find a complex array of other desires—for money, for status and prestige, to express one's manual skills, and to be independent of outside forces in determining one's hours and conditions of work. Of lesser importance, but still worthy of note, are interests in the social interactive nature of dental practice, the intellectual challenge of the profession, and opportunity for creative expression. Not one of these motives is in any sense basically undesirable; any one of them if emphasized to an extreme can lead us to misjudge the nature of forces operating to bring young people into this field. It is the particular pattern and balance of this total complex of personal drives that distinguishes those who enter dentistry, and they in turn especially suit him to this vocation.

Personality Patterns of Entering Dental Students

In the following we will describe some common personality features of entering dental students. We exercise caution in generalizing from such a composite portrait of students to the practicing dentist; significant changes in this picture could easily take place as a result of experiences in professional school, and, later, from facing the realities of practice. Each mature dentist reading this is apt to find some statement about which he can say, "But, I'm not like that, and I don't know any dentists who are!" This is likely to be entirely true, but we hope the reader now warned will not judge the validity of our portrait against himself and his personal acquaintances. A composite drawn from statistical summaries does not represent any one actual person, and, because of certain hazards in using numbers in this way, the portrait may contain some internally contradictory statements.

This paper is divided into four sections. The first deals with the student's identification figure, the person (or quality) he states as his model in life, and the kind of person he regards as most successful. The second section treats the student's concept of himself, both as he sees his positive qualities and his faults. The third and fourth parts deal with goals, aspirations, and desires, and with fears and anxieties.

Identification Figure

One of the most powerful influences shaping a person's life is that internalized ideal figure he carries in his own mind. This mental figure embodies his concept of the person he wants to be like, it acts as his self critic when he fails to meet its implied standards, and it defines for him the general action roles and emotional characteristics with which he wants to meet life, particularly in his interaction with others. By striving to act as this ideal image implies, he feels he can obtain from life those gratifications he desires—e.g., satisfactions of his motives, recognition from peers or society, and rewards and privileges attendant to successful performance.

We can easily trace the development of an ideal self as people mature. The person the small boy would like to be like is most often his father, or some glamorous, visible figure such as the policeman, fireman, or "cowboy." As young people pass through adolescence to young adulthood, the successful father continues to be a frequent identification figure, but also we find the addition of a wider range of occupational roles and increased subtlety of qualities attributed. Table 1 summarizes responses to two questions designed to obtain this kind of information from our dental students.

TABLE 1

A. "THE PERSON I CONSIDER MOST SUCCESSFUL IS ———."
B. "THE PERSON I WOULD MOST LIKE TO MOLD MYSELF AFTER IS ———."

Category of Reference	*A* N	*A* PER CENT	*B* N	*B* PER CENT
1. Dentist (named)	129	3.6	408	11.4
2. Physician (named)	61	1.7	105	2.9
3. An intelligent, well-educated person	77	2.1	31	0.9
4. Father	358	10.0	971	27.0
5. Other family member	97	2.7	233	6.5
6. Self-reference	14	0.4	71	2.0
7. "Well-adjusted, happy people"	1,271	35.4	113	3.1
8. Famous and leader types	144	4.0	132	3.7
9. Great religious figures, and person of high moral quality	308	8.6	249	6.9
10. People who strive, achieve success	645	18.0	71	2.0
11. "No one," "don't know," left blank, miscellaneous others named	474	13.2	1,194	33.3
Totals	3,578	100.0	3,578	100.0

Table 1 is arrayed in three groups of categories, representing named persons in the first 6 items, qualities or traits in numbers 7 through 9, and idiosyncratic or avoidant answers in items 10 and 11. Question B is far more closely related to the concept of ideal model than is question A. These students frequently named some quality in responding to the stimulus "most successful," but rarely named a quality in response to question B. It is of considerable interest that the notion of success is far more frequently associated with "happiness" than with hard work and achievement.

As is characteristic of most studies of identifications (for men), the father emerges as the most important named figure. That a particular, named dentist is second in this group again emphasizes our frequent conclusion regarding his focal position in recruiting. The young man's personal contact with and admiration for a particular dentist may be seen as a central influence on choice of career in dentistry.

The flavor of responses to these items can best be illustrated by some direct quotations from the categories on great religious figures, famous leaders, and the three qualities of happiness, achievement, and intelligence. The remaining categories are self-evident or trivial.

On religious figures: frequent references are made to "Jesus Christ," "Schweitzer," " my bishop (priest, minister, pastor)."

On famous leaders: a wide variety of persons are named, especially "Eisenhower," "Salk," "Ralph Bunch," "Robert E. Lee," "Leonardo da Vinci," "Abe Lincoln," "Lord Beaverbrook," and "Castro" (we must remember here that the questionnaire dates from 1958).

On happiness and adjustment: "One who is happy and has lots of friends," "One who has sufficient and is happy with it," "A man who is happy in life," "The well-adjusted one," "A hard working, happy person," "One who is at peace with others and himself."

In addition, a variety of responses placed in this category contained some reference to achievement, but we felt the emphasis was on happiness. For example: "The happy professional man," "A man who accomplishes his goal and is happy," "One who is happy in his work and has reached the top in his field." These responses are by no means as sharply focused on goal attainment as those we coded under achievement.

On achievement, striving for and attaining success: "A person who got what he went after," "He who achieves what he sets out to do," "A man who starts from the bottom and makes his way to the top through hard work," "The one who rises to the top in his profession," "One who knows what he wants and strives to get it, hurting as few people as he can getting it." There were also frequent references to, "The successful dentist (in the community)."

On intelligence and education: "An educated person," "Einstein," "Aristotle," "The intellectual," "One who has learned a great deal

about something and has used it to advantage for himself and others."

Our over-all impression of the self identity expressed by these young men entering dentistry is one of normality and sound acceptance of the core values of our society. There is, commonly, a sense of identity with the father, and substitute "father-leader figures." Similarly, there is a strong current of acceptance for basic moral values, and for such societal values as happiness, good personal adjustment, occupational achievement, and occupational role identification. In view of the requirements of dental education, perhaps we may discern less emphasis on intellectual attainment than might be desirable for the total development of the profession.

The Dental Student's Self-Concept

In this section we report the trends found in 5 open-ended items related to positive and negative aspects of self-evaluations. It must be remembered that close analysis of an individual record would reveal a far more sensitive personality picture. Here we can treat only gross findings from the total group. The most striking result is the commonness, or stereotypy of responses. In each of these tables it may be noted that the 11 punch positions available on an IBM card easily encompass more than 90 per cent of all answers given. Or, to reverse this point, the extent of genuine individuality expressed is rare. One implication of this is that these students are predominantly conforming and conventional in their attitudes. They will tend to accept the status quo, will prefer safe, established methods, and will avoid questioning the validity of authority. We cannot expect much interest in research and innovation from this type of a student population. This point is specifically covered in two later items in the questionnaire. To "My feeling concerning people who do research as a profession is one of. . . ," the characteristic response is "respect." But, to "My own feeling about doing research is. . . ," they tend to answer "It's not for me," "I don't have that kind of brains," and "It doesn't pay enough!"

Tables 2 and 3 represent aspects of the individual and his accomplishments that are seen in a positive light. In Table 2 it is readily seen that the outstanding theme is sociability in interpersonal relations. In fact, categories 1 and 3 through 8 essentially represent variations on this theme, the major ways a person secures

TABLE 2

"PEOPLE LIKE ME BECAUSE I AM ——"

Category of Response	*N*	*Per Cent*
1. Congenial, friendly, get along well	1,504	42.0
2. Honest, fair, sincere, reliable	419	11.7
3. Considerate, helpful, listen to them	349	9.8
4. Happy, cheerful, pleasant, easy-going	265	7.4
5. Tactful, tolerant, accepting of them	221	6.2
6. Good, nice, a "regular guy"	141	3.9
7. Have a good sense of humor	127	3.5
8. Amusing, entertaining	88	2.5
9. Ambitious, hard-working	36	1.0
10. All other responses	254	7.1
11. Left blank	174	4.9
Total	3,578	100.0

social acceptance in our society. Most of these categories refer to specific techniques with which the person can relate himself positively with others. There is a striking lack of emphasis on the underlying values of enterprise (only in 2 and 9 is there some such reference). This is not surprising, for it is consonant with observations from many sources on the changing attitudes of young people today away from entrepreneurial values to those of emotional security in groups, integration through cooperativeness rather than competition. The picture presented in Table 2 is of a young man who thinks of himself as (and who probably is) a mild, pleasant, likeable individual.

Table 3 refers to those incidents in these students' lives from which they take pride, which contribute to their self-esteem. The emphasis shifts strongly to features of their occupational orientation. Gaining entry to dentistry, a good scholastic record, and preparation for a career, together account for almost 43 per cent of the answers. The competitive element receives some emphasis in these responses; items 4, 9, 10, and 11 account for 18.5 per cent of responses. The second item, on gaining scholastic honors and making good grades, probably also contains some underlying pride in winning, or excelling, in a competitive system. Category 9 responses, for example, include winning speech, debate, and music contests, and essay and poster work.

TABLE 3

"I AM PROUD OF THE TIME I ——"

Category of Response	*N*	*Per Cent*
1. Got into dentistry	630	17.6
2. Graduated, made good grades, or honors	547	15.3
3. "Did well" and similar vague responses	539	15.1
4. Achieved success in sports (any)	411	11.5
5. Spend preparing for a career	354	9.9
6. Gave service (church), or helped someone	344	9.6
7. Accomplished (something) in military service	186	5.2
8. Got married, first child born, and similar references to family of procreation	126	3.5
9. Competitive successes other than sports	119	3.3
10. Asserted self (against authority or odds)	79	2.2
11. Attained a social success	52	1.5
12. Left blank	191	5.3
Total	3,578	100.0

Table 4 indicates some of those factors that these students see in themselves as potential areas in which they need support, or are sources of support to them in their endeavors. Of particular importance is an undertone of self-confidence and independence that we see rarely in other questionnaire materials. These students tend,

TABLE 4

"I DEPEND A LOT ON ——"

Category of Response	*N*	*Per Cent*
1. Myself (and self qualities), no one	1,012	28.3
2. Friends, my group, other people	652	18.2
3. Wife (or girl friend)	504	14.1
4. Parents, family (including in-laws)	421	11.7
5. Memory, experience, intuition	182	5.1
6. Money, my car	117	3.3
7. Work, being busy, hard study	101	2.8
8. Father (and grandfather)	51	1.4
9. Mother (and grandmother)	31	0.9
10. Food, drink, smoking	16	0.5
11. Other responses (including God, luck)	325	9.1
12. Left blank	166	4.6
Total	3,578	100.0

in very considerable proportion, to regard themselves as a source of their success. In this category we would include those responses under items 1, 5, and 7; all of these are particular qualities that the individual brings to his work or his career studies, and on which he sees his future success as being dependent. For example in category 1 we frequently got responses, "I depend a lot on, 'My ability to stick to a problem or a project until it is done,' " and similarly. Likewise, in categories 5 and 7, they refer to their personal qualities of work, hard study, keeping busy, experiences they have had in the past, ability to remember things, or to understand things as being fundamental properties that will aid them in the future. There is a category, second in frequency, which illustrates again the strong trend toward getting along well with others around them. Being sociable and congenial are factors noted previously in Table 2. This table also shows the need to depend upon the immediate kin group, as seen in categories 3, 4, 8, and 9. These four categories added together account for 28 per cent of the total number of responses tabulated here. Among the responses categorized in item 11, there is no single response that totaled more than 1 per cent, and none of these was sufficiently clear to make it into a separate category such as those referring to the oral needs of eating, drinking, and smoking. We separated item 10, particularly, because it referred to oral activities and we wondered to what extent this might appear in a person who would make the mouth the subject of his life's work. It is quite interesting that there was only a very low response in this particular area.

In Tables 5 and 6 we deal with two open-ended sentences in which the individual might easily have made some kind of negative evaluation of himself. In Table 5 there was a good opportunity to avoid making a negative evaluation of one's own person by the kinds of responses to category 1, specifically, those things that other people do that the individual did not do himself and for which objectively he could not be blamed. This particular way of avoiding negative evaluation of one's self is selected by a very considerable plurality of all our respondents. There is, however, another group of people who avoid blame in almost all kinds of ways, by pushing it off of themselves, even when objectively they have been at fault or in error. Note in this instance category 2, "One's own faults, his errors, his failures in some performance or another to come up to

TABLE 5

"I DON'T THINK I SHOULD BE BLAMED FOR ——"

Category of Response	*N*	*Per Cent*
1. What others do (what I did not do)	1,313	36.7
2. My faults, errors, or failures	358	10.0
3. The kind of person I am (my mind, body, appearance, attitudes)	340	9.5
4. "Everything," "anything," and similarly	332	9.3
5. What I do (how I perform, my grades, etc.)	291	8.1
6. Things beyond my control (e.g., "the world situation," "national politics")	223	6.2
7. All other responses[a]	234	6.6
8. Left blank	487	13.6
Total	3,578	100.0

[a] Including such responses as laziness, loafing, not trying, being slow, being harsh or blunt, uncommunicative, and other idiosyncratic comments.

some requirement or expectation," and in category 5, "What I do, in particular how I perform, my grades in school, etc." Over 18 per cent of the respondents fall into these two categories. Category 3, "The kind of a person I see myself as being," and the rather vague, inclusive comments in category 4 also are avoidant of a specific self-blame. Category 6, similarly, might be considered as placing the blame on things outside the person, in either very large, generalized, or abstract ways, as contrasted with the specific ways in which other people performed improperly and the person was unjustly blamed, as indicated in category 1. The widely scattered responses in category 7 were, in many cases, of a rather amusing nature. One for example was—I don't think I should be blamed for, "Burning the beans," another indicated, "The Chicago fire."

It is when we turn to Table 6 that these individuals found it rather difficult to avoid picking out some specific thing about themselves to mention as a fault or difficulty. In view of the high pressures on these students to achieve in a professional career through higher education we immediately see that a great deal of their self-concern and self-criticism is directed toward this area. Categories 1 and 2 refer, in many of the specific responses, to studies that these men are undertaking in dentistry itself. These two categories account for nearly 43 per cent of all responses to this category,

TABLE 6

"MY WORST FAULT IS ——"

Category of Response	*N*	*Per Cent*
1. Being forgetful, slow to learn, stupidity	877	24.5
2. Laziness, procrastinating, wasting time	659	18.4
3. Lacking self-confidence, being shy	357	10.0
4. Joking, swearing, other verbal inappropriateness	345	9.6
5. Being depressed, worried, withdrawn, feeling inferior, anxious (including drinking)	275	7.7
6. Expressing impatience and temper	260	7.3
7. Being selfish, stubborn, inconsiderate, undependable	205	5.7
8. Being dominative, conceited, demanding recognition	150	4.2
9. Being sarcastic, critical, hostile	141	3.9
10. Being untidy, sloppy, lacking order	118	3.3
11. "None," "have none," "don't know," and left blank	191	5.4
Total	3,578	100.0

and it is obvious that they do refer to the underlying career aspirations involved. Of the remaining categories in this table we can see two general trends. Categories 3, 5, and 10 tend to refer to qualities that the person sees in himself internally. It is probable that these types of responses—lack of self-confidence, shyness, being untidy and disorderly, being depressed, worried and withdrawn, feelings of anxiety—refer to the individual's self-evaluation against his own established standards, values, and ideals. These internally directed responses account for 21 per cent of the responses here. The remaining categories, 4, 6, 7, 8, and 9, refer to modes of action the person has toward people around him; they refer to factors in social and interpersonal interactions. In one way or another each of these categories implies some kind of an expression of outer hostility toward other people or the placing of unreasonable demands on others. This seems related to the underlying concern of these students about their impact on others in a social sense.

In this second section in surveying some of the personality patterns of those students entering dentistry we have concerned ourselves with the students' self-concept; both in a positive and negative sense. We have an over-all impression of a fairly normal individual, one who is concerned to get along well with people around him, who is congenial and pleasant; but who, at the same time, has

some inner core of self-confidence, a feeling of independence that he wants to express through his career. This is a person who has accepted the fundamental values of our society in desiring to achieve an honorable career through his work. He is not without some concern about potential areas of inadequacy within himself, and his concern in this regard is directed most strongly toward qualities that would be detrimental to his aspiration for a career in dentistry.

Wishes and Desires

Table 7, 8, 9, and 10 were open-ended questions in which the individual expressed one or another of his dreams or wishful thoughts, or something of that nature. The kinds of things that we were asking for here were what the person enjoys doing that will give him pleasure, both thinking about and contemplating, planning for, and actually carrying out. In the final table we invited them to express their attitudes about what they would like to do if they had an absolutely open chance to carry out anything they wished.

Tables 7, 8, and 9 represent situations in which we require a respondent to express some of his wishes, desires, interests, beyond the immediate present. In particular, these three tables indicate areas in which we might expect some expression of plans for long-range development of one kind or another. There are some general

TABLE 7

"I ENJOY THINKING ABOUT ——"

Category of Response	*N*	*Per Cent*
1. The "future," and similar vague responses	1,091	30.5
2. Sex, dates, marriage	661	18.5
3. Work (especially dentistry, studies, career)	423	11.8
4. Sports (all kinds)	303	8.5
5. Pleasant special events	258	7.2
6. Philosophy, religion, "ideas"	228	6.4
7. Home, house, family (present or to come)	172	4.8
8. Travel, vacations	143	4.0
9. People and motives (vague generalities)	123	3.4
10. Challenging projects, goals, aims	59	1.6
11. Driving, flying, cars, mechanical gadgets	45	1.3
12. Left blank	72	2.0
Total	3,578	100.0

TABLE 8

"I ENJOY PLANNING FOR ——"

Category of Response	*N*	*Per Cent*
1. The "future," and similar vague responses	1,371	38.3
2. Travel, vacations	581	16.2
3. Parties, picnics, social events	419	11.7
4. Dentistry ("my practice," etc.)	380	10.6
5. A home or house, building a family	263	7.4
6. Sports, games, recreation	168	4.7
7. Heterosexual activities (marriage, dates, etc.)	157	4.4
8. "Weekends"	95	2.7
9. Goals, aims, challenging projects	47	1.3
10. All other responses	37	1.0
11. Left blank	60	1.7
Total	3,578	100.0

TABLE 9

"I ENJOY CARRYING OUT ——"

Category of Response	*N*	*Per Cent*
1. Plans, wishes and similar vague responses	1,371	38.3
2. Assignments, duties, responsibilities	602	16.8
3. Orders, directions, instructions	374	10.5
4. Challenging or difficult projects	270	7.5
5. Tasks, chores (e.g., "carrying out trash")	220	6.2
6. Ideas, goals, objectives	199	5.6
7. Services to others	96	2.7
8. Social plans	61	1.7
9. All other responses	202	5.6
10. Left blank	183	5.1
Total	3,578	100.0

trends in these three tables that we can remark on at once. The greatest bulk of our respondents tended to indicate a lack of specific planning, of programming, thinking, and carrying out by the frequency with which they resorted to such responses as just, "For the future," and similar vague responses. In each of these tables this particular type of response is the one of greatest frequency by a considerable margin. The second trend is those responses relating to relationships with members of the opposite sex.

This is in second frequency of things they enjoyed thinking about; seventh in frequency in making plans, but did not occur in Table 9. We need to caution that when we refer to "sex" and "heterosexual activities" we in no way wish to imply that these were crude responses at all. We use this category simply to refer to interest in establishing and maintaining positive relationships with members of the opposite sex in whatever way this might have been mentioned by the respondents. A third trend in this table refers to the work area, especially dentistry, the studies and activities surrounding one's career. This was in third place of importance in Table 7, in fourth place in Table 8, but when we come to Table 9 references to dentistry were scattered in several of the categories. Table 9 in category 2 provided many references to dentistry as regards assignments, duties, and responsibilities in the work; category 4, "Challenging or difficult projects," included projects in their educational work; and, category 6, "Goals and objective," frequently included completing their career studies and programs. Several of the categories in Tables 7 and 8 referred to pleasant, sociable activities and recreations—parties, picnics, sports, special events, travel, vacations, etc. These particular types of recreational and social responses rarely occurred in answering the question tabulated in Table 9. The only kind of response of gratification about social activities was in eighth place in Table 9, accounting for less than 2 per cent of the responses. There is clearly a difference in their thinking and responding to the idea of enjoying carrying out something, as opposed to "Planning for" and "Thinking about." In carrying out something, virtually all responses that could be seriously categorized refer to some kind of challenge or barrier, set assignment, something to be accomplished in the sense of work or working hard at it. With the exception of references to dentistry these kinds of expressions occurred very rarely in Tables 7 and 8—category 9 in Table 8 and category 10 in Table 7 accounting for less than 2 per cent of the total responses. Consequently, in spite of the fact that many of the responses in Tables 7 and 8 can be thought of as serious minded responses, there is, all in all, in these two tables far more of a trend of general pleasure and interest than we find in Table 9. Table 9 refers to a kind of an attitude in which they are definitely focusing on achievement of one variety or another. We need to caution in looking at these three tables that interpreta-

tions about their general meaning are watered down considerably in view of the large proportions of the respondents who use a vague or indifferent response to each one of these three.

Passing to Table 10, "If I could spend my time anyway I desire I would like to. . . ," we find a somewhat different approach. There

TABLE 10

"IF I COULD SPEND MY TIME ANY WAY I DESIRE, I WOULD LIKE TO ——"

Category of Response	*N*	*Per Cent*
1. Travel	803	22.4
2. Sports, active recreation	788	22.0
3. Work, study (especially dentistry)	576	16.1
4. Sedentary recreation (including "sleep" and "loaf")	513	14.3
5. Not change anything	270	7.6
6. Any creative response, e.g., paint (art), write, play music	133	3.7
7. Marriage and family	93	2.6
8. Socialize (including "picnic")	71	2.0
9. Any sexual response	57	1.6
10. Do research	39	1.1
11. Be autonomous, e.g., "be my own boss"	14	0.4
12. Blank, "don't know"	221	6.2
Total	3,578	100.0

is wide scattering of responses here, but the great American sport of traveling, in the sense of travel, vacation, and seeing various parts of the country or the world, is the most frequent response, followed closely by a category involving all kinds of active sports and recreations.

In third place is an interest in their studies and work, surrounding the field of dentistry and their career activities. There were many categories virtually self-explanatory. We found it particularly interesting that a small group, in sixth place, did refer to an interest in creativity of one kind or another. Although this represents only a small percentage of total respondents, it occurs in answer to this particular question and we feel it is worth emphasizing that it does occur here. Perhaps we might regret that we do not find a higher percentage of people who express creative interest of one kind or another. We might also regret that the response about research,

category 10, is similarly so very small. In this table we were able to separate those responses concerning marriage and family, wife and children, etc., from those that referred to heterosexual interaction of a more direct and immediate kind. We found some responses of the nature categorized in 11, "The desire to be autonomous, or to be one's own boss." This is a very small frequency, but we have pulled it out separately because, in tabulating our checklists and the types of essay responses in other papers, this desire to be autonomous has been frequently stressed.

In summarizing our over-all impression of the goals, wishes, desires, and interests seen in these four tables, again we have the feeling of a generally bland, pleasant personality. The average young man entering dentistry is by no means an unusual, strange, or eccentric person. In the main his response in this general area of life is positive, sociable, work oriented, directed toward various pleasures and gratifications, and constructive activities of one kind or another.

Fears and Anxieties

On three of these incomplete sentences we have assembled some evidence regarding those aspects of life that our entering students see with fear or anxiety one way or another. The first of these, Table 11, specifically centers the question on what fears they might

TABLE 11

"IN STUDYING DENTISTRY, I FEAR ——"

Category of Response	*N*	*Per Cent*
1. Lack of mental ability (often to pass specific difficult courses)	612	17.1
2. Nothing, "had none"	542	15.2
3. Failure, "flunking out"	300	8.4
4. Lack of self-confidence	290	8.1
5. Statements indicating vague, generalized anxiety	218	6.1
6. Lack of mechanical aptitude	208	5.8
7. Financial problems	118	3.3
8. Lack of time to study	36	1.0
9. Learning one really dislikes the work	33	0.9
10. All other responses	225	6.3
11. Left blank	996	27.8
Total	3,578	100.0

have regarding dentistry itself. The greatest proportion of these responses which indicate fears directed toward their studies center in a potential lack of mental ability, failure of specific courses, flunking out, etc. We might add to these, category 8, "The lack of time to study," indicating that studies are seen as requiring definite allocation of time. Lack of mechanical aptitude is feared by only about 6 per cent of this group. In view of the fact that they have had to pass rather stiff examinations in mechanical aptitude in order to be admitted to dentistry, it seems reasonable that this very small percentage is remaining. It is not at all implausible, and it might be of interest in the future to learn whether this particular 6 per cent are, in fact, some of those who had their lowest scores on the mechanical section of the aptitude tests for entry. It is well worth noting that in the second category, 15 per cent of our respondents indicated that they had no particular fears. The possibility that particular temperament traits, personal feelings of anxiety, and lack of self-confidence might be the greatest detriment to them in studying dentistry is expressed by about 14 per cent of these respondents. Financial problems are mentioned by only slightly more than 3 per cent. We have entered here category 9, "Learning that one really dislikes the work," because this came out rather clearly as a response to a different category reported elsewhere, concerning the important reasons why more people do not apply for dentistry, in which over 5 per cent indicated they felt that people did not enter dentistry because they had a basic distaste for the work. By comparison very few of these students feel that this is a potentiality in their own case.

Table 12, "The reason most people don't get ahead is. . . ," is included here as reflecting the dental students' concerns, because it is our experience, psychologically, that in answering such questions most people really project in their answers their own personal feelings, rather than make simply an objective analysis of others. The general concern exhibited in this table is with respect to work itself. These students feel that hard work, self-application, drive and motivation, planning, are those qualities that they need to have in themselves in order to succeed. They feel that if they do not get ahead it is probably these kinds of things that will prevent them.

The final table in this section, Table 13, "Debt is. . . ," is included in this section on fears and anxieties of students primarily

TABLE 12

"THE REASON MOST PEOPLE DON'T GET AHEAD IS ——"

Category of Response	*N*	*Per Cent*
1. Laziness, don't work hard or apply themselves	1,324	37.0
2. Lack drive, ambition, motivation	846	23.7
3. Lack planning, or clear goals	201	5.6
4. They are contented as they are	196	5.5
5. They fear risk and failure, lack confidence	188	5.3
6. Lack of some needed ability	101	2.8
7. Lack of opportunities	83	2.3
8. Stupidity, unawareness, lack of intelligence	73	2.0
9. Indecisive, ambivalent, unstable	40	1.1
10. All other responses, including "don't know"	404	11.3
11. Left blank	122	3.4
Total	3,578	100.0

to illustrate how a student views his financial responsibilities. The cost of dental education is high; entering dentistry requires further investment in office equipment. It is of particular importance to note that approximately 30 per cent of our respondents view debt in a quite negative light, taking account of their concepts of debt from categories 1, 3, 6, 8, and 9. The other categories included by no means indicate as strong a feeling of anxiety or fear regarding financial burdens, either now or in the future.

TABLE 13

"DEBT IS ——"

Category of Response	*N*	*Per Cent*
1. "To be avoided" and similar responses	888	24.8
2. Unavoidable, inevitable, necessary	767	21.4
3. Evil, repulsive, a disease, hell	524	14.6
4. (An "economics" definition given)	356	9.9
5. Useful, good, all right	203	5.7
6. Answers indicating extreme anxiety	188	5.3
7. Moral, humanistic interpretations, e.g., "our duty to mankind"	177	4.9
8. A burden, hard to pay off	99	2.8
9. Annoying, embarrassing	92	2.6
10. All other responses	132	3.7
11. Left blank	152	4.3
Total	3,578	100.0

The "Most Common" Dental Student

We may look at the personality of the dental student in a general way by simply summarizing the most frequent meaningful responses from those open-ended questions. Again, although we will draw on our interview materials somewhat, we emphasize that no particular individual is apt to fit this statistically derived portrait. We paraphrase in the first person the way such a *typical* student might describe himself:

> The kind of person I regard as most successful is one who is happy, well-adjusted to our society, and who is troubled by few feelings of anxiety or tension. He has solved his personal problems and resolved his personality conflicts. I'm not sure I can become that kind of a person, and to be successful in dentistry I will try to model myself after my own father.
>
> Among the more important things in my life are my friends. It is personally very necessary for me to feel that I am well-liked, regarded as pleasant, sociable, and nice to have in a group. I don't want those around me to think I'm pushing, too eager and ambitious, or a grind at studies.
>
> Looking back over my life the greatest thing that has happened to me is being admitted to dental school. This means a lot, and it means I've had to achieve successfully in my earlier years in college and high school. Maybe I haven't always been number one in the things I've attempted, but generally I was well ahead of the average in my classes.
>
> The largest part of my success I attribute to myself. Of course other people—my father and mother, my wife, and others—have helped me when I have needed it. But, my own abilities (intelligence, skill, memory, perseverance, and industry) have been the essential factors in getting me where I am today. I do have some fears of not being able to get where I want to go, but actually I am self-confident and fairly sure I won't fail in dentistry.
>
> Life would be much easier and happier for me if it weren't for some of my bad habits. I am not really as smart as I want others to think I am. It takes a lot of study for me to get through dental school, but I can't force myself to do as much as I should. I put things off too long, waste weekends having a good time, and can't seem to stick to a well-organized plan in my work.
>
> Being accepted, liked, and given recognition by those around me is emotionally very important to me. This is so vital, I can't really relax and warm up in social situations the way I know I should. Because I feel tense, all too often I try to get attention by joking, teasing, sarcasm, and by trying to take over and run things in an informal group.
>
> I like to win, basically I don't like to share glory with others and maybe I'm not much of a "team" player. When others around me get ahead, I lose confidence, get depressed, get feelings of inferiority, and sometimes turn to the bottle for comfort.
>
> I'm a realistic person, one who doesn't spend much time daydreaming about the future. Once I made the decision to enter dentistry and was admitted, my life was pretty well laid out for several years to come. Most

of the things I think about and plan for are the practical, immediate things I have to do. Theoretical things and "egg-head" notions don't interest me much. It is fun to imagine what it will be like to be in practice, but right now that is in the vague, distant future. I try to focus on getting things done now, and, even though I procrastinate at times, I do accept my current responsibilities.

The study of dentistry is fairly rough, especially these first two years when we have to take all these theory and basic courses. It looks to me just as tough the first two years in medical school. This is going to be the hardest part for me, maybe I don't have the kind of brains that it takes. If it were just learning how to do the job, I would not be this worried, because I'm rather sure I can do things well with my hands. This means I'll have to study harder and longer hours now, because I feel a lot of hard work will make up for my not being so sharp. Other people may not be able to do this, but I am not that lazy, and I have the ambition to keep me going.

As an established dentist, my income is going to be good. It's the debts that pile up paying for professional education, buying equipment, and putting out money for office space and help that worries me. It takes a few years to get started, and I may not be able to meet my financial obligations on time. I may have to take a salaried position, at least half time, the first few years to get started more securely.

The Dental Student's Concept of Public Attitudes Toward the Dentist

The *Journal of the American Dental Association,* March 1958, published a pilot study entitled, "A Motivational Study of Dental Care." In that study the research psychologists and sociologists explored intensively, with people of middle class and lower class, their subject's feelings about teeth, the meaning of teeth and dental care to them, and social class differences in attitudes and practices. In the final section of that research report (pages 911-917), they explored some of the attitudes the 126 individually studied people expressed toward dentists themselves. Although that study does not represent a statistically broad sampling of our entire population, it does represent one of the more intensive studies of attitudes towards dentists that we have available. A high degree of professional competence is brought to bear on genuine, underlying meanings for the attitudes found. At the same time they were very careful to state that, while they found these kinds of attitudes, they could not, with the size of its sample and its local nature, estimate how widespread or how intense these attitudes were in various social groups throughout the country. Not only did these researchers find that the attitudes toward the dentist are quite varied and complex, but they vary from one socioeconomic group to another. They found that there is a fairly general recognition of dentistry as a high status profession; a feeling that in most instances dentists are competent to aid people in solving problems that their teeth give them. On the other hand, certain definite criticisms of the dentist are voiced, and we wish to indicate some of these as a contrast to the attitudes entering dental students feel the public has about dentists.

One specific complaint mentioned is the attitude that dental costs are high, and dental care in general is quite expensive. They found a feeling among people that the professional identification of the dentist is not sufficiently well established or strong to justify the level of fees paid to him. The second major criticism leveled at the dentist is that he is painful; that dentists hurt their patients. There is a widespread, underlying anxiety associated with getting dental treatment. They found that pain is closely associated by most

people with all types of dental problems. This pain is involved not only in what the dentist does, but what drives a person to go to the dentist in the first place. Similarly, these researchers found the public criticizes the dentist for the way he handles people in his office—the difficulty in making appointments, and the necessity to wait in uncomfortable reception rooms unnecessary lengths of time. People feel that the dentist is too rough. In this last instance there is some indication that the public feels the dentist is not as highly skilled as he should be. These respondents did not see the dentist as friendly enough; they thought he was too aloof, too remote from patients, and not a warm person who was personally concerned with his patients.

In the present survey of dental students we had the opportunity to assay the student concept of public feeling about the reaction to dentists in a variety of ways. First of all there were two cartoons presented to them in a group of three cartoons. These provided an opportunity for the responding person to fill in the "balloon" over one person's head in the cartoon with an appropriate response. One person is holding his jaws and saying, "I've got an appointment at the dentist," and our subject then replied to him in a variety of different ways. The second of these cartoons that we want to report is of a person in a dentist's chair and the dentist standing beside the chair saying, "Now we'll begin." The figure of the man in the chair then makes some reply to him.

A second way in which we got the student attitudes was to present them with four figures of faces showing an intensive scowl, a mild frown, mild smile, and a very pleasant, striking smile. These four faces were placed at the head of four columns, and we asked the student to check under the column what the average person would feel about interacting with the dentist under seven different situations—meeting the dentist; asking him to cooperate on a club project; thinking about going to the dentist at the time the appointment is made; the actual day of the appointment; during the visit; and finally, when the dentist says the work is finished.

Still another way we tried to get at the student concept of attitudes toward dentistry was by asking them why more people do not apply for admission to schools of dentistry. In one way this particular item may reflect their own feelings of basic inadequacies in them-

selves. Actually they are a part of the perception of the public feeling toward dentistry.

The final table we report deals with the student concept of specific attitudes toward the dentist in two items—"The attitude of most people toward dentists is," and "My parents' attitudes toward dentists are." Throughout all of these tables we see that there is a more positive attitude toward dentistry than might be inferred from the article by Social Research Incorporated, from which we extracted various notions at the opening of this paper. It must be remembered that these students are strongly identified with dentistry. This, necessarily, is going to condition some of their feelings about it, and their responses to these questions in a more positive direction than might have been the case if they were members of the general public.

How we feel that others see us has an important effect on how we view ourselves and our work. If we believe that friends, acquaintances, and clients regard us with negative feelings—hatred, disgust, loathing, fear, anxiety, or the like—this tends to lower our own self-esteem. Virtually everyone wants to be accepted, to feel that at least some member of his personal public likes, trusts, admires, or respects him. If the dental student's attitude about probable acceptance of him as a dentist were consistently negative, there would be enormous difficulty explaining psychologically why he chose the occupation. Even persons in quite lowly and objectively unpleasant jobs will tend to mention something positive about his work—the garbage collector speaks of his role in human sanitation.

In Tables 1a and 1b we have summarized responses made in completing two small cartoons. The figures were all male and youthful, to correspond with the usual dental student. The "balloon" for one figure contains a statement, as given at the head of each table, and the other figure has an empty balloon to be completed by our student in reply. Table 1a represents an overwhelming tendency to present dentistry in a positive light. Nearly half made some kind of soothing, positive comment to the apparent sufferer: "It will be over in no time, and you'll feel all right," "Don't worry, the dentist will take good care of you." Similarly, there is nothing of a negative character to categories 2, 4, 5, 6, and

TABLE 1a

THE ENTERING STUDENTS' CONCEPT OF REACTIONS TO THE DENTAL APPOINTMENT

CARTOON I. PERSON SAYS, "I'VE GOT AN APPOINTMENT AT THE DENTIST"

Our subject replies with:

	N	*Per Cent*
1. A soothing, positive comment	1,722	48.1
2. An objective inquiry about the work to be done	599	16.8
3. Expression of distaste, sadism, negative feeling, sarcasm, or references to pain	459	12.8
4. Innocuous comments	294	8.2
5. Reference to his own teeth	124	3.5
6. Reference to modern techniques and drugs	119	3.3
7. Identification of himself as a "dentist"	82	2.3
8. All other responses	122	3.4
9. Left blank	57	1.6
Total	3,578	100.0

7. All but category 4 should be obvious as to their contents. In 4 we placed such innocuous and meaningless replies as "Oh," "I see," and the like.

In Table 1a, less than 13 per cent made any reference to pain, or indulged in any unkind comment to the patient. We have coded here such responses as: "I'm glad I'm not in your shoes," "I hope he really gives it to you this time," and "That's what you get for waiting so long." In all, however, the extent of negative feeling expressed in the context of "have an appointment with the dentist" is quite small.

In Table 1b we move to a cartoon representing the context of the dentist's office at the time he is beginning to work on the patient's mouth (the drill in hand implies to this writer that prior examination, etc., has been completed). In this frame of reference the anxiety level increases considerably. Negative forms of response predominate. Categories 1, 3, 5, and 7 are one form or another of negative response, accounting for over 50 per cent of the responses. These outweigh the sum of positive acceptance (2), objective inquiry (4), cooperation (6), "Just tell me what you want me to do," and self-

TABLE 1b

CARTOON II. DENTIST FIGURE WITH DRILL IN HAND SAYS, "NOW, WE'LL BEGIN."

Figure of man in chair is seen as expressing:

	N	*Per Cent*
1. Fear of hurt or pain	937	26.2
2. Calm acceptance	868	24.3
3. Mild distrust	503	14.0
4. Curiosity about the work	374	10.4
5. Irony, hostility, sarcasm	293	8.2
6. Cooperation, desire to learn	134	3.7
7. Diversionary tactics	81	2.3
8. Self-identification with dentistry	38	1.1
9. All other responses	57	8.2
10. Left blank	293	8.2
Total	3,578	100.0

identity with dentistry (8). These findings indicate a clearly defined gradient of feeling toward the dentist from positive to negative as a function of the immediacy of interaction with him in his professional role. It is of considerable interest that this extent of negative feeling is expressed by the student himself. We find such expressions as, (1) "Try to make this as painless as possible, will you?," (3) "Take it easy, Doc," (5) "Are you sure you know what you're doing?," and (7) "Let's check those X-rays again to be sure."

When we pass to Table 2 the gradient of supposed feeling toward the dentist, depending on the situation, is made abundantly clear. The preponderance is negative in two situations, 3 and 5, although there are fairly strong negative minorities in 4 and 6. The mental anguish of "thinking about need to go to dentist" is clearly the most distressing thing for a patient. Those situations involving action (4, 5, and 6) in making the appointment, keeping it, and completing the visit and setting a new appointment are not quite so distressing as the mental condition alone. If we can couple this item to the cartoon in Table 1b, we can expect a rise in negative effect at the point the client is seated and the dentist begins work. We may also have a clue here why people put off making appointments—the distress of

TABLE 2

DENTAL STUDENTS' CONCEPTS OF PUBLIC ATTITUDES TOWARD DENTISTS IN DIFFERING SITUATIONS

	Students Feel the Attitude Is											
	VERY NEGATIVE		MILDLY NEGATIVE		MILDLY POSITIVE		VERY POSITIVE		DATA MISSING		TOTALS	
The Situation	N	%	N	%	N	%	N	%	N	%	N	%
1. Meeting the dentist, not needing service	33	1	56	1	930	26	2,454	69	105	3	3,578	100
2. Asking dentist to cooperate on club project	7	—	50	1	1,178	33	2,238	63	105	3	3,578	100
3. Thinking about need to go to dentist	261	7	2,168	61	1,003	28	41	1	105	3	3,578	100
4. At time appointment is made	107	3	1,066	30	2,023	56	275	8	107	3	3,578	100
5. The day of the appointment	494	14	1,541	43	1,279	36	138	4	126	3	3,578	100
6. During the visit, dentist sets next appointment	199	6	1,012	28	1,834	51	409	12	124	3	3,578	100
7. Dentist says work is finished, "You're in good shape" ..	13	—	8	—	188	5	3,258	91	111	3	3,578	100

"thinking about" is more unnerving than any subsequent feeling while carrying through on the appointment.

Some other important features of the dentist's role are apparent in Table 2. His ameliorative function is seen as the most positive (7), but these students also have a strong need to feel that the dentist is positively accepted in both his informal social role (1), and in his community group role (2).

Table 3 presents still another way of assaying how dental students feel others view dentistry. This question is focused on their immediate situation, and it inquires why they feel their peers have not selected the same vocation. These students seem to state that, compared with themselves, others who do not seek admission to dentistry do not have as much drive (1), achievement (3), perseverance (4), intelligence (3 and 8), or manual skills (9). The student himself seems to be reiterating fears we have noted before, that the cost of dental education is prohibitive (2), and that years of added training are required before entering the productive career phase (5). In spite of fairly high requirements for entry, not many see sheer lack

TABLE 3

THE THREE MOST IMPORTANT REASONS WHY MORE PEOPLE DO NOT APPLY FOR ADMISSION TO SCHOOLS OF DENTISTRY ARE: "_____"[a]

Category of First Response	*N*	*Per Cent*
1. Lack interest, desire, motivation	994	27.9
2. Lack adequate finances	652	18.2
3. Poor academic record prevents entry	423	11.8
4. Fear hard work and possible failure	280	7.8
5. Lack the time to complete	208	5.8
6. Basic distaste for the job	195	5.5
7. Ignorance about the profession	184	5.1
8. Lack the intelligence and ability	139	3.9
9. Lack necessary manual skills	94	2.6
10. Unpleasant experiences with dentists	43	1.2
11. Can't meet general requirements, and all other responses	161	4.5
12. Left blank	205	5.7
Total	3,578	100.0

[a] Only the first response is tabulated here.

of ability (8 and 9) as deterring possible applicants. More feel that people are ignorant of the profession (7), or have a basic distaste for it (6). We may be able to decrease this ignorance, and reduce unpleasant experiences (10); but, it is hard to combat "basic distaste." Some of the replies in category 6 read, "They find the idea of working in someone's mouth disgusting," "They couldn't stand having to hurt someone to fix his teeth." We need to remember that, even though these are the student guesses about how others feel toward dentistry, they also reflect their own projections of fears and concerns. Thus it is probable that many of them feel real concern about finances, time to do their studies, and their possible lack of brains and skills. Some may even wonder secretly whether they will find the work itself distasteful!

Table 4 again tabulates two open-ended items. Here we ask for the concepts of how they think the general public and their own parents would regard dentists. The table is arranged in order of decreasing frequency for the general public responses, which can be compared readily with the frequencies for the same categories in the column for "parents." The over-all finding for "the attitude of most people," as these students sense it, is similar to that found in Table 1b earlier. Over half the responses here are negative, just as they were to a cartoon of a person about to receive work from a dentist.

By contrast, Table 4 shows a remarkable shift of feeling about the attitude of parents toward the dentist. Almost 89 per cent think their own parents have a positive attitude. It would be genuinely remarkable if an objective poll of the parents of dental students were to reveal only about 5 per cent negative evaluations at the same time that the general public gave over 50 per cent negative responses. While we cannot assume that the frequencies in either column are realistic, we do need to try to account for the kind of difference seen here.

Some immediately plausible reasons occur to us on why parents of dental students are felt by those students to have far more positive attitudes toward dentists than the average person in the population. An obvious reason is that such parents would feel more positive simply because their son has entered dentistry. Getting into dentistry represents a "step ahead" for three-fourths of our students; and, this may lead to increased parental pride in the attainment of these offspring, with concomitant kinder feelings toward the profes-

TABLE 4

ENTERING DENTAL STUDENTS' CONCEPTS OF OTHERS' ATTITUDES TOWARD DENTISTS

A. "THE ATTITUDE OF MOST PEOPLE TOWARD DENTISTS IS ———"
B. "I FEEL MY PARENTS' ATTITUDES TOWARD DENTISTS ARE ———"

Type of Response	*A*		*B*	
	N	PER CENT	N	PER CENT
1. Fear, anxiety	1,012	28.3	43	1.2
2. Positive, favorable	581	16.2	1,759	49.2
3. Respect, admiration	537	15.0	711	19.9
4. Dislike, avoidance	397	11.1	46	1.3
5. Negative, but see them as essential	250	7.0	49	1.4
6. "Same as mine"	196	5.5	186	5.2
7. Benefactors, need more of them	145	4.1	229	6.4
8. Rough, painful	118	3.3	5	0.1
9. Expensive, charge too much	84	2.3	34	1.0
10. "Normal," "average," and miscellaneous	54	1.5	286	8.0
11. Second rate to an M.D.	9	0.3	5	0.1
12. Left blank, or "don't know"	192	5.4	225	6.2
Total	3,578	100.0	3,578	100.0

sion they have entered. Secondly, we know the average education and socioeconomic status of parents of dental students is well above the average of the total population. We know in this regard, from other sources, that positive attitudes toward dental care and the dentist himself increase as we move to higher educational levels, and as we move from lower social class to upper middle social class. A third potent force leading to our findings lies within the students themselves. Virtually all of us feel a deep need to have the affection and recognition of our own parents. It would be hard for us to believe we had earned these feelings in our parents if we enter a profession we know they view with distaste. Therefore, the dental student psychologically must try to envision his parents as holding favorable feelings toward dentists. These kinds of forces may be sufficient to account for the disparities noted, from the point of view of the student's own perceptions. We hardly can credit that such enormous differences are apt to be found between the general public and parents of our students!

Summary

In this paper we have discussed the dental student concepts of the attitudes of others toward the dentist and the practice of dentistry. They have positive attitudes toward their own work and are willing to express these to others. They realize that most people have strong feelings of anxiety about visiting a dentist, but also feel the public regards him with warmth and acceptance outside his work role. The student himself, whether he consciously admits it or not, tends to feel trepidation at having the dentist work on his own teeth. Generally they feel superior to the average person in mental ability, skills, and in drive to achieve their vocational goal.

Miscellany: On Wishes and Aspirations

This section contains some fairly unrelated tables. A common theme can be seen in that each deals with some potential interest, aspiration, or desire regarding the person's future practice. None of these appears to have such intensity of meaning as the motives to enter dentistry discussed in an earlier section. These seem to have a lighter meaning, caught by the phrase, "If I could have my way, I'd rather ....." The four topics are:

1. Size of town in which the subject would like to set up practice,
2. Which dental specialties he might like to enter,
3. Which of ten dental jobs he would be willing to follow, and
4. The income he expects to be making after five years of practice.

These four points are also covered by Mann and Parkin in "The Dental School Applicant," *Journal of Dental Education,* March, 1960. The reader may compare with their Tables 9 and 36, 35, 37, and 38. In general, our results are similar on the students to theirs on applicants, even after unsuccessful candidates have been eliminated. There are some differences, and we will attend to these as they appear.

Table 1 presents the proportions who wish to practice in a city the same size, larger, and smaller than their home towns cross-tabulated by actual home town size from another question. The important feature to note is the very large portions from farm and small communities who wish to migrate to larger centers. Likewise, relatively large percentages of those from cities over 250,000 wish to move to smaller centers. Such a redistribution of the dental population carried forward for only a handful of dental classes would result in an absurd maldistribution of dentists in respect to expected population distributions. Even the great metropolitan centers, now perhaps over stocked with dentists, would experience a severe shortage in half a dozen years! Clearly, wished-for movements are not likely to take place in line with ratios given here.

Comparing these results with those of Mann and Parkin (Tables 9 and 36) we find our over-all totals for "Same," "Larger," and "Smaller" city desired do not differ much from theirs. One difference between applicants and those finally accepted may point to an unconscious bias on the part of admissions committees. Specifically,

TABLE 1

DESIRED SIZE OF TOWN FOR PRACTICE BY SIZE OF HOME TOWN

Size of Home Town (in 000's)	*Desired Size to Locate Practice*							
	SAME[a]		LARGER[a]		SMALLER[a]		SUBTOTAL[b]	
	N	%	N	%	N	%	N	%
1. Farm	50	35.7	90	64.3	—	—	140	3.9
2. Under 5	139	31.1	313	68.5	4	1.0	456	12.7
3. 5-20	338	60.6	200	35.8	20	3.6	558	15.6
4. 20-50	321	68.7	103	22.1	43	9.2	467	13.0
5. 50-100	208	68.6	43	14.1	52	17.1	303	8.5
6. 100-250	255	71.2	34	9.5	69	19.3	358	10.0
7. 250-500	163	64.2	10	3.9	81	31.9	254	7.1
8. 500-1,000	156	56.9	16	5.8	102	37.2	274	7.7
9. Over 1,000	272	53.2	—	—	239	46.8	511	14.3
Subtotal	1,902	57.3	809	24.4	610	18.4	3,321	92.8
Data missing							257	7.2
Total							3,578	100.0

[a] Percentages in Same, Larger, and Smaller columns are computed using row totals for each Home Town size.

[b] Percentages in Subtotal column are computed using Total (3,578).

a disproportionately greater percentage of those from farms and small towns is admitted, and an appreciably smaller percentage is retained from the metropolitan groups over 500,000. Surely some strange force is at work here, for *on the average,* the education of the city boy is superior to that of the rural and small town boy. Additionally, from Mann and Parkin (Table 9) we learn that the heaviest group of farm background applicants is in the Southeast—the very region with the weakest educational standards in the nation. This tendency may well merit some scrutiny by dental schools.

A more serious problem seen in our results is the evident failure of recruitment in both the rural areas and the great cities. Over 10 per cent of our population is classed as "rural," but we find less than 4 per cent of our student body and less than 3 per cent of applicants from such a background. At the other extreme, over 25 per cent of our population is in cities over 1,000,000. We draw only 14.3 per cent of our students from this source!

Table 2 lists possible interests in future specialization broken down by whether the respondents knew or did not know the meaning of

all the specialties. Comparing ratios between columns for each specialty with the ratio of the column totals, it is evident that those specialties which were relatively not well known were oral pathology, pedodontics, periodontics, and prosthodontics. Nonetheless, 2,082 out of 3,578 students do indicate a specialty of interest. We can readily imagine the shock to dentistry if even a half of this number attempted to carry through on this tentative interest. Fifty-eight per cent indicate this interest, but less than 5 per cent of American dentists are listed as specialists! Fortunately we can expect these wishes to fail of implementation. Also of note is the fact that surgery wins the glamour poll in dentistry, just as it also does in medicine.

TABLE 2

INTEREST IN SPECIALIZATION AMONG ENTERING DENTAL STUDENTS

	"Do you know what all these specialties are?"							
	YES[a]		NO[a]		DATA MISSING[a]		*Total*[a]	
Specialty Desired	N	Per Cent	N	Per Cent	N	Per Cent	N	Per Cent
1. Dental Public Health	18	0.9	10	0.8	1	0.5	29	0.8
2. Oral Pathology ...	31	1.5	8	0.6	—	—	39	1.1
3. Oral Surgery	601	29.0	281	21.2	11	6.0	839	25.0
4. Orthodontics	490	23.7	307	23.2	7	3.8	804	22.5
5. Pedodontics	140	6.8	56	4.2	1	0.5	197	5.5
6. Periodontics	23	1.1	5	0.4	5	2.7	33	0.9
7. Prosthodontics	76	3.7	6	0.5	5	2.7	87	2.4
8. "I don't know yet."	687	33.2	646	49.0	11	6.0	1,344	37.6
9. Data Missing	4	0.2	5	0.4	143	77.7	152	4.2
Totals	2,070	100.1	1,324	100.3	184	99.9	3,578	100.0

[a] Percentages based on totals in each column.

Table 3 gives results of a checklist with heading and categories as stated in the table. Again there are some appreciable divergencies from the work published on applicants (Mann and Parkin, Table 37). We might speculate (idly perhaps?) that an applicant is *more* likely of admission if he is willing to be a teacher and/or go into group practice, and *less* likely of admission if he wants research, public health service, and/or private practice! These are strange results, but given the large numbers involved here even small changes in percentages are statistically significant.

TABLE 3

"WOULD YOU LIKE TO BE ANY OF THE FOLLOWING?"

(Check as many as apply.)

Type of Work	*N*	*Per Cent*[a]
Dental teacher	1,299	36.3
Dental research worker	977	27.3
Dentist in armed forces	1,040	29.1
Dentist in U.S. P.H.S.	344	9.6
Dentist in state or local health department	389	10.9
Dentist in a factory or plant	247	6.9
Dentist in a public school system	658	18.4
Dentist on a hospital staff	1,531	42.8
Dentist in group practice	1,126	31.5
Dentist in private practice	3,252	90.9

[a] Percentages of 3,578 questionnaires with the given item checked.

There are some other findings in our research that illuminate these data. A separate run showed that almost all of those who checked a willingness to be dentists in the armed services are in fact those who anticipate having to go through military duty subsequent to graduation. Those who had been through service tended to avoid this choice in the checklist.

Elsewhere we have inquired about attitudes toward and willingness to do dental research, both in open-ended items in the questionnaire and in interviews with students. Those findings flatly reverse this checklist result; nearly ten times as many check this item as we found in the other sources. In the opposite direction, far more than on the checklist indicated in interviews that they plan to work in a factory, plant, or business, as a "company dentist," at least part time for a few years. They definitely said they might not like it and had no intention of this as a career, but felt it would provide a way of easing financial burdens during the years of starting a practice. The overwhelming choice is private practice, entirely in line with all we have gathered as to the essentially independent temperament of the man who enters this profession.

In Table 4 we turn to the financial expectations these students desire after five years in practice (Mann and Parkin, Table 38). We

certainly can feel that estimates at both the upper and lower extremes are unrealistic. The expected average income, however, is fairly close to the average income of dentists in practice. As an average this is not unreasonable, but the average dentist has certainly been in practice far longer than five years in order to attain it!

TABLE 4a

FINANCIAL EXPECTATIONS OF ENTERING DENTAL STUDENTS AFTER FIVE YEARS IN PRACTICE

Level of Income	*N*	*Per Cent*[a]
Under $5,000	11	0.4
$ 5,000 to $ 9,000	431	17.0
$10,000 to $14,000	1,093	43.0
$15,000 to $19,000	583	23.0
$20,000 to $24,000	250	9.8
$25,000 to $29,000	91	3.6
$30,000 and over	80	3.2
Total	2,530	100.0

[a] Percentages based on those records which provide an answer in dollars. 767 persons gave essay answers, and 272 left the question blank.

TABLE 4b

Range: $1,000 to $90,000
Average: $13,562
Standard deviation: ± $7,243

Dentistry and Manpower Resources

Preceding sections in this issue have concentrated on a number of aspects of the dental student population. In some we have been concerned to relate many of these features to their implications for recruiting future students and to their evidence of possible inappropriateness in selection processes. In other sections we have represented this student to the reader as an essentially normal, healthy, well-balanced individual. He comes from a better than average family background, and he is very strongly motivated to improve his own status beyond that of his origins. While he is a societally normal, stable person, at the same time he is psychologically complex, exhibiting an array of powerful, unusual needs and drives. These features of the total person make dentistry *the* profession for which he seems most ideally suited. Other occupations may satisfy some of these needs, but none we have been able to imagine would "supply" outlets with the balance and intensity of dentistry. Other vocations may answer some of these needs with greater force, but with a loss of other needs the dentist is apt to feel are required for his general satisfaction and sense of well-being. For the record, we wish to catalogue here the strongly felt needs of dentists which their profession provides. It may interest the reader to try to discover any other occupation which affords these in the pattern we find in dental practice (this list is not in any order of intrinsic importance).

1. The need to be *nurturant:* to give help and service to fellow men.
2. The need for *status:* to enjoy a high level of prestige and recognition in one's community.
3. The need for *acquisition:* desire for money, income, material possessions.
4. The need for *autonomy:* to be independent of others, make one's own decisions, determine and act on a course of life for oneself.
5. The need to use *manual skills:* this seems akin to the kinds of satisfactions found in both the work of the skilled mechanic and the performance of the virtuoso musician.

* * *

The first five have been given explicit attention in one or more of

our papers. In addition we may list five more needs given outlet in dentistry, the last two have been mentioned earlier.

6. The need for *orderliness:* dentistry requires a very high degree of attention to fine detail, involves compulsiveness in working to close tolerances.

7. The need for *dominance:* the ability to direct others, to work on them without hindrance. We need merely point out here that the doctor-patient relationship is a superordinate-subordinate one in almost all instances. Further (and facetiously), the patient with a dam, some instruments, and a few fingers in his mouth does not "talk back."

8. The need to *express hostility:* to derive pleasure from hurting others. However offensive it may be to the profession to recognize this in itself, the evidence of public opinion convicts, and our psychological evidence supports this, that the dentist has some sadism in his make-up. But, because of the strong ethical controls of the profession, the hurting of patients is minimized and, ordinarily, occurs only when necessary to perform the required work. The existence and strength of this need and its expression in practice have not been explored, but have important societal consequences. We may hypothesize that the dentists' capacity to discharge this kind of affect in his *constructive* work role may make him a more congenial person (less apt to sarcasm, irony, biting wit) in other social situations!

9. The need for *intellectual experience:* the field, as an applied area of biological science, places considerable pressure on its incumbents for mental curiosity and competence.

10. The need for *esthetic expression:* the drive to produce something beautiful and functional, to feel that one's products are creative.

This complex of ten needs is insufficient to describe the personality of the dentist (as a vocational type). In the course of our studies of the dentist and the dental student we have constructed a considerable further array of needs, and combinations of needs, hypothesizing their presence, their absence, and their rejection. We cannot comment on these at this time, but we wish to assure the dentist who reads this that we know full well he cannot be subsumed under the ten headings above.

On the other hand, combinations among these ten personality

traits lead to some recognizable derivatives. The combination of status, acquisition, and dominance is virtually identical with what the businessman calls the *drive to achieve*. Putting together manual skills, orderliness, and esthetics, we have an old-fashioned, but in this writer's opinion, essential quality best named "craftsmanship."

In very rough form we have begun this section with a psychological sketch of the dental person. Whether this is the *persona* dentistry wishes to present to the world, we must leave to the profession. Let us now attend, in the remainder of this discussion to the fulfillment of this occupational role in our society.

The facts of population pressures soon to face us, the aging of the practicing dental group, the inadequate supply of dentists to meet current needs, and the growing demands of the public for dental care present a grim prospect. These facts have been presented forcefully to dentists in recent years.*

Recognizing that there are fewer dentists in active practice than the total number of dentists available, we present here some illustrative figures for the current period:

	184,000,000	population
	92,000	practicing dentists
	1:2,000	ratio
if in 1975 we have:		
	220,000,000	population
we need	110,000	dentists to maintain this ratio.

This imples that an average of 1,200 additional dentists must enter practice each year for the next 15 years. The present average rate of adding dentists is roughly 1,000, producing a deficit of 200 per year.

It is in the light of such events that we must welcome every advance in preventive dentistry. In addition we are recommending for serious consideration and action the following broad programs conceived as problem areas. It seems to us that we can "make up" our deficit of trained, active dentists only by vigorous attack along all these avenues.

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* Recent articles of relevance are: (a) Moen, Realism in Maintaining the Present Population-Dentist Ratio in the Next 17 Years. J. Am. Col. Den. 26:146-48, June 1959; (b) Panel Discussion, Recruitment of Dental Personnel. J. Am. Col. Den. 26:236-82, Sept. 1959; (c) Hollinshead, A Look at the Future of the Dental Profession: An Interim Report on the Survey of Dentistry. J. D. Educ. 23:123-28, June 1959; and (d) Kesel, The Survey of Dentistry and Dental Research. J. D. Educ. 23:129-34, June 1959.

1. *The invention, installation, and effective use of new types of equipment and methods.* It would be presumptuous of us to suggest here any new inventions to aid the dentist, rather we are pointing to the need to develop a philosophy of acceptance of progress. When tested instrumentation is available, it needs quicker recognition; the dentist himself is more apt to drive a 1960 Oldsmobile than a 1927 Buick! Of the clearly established advances in instrumentation, how widespread is their installation and trained use? When we speak of *effective* use, we wish to pin down the fact that the dentist who has been in practice a decade or two in all probability must accept training in some depth in new techniques in order to use them soundly and to integrate them into the total picture of his practice. When too, there are new methods (as extended beyond the concepts of instrumentation and techniques) which can improve the dentists' work, these deserve serious, prompt evaluation and promulgation to practitioners. Methods whereby, for example, we might reduce patient-chair hours by 25-30 per cent need to be broadcast. Journal articles, spread through local contact, and other current attempts are not enough. *Again,* we must have direct education in methods (a longer term affair), techniques (medium range in time), and instrumentation (a short range skill program).

In this same area of *innovation,* we are shocked on reading the evidence to find that in many localities dentists themselves are among the most rabid in opposing preventive dentistry. Fluoridation is enough to mention now. Again we must emphasize that a spirit of accepting progress must be instilled in the dental community.

2. *Streamline office practices.* We refer here to the troublesome minutiae which plague the practitioner. These are the things he feels distract and detract from his role as a professional practitioner. Bookkeeping, ordering supplies, and scheduling visits rank high in this list. The dentist characteristically pushes these things into the background. The assistant and the receptionist are only as good as their selection, training, and supervision. The effective dentist of the future cannot afford to dodge his responsibilities as an office manager and supervisor. The dentist's public relations and personal acceptance rest heavily on these agents who arrange his time and money. The patient who comes to the chair in a bad mood eats time.

Wherever possible we would recommend that dentists in an area

or location pool their bookkeeping, billing, collections, and tax problems—as well as payroll, accounts payable, rents, and the like. A movement of this nature would lead shortly to greater uniformity of reporting on the nature of work performed, and might lead to a more sensible uniformity of fees in relation to actual events. The very old and well-established practice of charging per "visit," or for a type of work done is obviously not valid. It is *time* that is at issue. Although the public is poorly conditioned to this notion, we strongly recommend a fee be based on a "time plus materials" system. This would be a difficult change to achieve, but we feel it would result in more equitable (and profitable) practice than the present piece-work system.

3. There needs to be *broader training and use of ancillary, technical personnel.* By this we mean that more dental technicians, hygienists, and assistants need to be trained. We also need to strive for fuller use of their time in the dental offices in handling all types of duties of running an effective office aside from activities at, or supportive to, the dental chair itself. Currently we are not getting sufficient return on our investment in training dental hygienists. The field currently is restricted to women, though the military now use male personnel in this category. Many young women may obtain this training as an "insurance" against having to work in later years. Thus we find a situation similar to the case in elementary school teaching in that only about 10 per cent of these young women remain actively in their work five or more years. This kind of employee turnover needs to be combatted, by recruiting young men into this work, and by attempting to reclaim at least a portion of the time of women who leave.

4. A fourth program we would like to suggest relates to *better financing of the early years in practice, coupled with an effort to improve the distribution of dental services.* In this connection, it might be feasible to interest major insurance companies in building, equipping, and staffing dental offices and clinics in areas now sparsely served. The young dentist could enter such a practice on a contract basis, with a fair graduated income over five years and option to purchase the facilities and practice later—or to continue it on a rental basis. We must seek some source of finance in order to start reaching that 40 per cent of our population who now receive either no dental care, or care only in severe crises.

The above four program areas relate to development of the practice of dentistry. They would have small chance of effecting progress if they did not rest on a firm base of education emanating from our dental schools. Clearly we must intensify our programs of continuing education for the man in practice so that his awareness and use of new equipment, techniques, methods, and ancillary personnel will be maximized. The following three program suggestions are directed toward the needs of dental schools. To meet future needs we must increase the number of graduates somewhere in the range of 94 (Moen's minimum) to 200 (our estimate) more each year! This requirement for physical facilities alone will create an enormous financial burden.

If in 1958 we have graduated 3,100 dentists, Moen's minimum of 94 more per year up to 1968 would mean we are training 4,040 per year, and in 1970 it would be 4,228. We are of the opinion that a higher rate needs to be approached; because, we have consistently underestimated our population gains, and, further, we should institute more rigorous screening of lower achieving students in freshman and sophomore years. Our figure of 200 more per year means that we *should* be entering into training about 5,100 dentists per year in 1970, and probably graduating about 4,600. The sheer problem of meeting this demand on physical facilities, teaching staff, and other levels probably will not be within the realm of financial and personnel feasibility. It is for these reasons that we feel all possible avenues of relief must be pursued as soon as possible.

5. *Build vastly increased dental school facilities.* Every possible public and private resource will have to be reached to meet this need. To date dental schools have not matched the successes of medicine or engineering in securing funds. Pressures on university budgets will become increasingly serious in the immediate future, and concerted action by the dental community is needed even to maintain the present "share." There must be every possible appeal to practicing dentists to support their schools through personal giving. May we also remark here that gifts with "strings" attached are of little benefit; the greater need of dental schools now is for *uncommitted* funds they can use for maintenance, upgrading old, even obsolete, facilities, and salaries.

6. Our next suggested program centers on *the optimum use of present facilities.* We can increase the number of graduates per year

by at least 20 per cent and probably more if we move to full use of present space and equipment. We can do this by admitting slightly larger classes and using tightly organized split-group sectioning. Secondly, there needs to be broadly instituted a 4-quarter, year around schedule, so that we graduate a class in three, rather than four, calendar years. (Because of the need for students to work Summers to pay for dental education, this last implies a vastly expanded scholarship and student aid program. This is another area in which dental schools must have great amounts of uncommitted funds.) An implication of this "full-use" plan is that continuing education for the practitioner now under a school's auspices will have to be handled evenings, weekends and during school holidays. But again, "full use" *means* that those times must also be scheduled!

7. Expanded facilities and "full use" will mean little without correspondingly *increased faculties.* There are two paths to be taken in this. First, more young people have to be encouraged into making teaching either a full-time or at least half-time career commitment. At present it seems this can be accomplished only if we are able to make such a choice financially rewarding in a fair ratio with the inducements of private practice. Secondly, we can improve the effectiveness and efficiency of dental teaching. Few members of dental school faculties have had any training in the processes of teaching. They have the percept of their elders, who in turn were good, bad, and indifferent teachers. What we envision here is that dental schools everywhere need to institute training (perhaps at a graduate level) in cooperation with the expert guidance available in Schools of Education on "The Teaching of Dentistry." Our interviews with seniors in dental schools have afforded us evidence of widespread malpractice so far as teaching techniques are involved. The quality of the student we produce depends in great measure on the qualitative excellence of the instruction he receives. This responsibility for fine teaching rests with the administrators and all instructors in dental schools.

The following programs deal with dentistry's needs in the student area. These suggestions rest firmly on the evidence we have gathered from students and faculties of dental schools. There remain gaps in our understanding, and as we proceed we will outline briefly the necessary research to complete it.

8. Dentistry needs to seek a greater total flow of *suitable applicants* for training. We noted in our opening statement that it is our opin-

ion that dentistry has in recent years received its fair share of applicants from the available student market. This is not to say that we have had enough men of the desired calibre to do the job we face. It is simply the fact that for the past decade we have been drawing from the small child-producing years of the depression at the same time that the demands of the physical and social science areas have increased vastly. Dentistry has faced the same drop in applicants as medicine, which went from 24,434 in 1949-50 to a low of 14,538 in 1954-55, and recovered only mildly to 15,170 in 1958-59 after being up to 15,917 in 1956-57.

Increasing the total flow of applicants does not mean we should broadcast appeals to high school and college students. Far better results for dentistry will be obtained if we consciously focus recruiting results on those portions of high school and college populations that have strong academic records *and* some kind of appropriate mechanical background. The ideal recruiting group to initiate this nationwide search will be the local dental associations in every community. The understanding of dentistry, what it needs and what it offers, must be carried to high school and college counselors, and, even more, to faculty men in the sciences who can orient students this way.

9. Our research has indicated that we experience disproportionately *small numbers of applicants with rural and metropolitan backgrounds.* It is possible that we should concentrate greater efforts to reach men with such backgrounds. First, however, we should try to learn why this phenomenon appears, and thereby assess the validity of a readjustment of efforts in these directions.

10. We do seem to need to place more emphasis on *recruiting applicants from blue-collar family backgrounds.* It seems probable that there is an untapped reservoir of talent here. At the same time we must realize that such applicants are less likely to be able to pay for dental education than those from middle-class groups. Again, greater financial supports may be required.

11. A stubbornly neglected, perhaps resisted, area for increasing our dental population is recruitment of women. We have heard the arguments on this matter pro and con, but these in no way change the fact that here is a pool of potential dental talent which could enlarge our applicant group by nearly 100 per cent. Already the countries of Northern and Eastern Europe have large percentages of

women in dentistry and the evidence seems to indicate they are very well accepted. Medicine has learned that the expected portion of women physicians *not* in active practice in any single year is 14 per cent. There seems to be no reason why dentistry too could not expect an 86 per cent utilization of women trained in its profession.

Some planning is necessary to bring women into dentistry in appreciable numbers. Foremost is the need for change in the attitudes of acceptance for women in the faculties of dental schools. Let us now remind ourselves that this brand of chauvinism has no place in any of the applied sciences, and certainly not in a health service. Secondly, there may need to be some structural changes to accommodate women. More important, our research at this point affords us no reliable clues as to why women do come to this field. We may know something of the pattern of motives for men, but we suspect these cannot be generalized to the opposite sex with any assurance. Obviously, before we can plan to attract women, we must study the underlying motives women have to come into dentistry, what satisfactions they gain from its practice, and what it means in their career lives.

12. Dentistry needs to gain a firm understanding of the total process of becoming a professional man in this field. The entering student is in no sense a professional-minded person. What are the significant experiences and emotional changes in dental school that allow us to give him this label four years later? Further, is there a change, deepening or broadening, of his sense of professionalism in his early years in practice? The rich information we have on each person in the 1958 entering class provides an extraordinary opportunity to study this professionalization process in detail. In the writer's opinion as a social scientist this is a chance we can ill afford to miss. The possible benefits of such an on-going study have already lost a year or more of information by lack of support. If we are to realize on this research, we must follow up on our data collecting now, at graduation in 1962, and at further intervals as these men enter practice.

* * *

In the above review we have done two things: indicated psychologically the kind of person attracted to dentistry, and have outlined twelve program areas we feel need sincere attention if dentistry is to survive and experience healthy growth. It would be foolhardy to ex-

pect our blunt, often harshly critical words to gain warm support throughout dentistry today. Our real hope is that we can stir controversy, discussion, and some action. Dentistry must define the forms of action most appropriate to itself, and we are realistic in knowing that what evolves will probably sound much different from what we have suggested from the point of view of an outside discipline.

CALENDAR OF MEETINGS

CONVOCATIONS

October 15, 1961, Philadelphia

October 28, 1962, Miami Beach

October 13, 1963, Atlantic City

November 8, 1964, San Francisco

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The oral cavity, with its many functions, plays a very important part in the person's well-being and facial expression.

It is dentistry's privilege to care for this facial area by providing care for the organs of mastication, speech and the digestive functions of the mouth.

Dentistry contributes immeasurably to the correction of oral anomalies in form and function and the rehabilitation of the handicapped.

Dentistry, through the maintenance of oral health, contributes to the physical, mental and social well-being of the human race.

—O. W. B.

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REVISED FOR MODERN DENTISTRY

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"The regimen I shall adopt shall be for the benefit of my patients according to my greater ability and judgment to protect and preserve their natural dentition. I will agree to no procedure which cannot be substantiated by sound professional judgment and scientific diagnosis.

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St. Louis 8, Mo.

Editor

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Ohio State University
College of Dentistry
305 West 12th Ave.
Columbus, Ohio

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