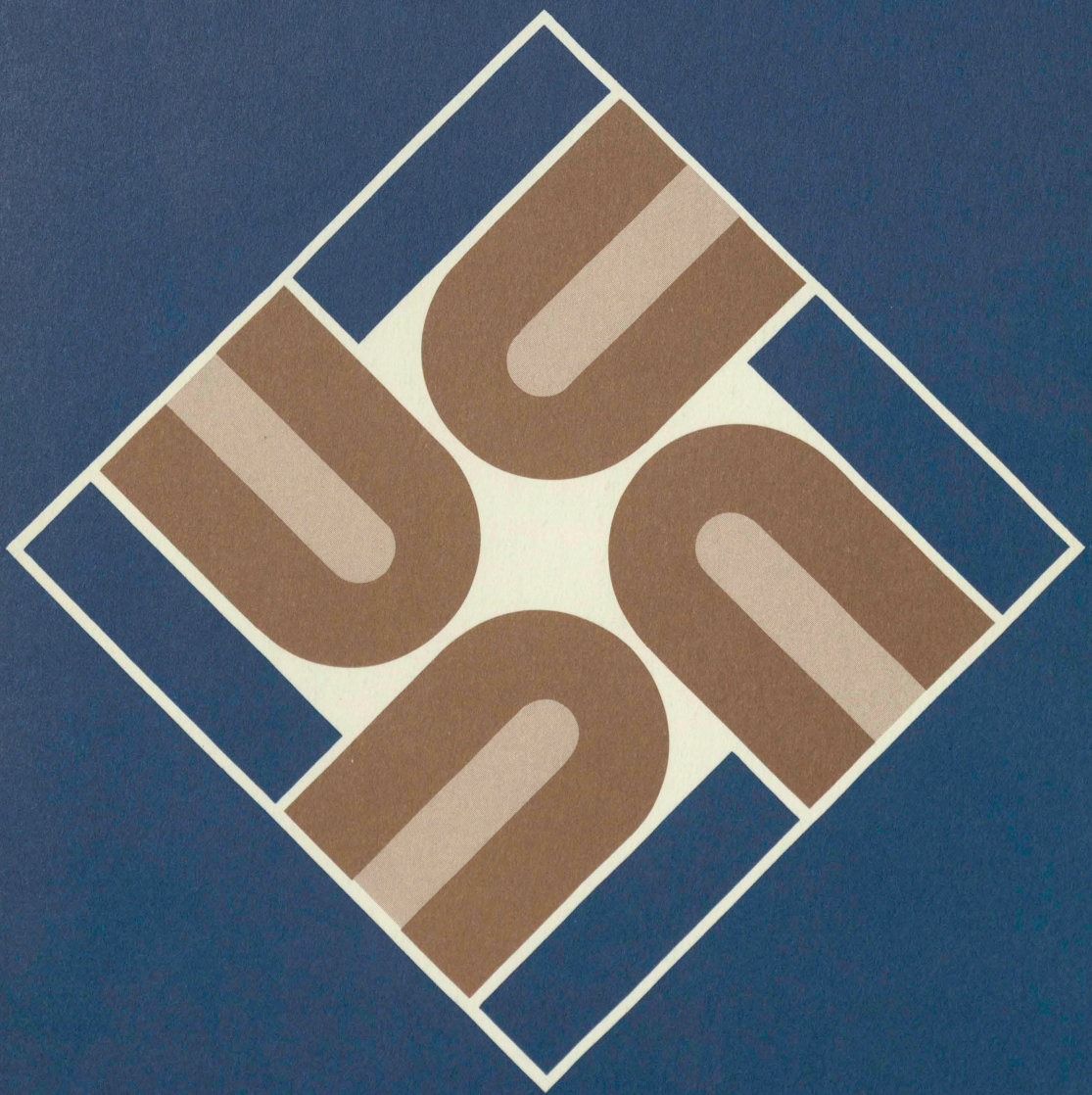
Alumni Bulletin

SCHOOL OF DENTISTRY

Spring Issue 1972



Indiana University - Purdue University at Indianapolis

Alumni Bulletin

SCHOOL OF DENTISTRY

Spring Issue 1972

Indiana University School of Dentistry ALUMNI BULLETIN

Contents

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A free and non-profit bulletin issued by Indiana University School of Dentistry, Indianapolis, Indiana, for the purpose of keeping its alumni informed of the activities and progress of the School.

Rainbows in the Paintboxes: School of Dentistry Art Club

Rolando DeCastro, Assistant Professor of Oral Anatomy

Dentistry is an art as well as a science, and that may explain why there are so many artistic people in the School of Dentistry. In the summer of 1969 several of our very talented staff members, students, and faculty felt the urge to seek an additional outlet for their creative ability through painting. Since I had the most background in this field, through my experience as a professional artist as well as a dentist in the Philippines, a few staff members asked me to conduct an art class as an extracurricular activity. Thanks to the cooperative efforts of these people—Mesdames Lee Fisher, Mildred Snyder, Twila Chapman, and Ruth Lively—the Dental Art Club/Class soon took its first energetic step. Dean Ralph E. McDonald generously offered the use of space for the evening meetings. Since then many additional members of the School of Dentistry family have taken part in club activities.

The Art Club has produced more than 100 paintings. There have been four exhibits, two at the Union Building and two at the Dental School. We have received warm letters from nice people about the exhibits. For example: "The art class exhibit in the Union Building is most interesting. Some very refreshing talents are evident. . . I enjoy passing your display frequently."—Miss Anita Slominski, coordinator of the Cerebral Palsy Clinic, Medical Center.

"The Student Activity Board wished to express their appreciation for a truly lovely exhibit in the Union Building during the month of October. . . We hope that we may be able to book another exhibit at a later date for you and your students."—Mrs. Helen Zapp, Student Activities Officer, Union Building, Medical Center.

Our Art Club members really deserve praise because most have had little previous experience, and they encounter many problems at the start. Confronted with a blank canvas, the beginner hesitates. Then after getting everything ready, he fears that he may not be able to apply the right colors and blend them properly on the beautiful outline he has prepared for his proposed painting. With some urging and guidance he gains self-confidence. But there are some problems ahead, such as how to make a jug look transparent, an apple fresh and inviting, or draperies gracefully folded or flowing. Or how to show waves rolling and splashing against the rocks.

Yet one would marvel at how these students solve such problems after only a few months of practice and exercise. As the weeks go by, their brush strokes improve while brush in hand meticulously glides over and over the canvas. Their ability to observe is also heightened. The more they observe, the more they learn. From time to time, later on, a feeling of great joy and pride comes to the student as he discovers a beautiful shade of color or a new and effective brush stroke. I feel pleasantly surprised, too, when I realize that I too have discovered something new, and together with my students I also learn a little more.

Our teaching uses a short-cut method. In their early instruction, the students are introduced to: (1) forms, proportions, and perspective; (2) lights, shadows, and shades; and (3) color harmony.

Once armed with this basic know-how, they start painting right away, with guidance. The guidance, however, is provided in such a way that each individual's style is maintained.

We begin with a still life (fruits or flowers), followed by a landscape, a seascape, the portrayal of animals and finally portraits of people.

Some of the more advanced members are now attempting to paint oil portraits. They have new challenges to meet, such as capturing not only the likeness of the model, but also his or her character and personality features that give life to a portrait.

(Continued)

ART from the IUSD ART CLUB


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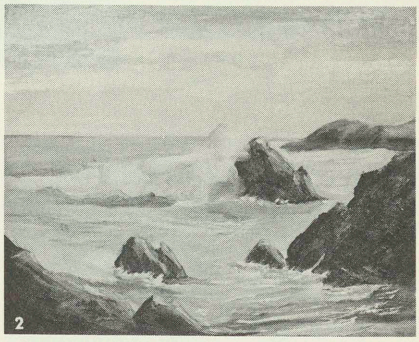
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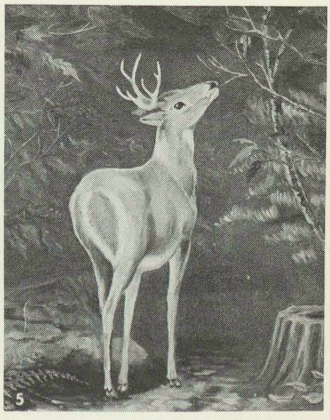
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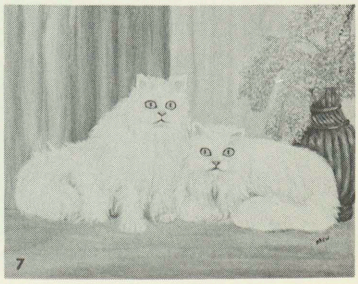
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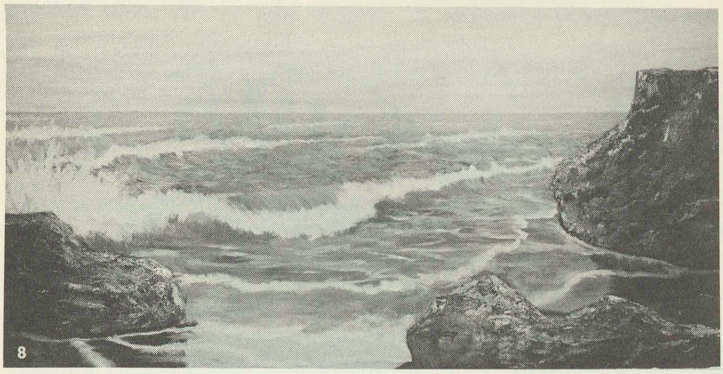
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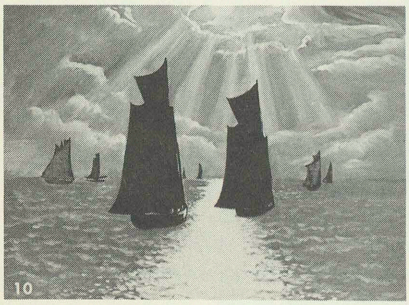
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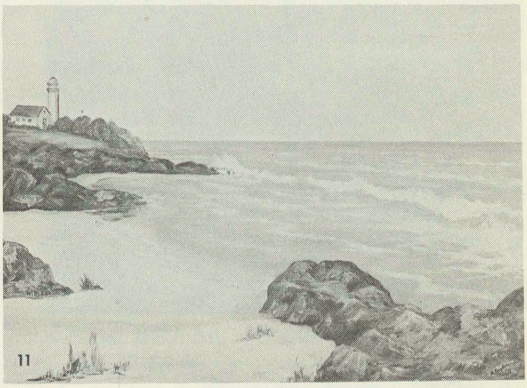
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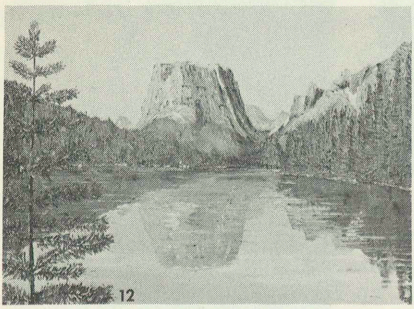
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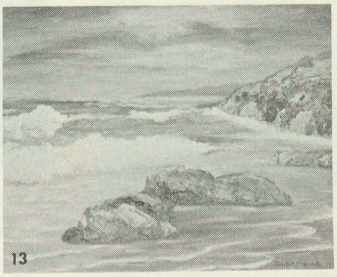
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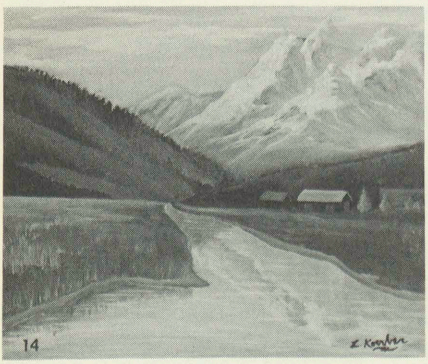
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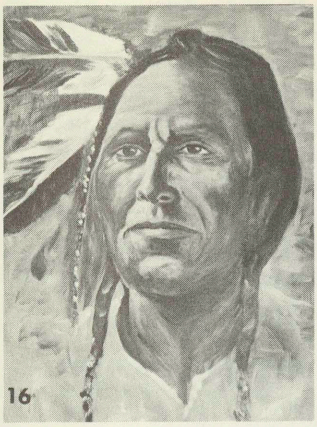
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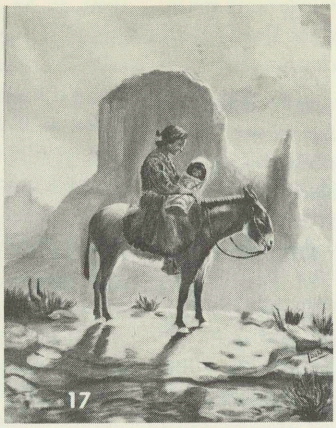
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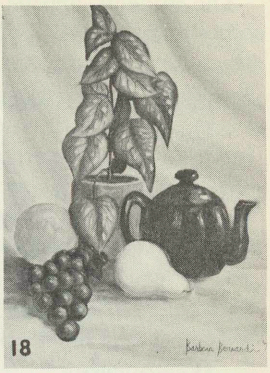
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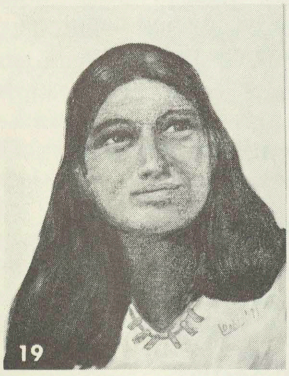
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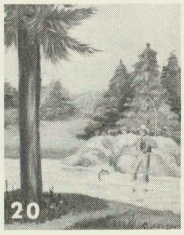
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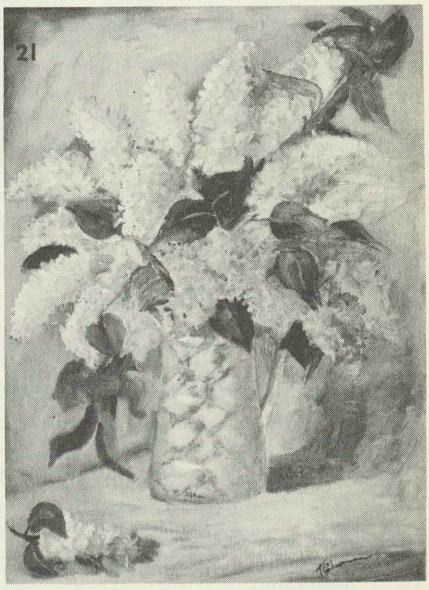
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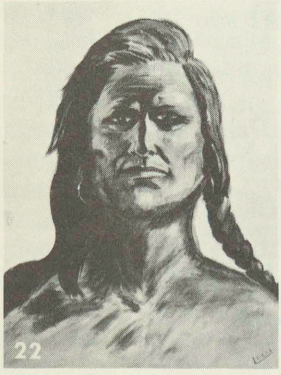
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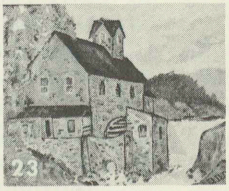
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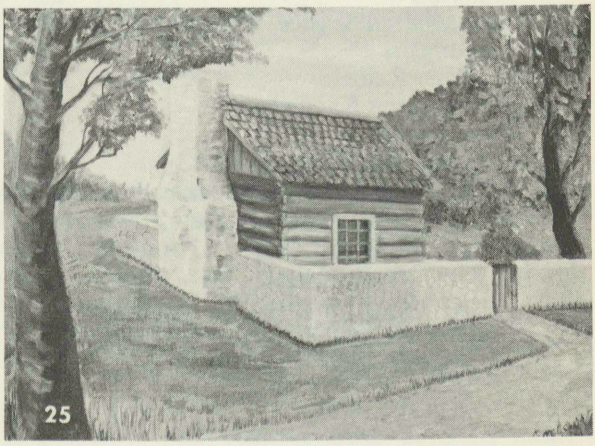
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The students' artistic development really comes in stages, as indicated in the following comments from art students:

1st Stage—"I'm afraid I won't make it, Dr. De Castro!" (Frustration)

2nd Stage—"Gee! How about that. . . I was able to do it!" (Hope)

3rd Stage—"Wow! I am not going to sell my painting for all the money in the world!" (Success)

4th Stage—"I'll paint a Siamese cat. My son wants me to paint one for him." (Confidence)

5th Stage—"I'll sell some of my paintings at the exhibition if the price is right." (The old pro speaks!)

Watching all my talented students develop their art ability is one of my pleasures as an art teacher. Another pleasure comes from the thought that the knowledge and experience gained could provide the art students with a new and improved sense of balance, control and coordination that could be useful in their performances in the school, the office, or the home.

There are other pleasures, too. Last summer the class had a combined field trip (for experience in outdoor painting) and picnic to Spring Mill State Park. Another such affair is planned for next summer, along with tours of art galleries.

The I.U. School of Dentistry Art Club will keep on working together. We will brush away worries and problems and paint the days with beauty and happiness. We have rainbows in our paintboxes.

Names of Artists Who Participated in the Recent Art Exhibit At the School of Dentistry

(Each painting on the three preceding pages bears an identification number in the lower left corner.)

Painting No.	Artist and Department
1.	Dr. Peter Reibel, Oral Anatomy
2.	Mrs. Lee Fisher, Dean's Office
3.	Mrs. Lee Fisher
4.	Mrs. Drew Urban, Library
5.	Miss Lillian Dahl, Community Dentistry
6.	Dr. Peter Reibel
7.	Mrs. Drew Urban
8.	Mrs. Twila Chapman, Dental Hygiene
9.	Mrs. Drew Urban
10.	Miss Hazel Clark, Dental Materials
11.	Mrs. Mildred Snyder, Student Instruments
12.	Dr. Peter Reibel
13.	Mrs. Georgia Kennedy, Houskeeping
14.	Dr. Leonard Koerber, Instructional Development
15.	Mrs. Dolores Riczo, Pedodontics
16.	Mrs. Dolores Riczo
17.	Miss Lillian Dahl
18.	Miss Barbara Bernardi, Oral Diagnosis
19.	Miss Lillian Dahl
20.	Mr. Kenneth Nelson, Student Instruments
21.	Mrs. Twila Chapman
22.	Miss Lillian Dahl
23.	Mrs. Diana Daly, Dean's Office
24.	Dr. Peter Reibel
25.	Mr. Kenneth Nelson

Others who have taken part in club activities include: Dr. Lee Allen, Miss Sarah Atkinson, Dr. Gary Bishop, Miss Beth Brinker, Mrs. Judy Elslager, Mrs. Isabelle Ezzell, Dr. Jose Garcia, Mrs. LaForrest Garner, Mrs. Sondra Hawkins, Mrs. Carol Hoehn, Mrs. Marie Housch, Mrs. Mahabanoo Kotwal, Miss Ellie Mahaffey, Miss Aida Mena, Mrs. Fern Mitchell, Dr. Purnima Patel, Mrs. Isabelle Poor, Miss Donna Riczo, Miss Ann Roche, Mrs. James R. Roche, Mrs. James Smith, Mrs. Mary Smith and Mrs. Bernice Tumey.

Photography by Richard Scott

Clinical Oral Medicine in Action

*David M. Dickey, Graduate Student in Oral Diagnosis/Oral Medicine**

Every dental practice has its fair share of patient problems which do not fit into the routine, or commonly seen categories. It should be emphasized that we are talking about patient problems, not problem patients, although at times the two may overlap. A concentrated effort to diagnose and clinically manage patients with unusual oral problems is being carried out by the Department of Oral Diagnosis/Oral Medicine at the Indiana University School of Dentistry, headed by Dr. David F. Mitchell. Four graduate students in the department are now working toward the degree of Master of Science in Dentistry, which will qualify them to teach Oral Diagnosis/Oral Medicine and to serve their teaching institutions as specialists in the diagnosis and non-surgical management of oral diseases and oral manifestations of systemic diseases. In addition to the author, a third-year resident, the graduate students are Dr. Dan Overholser, a second-year resident; Dr. William Goebel, a first-year resident; and Dr. Pierre Duquette, another first-year resident who has joined us on a scholarship from his school, the University of Montreal.

Besides being involved with teaching in the Oral Diagnosis Clinic, members of the graduate program conduct an Oral Medicine referral or consultation clinic on a designated day each week. New patients are worked up and evaluated, and then are either made the subject of a treatment plan or are referred to the proper specialist for treatment. Patients who have been diagnosed and are undergoing treatment are also appointed at this time. Since some patients are unable to come in on the designated clinic day and others require more frequent treatment or observation, additional appointments may be made at other times.

Patients are referred to the Oral Medicine Clinic by dentists and physicians throughout the community, by the Oral Diagnosis Department, and by other departments in the school.

Undergraduate students also benefit from the program by being exposed to some of the more interesting cases during their regularly scheduled time in the Oral Diagnosis Clinic. A weekly seminar is held for all faculty and graduate students during which difficult cases are discussed and ideas exchanged. These seminars include part-time faculty members in the O.D. Clinic, who refer many of our patients and have an interest in their progress. Our graduates also attend the weekly Plastic Surgery Tumor Conference, and spend one-half day a week in the Dermatology Clinic at Veterans Hospital.

To illustrate the work of the Oral Medicine Clinic, it may be helpful to spend some time with a few of these patients we have been talking about and the doctors who are trying to get through to their problems. Keep in mind that many of these people have already been examined by one or more dentists, and sometimes a physician or two. A thorough clinical examination with medical history is important for any patient, but it is especially critical in working up these patients. Some have long and complicated histories, and the information we want is not always readily available. To spare the reader unnecessary wading time, much of this cumbersome detail will be omitted. All the information presented here will be factual except the names.

Mrs. Hall is a 63-year-old housewife who wears complete dentures. She complained of a red, sore mouth which made it difficult to wear the dentures. She was referred by a local dentist.

"About a year ago I was in the hospital for 12 days with pneumonia. I had an allergic reaction to the reline material in my denture, and have had this problem ever since. My dentist tried different reline

* Effective July 1, 1972, Dr. Dickey will be Acting Chairman and Assistant Professor of Undergraduate Oral Diagnosis and Oral Medicine.

materials and even made new dentures, but it still didn't go away."

Further questioning revealed that she had recently been treated by a physician with gentian violet, a xylocaine rinse, bismuth injections, Nystatin (taken internally) and antibiotics. Before testing her for allergy to denture material, we decided to try a Clinicult culture. This is a culture medium specific for Candida albicans, a fungal organism, and is useful in detecting Candidiasis, or Moniliasis. Although we know that most people have these organisms in their normal oral flora, a strong positive indicates their presence in a pathogenic capacity. Moniliasis usually appears as a white plaque which can be rubbed off, but may look red and inflamed instead. The mucosa under Mrs. Hall's dentures appeared red and splotchy, but was not bleeding.

The patient was especially concerned because she and her husband had planned on leaving for Florida soon, and she was afraid that they might have to call off their trip.

She was given a prescription for Mycostatin-oral suspension and told to rinse for several minutes and then swallow. This was to be done four times a day and she was also instructed to soak her dentures in a Mycostatin solution overnight.

The Clinicult culture proved to be very positive. Mrs. Hall called three days later, as she had been asked to do.

"My mouth feels so much better. The redness and irritation are almost gone. We are going to go ahead with our Florida trip."

She was advised to continue with the medicine for two more weeks, and to call in when she returned from vacation. Four weeks later the patient was still free of her symptoms.

Miss Brown is a 22-year-old woman who had several dark, leathery, slightly raised lesions, 2 to 3 centimeters in diameter, on the left forehead and side of the face over the parotid gland region. The lesions had been there about a year, and had undergone remission and recurrence. The patient was referred from Dermatology with a diagnosis of chronic discoid lupus erythematosis on the basis of a skin biopsy performed several months earlier, and the chronic course of her disease. There was no involvement of the oral mucosa as is sometimes seen. Lupus erythematosis is not too uncommon, and the cause is not known. There is another type, disseminated lupus erythematosis, which is much more dangerous to the patient, and therefore it is important to make this distinction. Dermatology wanted to be sure that there was no dental cause for the facial lesions. The patient was examined thoroughly for this possibility. In addition, a sialogram was done on the left parotid gland. Radiopaque medium was injected into the gland after which extraoral radiographs were taken. These displayed a normally structured parotid gland, indicating that it was not being invaded by the skin lesion, nor was this lesion arising from the gland. The diagnosis of discoid lupus erythematosis stood.

A consultation request was received from the Department of Neurology concerning a physician from a small Indiana city who had been hospitalized at the Medical Center with a tentative diagnosis of cardiovascular accident. Dr. Kerrigan was having difficulty in eating because of inability to use dentures. In Long Hospital's CVA Ward we were asked for an evaluation. Dr. Overholser and I were led to a curtained-off corner where we met an amiable 50-year-old man who was practicing to write again. Dr. Kerrigan could not speak above a whisper. An oral examination revealed ill-fitting dentures and an ulcerated area in the muco-buccal fold beneath the anterior flange of the lower denture. When he opened his mouth, the upper denture simply dropped down. Severe weight loss no doubt contributed to this. He appeared fairly alert, and had fair control of facial and oral musculature. He did have some difficulty in swallowing. All other oral tissues appeared normal except the tongue. There was desquamation of epithelium along the lateral borders, resembling "geographic tongue." Dr. Kerrigan wondered if this was being caused by the dentures.

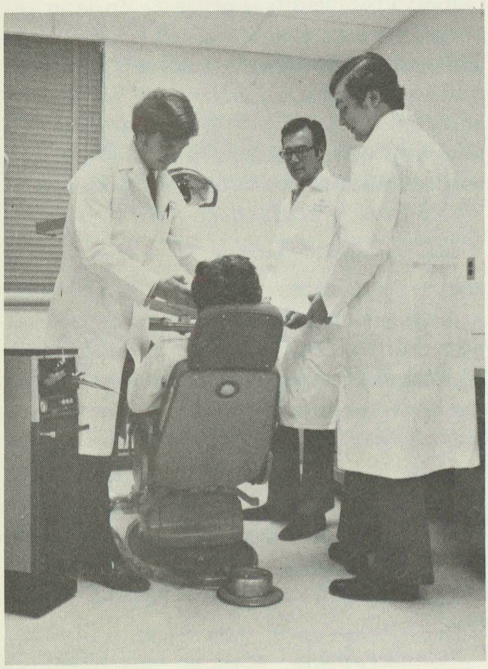
In looking at the patient's hospital chart, we noticed that one of the medications he was taking was Aldomet, an agent for controlling hypertension. Dr. Overholser consulted the P.D.R. One of the adverse reactions is sore tongue. This was explained to the patient, relieving his concern. A bedside reline followed, using a temporary soft reline material. When we looked in two days later we found that the dentures were staying in place, and the patient was able to eat much better. We advised him to see his dentist when he got home for a more permanent reline, or better still, new dentures. It was no big deal, but Dr. Kerrigan was a grateful patient.

Mr. Dunkin is a 72-year-old man who complained of a growth under his tongue which had been present about two years. He wore complete dentures. Upon examination, Dr. Goebel found a large fungating lesion several centimeters in diameter on the floor of the mouth. Also, the right and left submaxillary and cervical lymph nodes were enlarged and fixed. A history revealed that the patient had been told by a physician two years previously that the growth was related to his lower denture. He had been told to leave the denture out, rinse with Listerine, and return in two weeks. Two weeks later he was advised that there was nothing to worry about.

"What made you wait this long to see someone else about it?"

"It has gotten larger, and has been sore for the past two months."

Dr. Goebel took biopsies of two areas of the lesion. Several days later the biopsy report was back from the Oral Pathology Department: "Floor of mouth, epidermoid carcinoma, moderately well differentiated." Mr. Dunkin was scheduled for Plastic Surgery Tumor Conference. Surgical treatment was planned immediately, and a bilateral hemimandibulectomy was performed about half way back in the body of the mandible with bilateral neck dissection. The patient recovered well from the surgery, but his chances of survival for any length of time are questionable.



Dr. William Goebel (left) examines a patient in the Oral Medicine Clinic as Dr. David Dickey (center) author of the accompanying article, looks on with Dr. Dan Overholser.

Some time after this Dr. Goebel had another elderly male patient who had a white plaque-like lesion inside his lower lip with a narrow band of inflamed tissue around its periphery. Clinically we call this leukoplakia, and we see it quite often. Histologically it is called hyperkeratosis. This man's history told us that his was caused by carrying snuff in this area. Numerous cases of cancer of the oral tissue have been related to this manner of using tobacco. Biopsy showed hyperkeratosis of the lower lip. Dr. Goebel tried to advise the patient of the potential danger of his snuff habit. Undoubtedly Mr. Dunkin was still fresh in his memory. A recall appointment was set up for the patient with plans to re-biopsy his lesion. When that time came, he was contacted by phone, but said he didn't see how all this was necessary, and declined to return to our clinic. We may see him again at one of the tumor conferences. On the other hand, his "snuff pouch" may remain just that.

Occasionally patients are referred to us who have no real organic problem. This is not to say they don't have real pain and

discomfort. They most definitely do, but the cause of their affliction cannot be remedied by removing a tumor, treating an infection, relieving a muscle spasm, extracting a third molar, discovering a fracture, or what have you. In fact, none of these entities can be found. Many of these people are finally categorized under psychogenic disturbance. Although this may sound like a "cop-out," it represents a real problem, and a very difficult one to deal with.

Consider a case in point. Mr. Gilbert, a 53-year-old farmer, was referred by a dentist in a nearby community, with a chief complaint of continuous, severe headache behind the right eye. The pain had started 15 years before and had gradually become more frequent and had been continuous the past 2 years. Pain radiated to the scalp, skin of the face, maxilla, mandible, and neck. Sometimes it was triggered by eating hot foods.

This patient was worked up very thoroughly. Teeth were examined clinically and radiographically. All teeth were pulp tested. Periodontal evaluation was carried out. Routine blood studies were within normal limits. All soft tissues of intraoral and extraoral structures in head and neck were examined. There was clinical and radiographic evaluation of the temporomandibular joint. No dental cause could be found.

Previous to his appointments here, Mr. Gilbert had been examined and/or treated by a neurologist, 2 neurosurgeons, 2 general practitioners, 1 internist, an ophthalmologist, an ear, nose and throat specialist, the Cleveland Clinic, and the Mayo Clinic. The closest thing to a definitive diagnosis was right hemicranial cephalgia, or Horton's Headaches. Since 1965 Mr. Gilbert had had a craniectomy for section of the greater superficial petrosal nerve, ligation of the middle meningeal artery on the right side for an aneurysm discovered on an angiogram, and ligation of the right external carotid artery. He had also had histamine desensitization treatment three times. His wife had kept a list of medications taken during this time—some 34 different medications. Most of them were pain relievers or tranquilizers and a few were experimental drugs. After most of the treatments, Mr. Gilbert would have temporary relief, only to have the pain return. He claimed that the only thing which controlled his pain was Talwin, which he injected himself. From his wife's record:

"Talwin (3cc) every three hours through the day. John is able to sleep five to seven hours by learning to sleep with pain."

"John injured his back by falling from a haymow, and has worn a brace for two years. He fell down basement steps—brace no longer needed."

During his visits here the patient reported he had suffered an injury when his head was caught between his car door and the side of the car. After the initial pain receded, he had relief for about fourteen hours. Then the headaches commenced again.

The only treatment not already mentioned was by a psychiatrist, and it had lasted a year and a half without satisfactory results. The doctor felt initially that Mr. Gilbert's problem was organic. In later reports he noted that it was difficult to tell. The patient frequently suffered from depression and despondency and "he may be addicted to Talwin." We certainly could not help Mr. Gilbert's pain. We could only rule out several potential causes.

Not all such cases are as severe as the above. Sometimes medication can be used to help patients through acute episodes of discomfort. Counseling is often helpful. It may take several appointments before the true concern comes out. Then, in a confidential tone:

"My friend had a cousin who had a pain that's sort of like mine. They found out she had a malignant tumor in her saliva gland. She died last year from it. Do you think I could have something like this?"

"Cancerphobia" rears its ugly head! If the patient has had a thorough evaluation, he can be assured that his problem is not a dangerous one, and further counseled

on this point. Recovery is many times quite dramatic.

As the most recent member of our team in Oral Medicine, Dr. Duquette was rapidly indoctrinated into the "vague pain" club. One of his recent cases had a happier ending than some.

Mrs. Barnes, a 63-year-old housewife, reported having sharp pain and swelling around the left eye for the previous 15 days. She had similar pain two years ago, and her physician thought it could be tic douloureux. A visit to her dentist revealed an ill fitting denture which was replaced. The pain disappeared. Then, mysteriously, the pain recurred as described above. Tic douloureux, or trigeminal neuralgia, is a disorder involving the fifth cranial nerve. Although it has been described for centuries, its cause is still unknown, and a clear-cut diagnosis is quite uncommon. Dr. Duquette could not find a dental or other cause for this pain, nor did he feel that she had Tic. A seminar discussion brought agreement. But the seed had been planted two years before, and Mrs. Barnes felt that this was her affliction. Perhaps she had been enlightened by television. Dr. Duquette counseled her on her problem and explained to her why he didn't think she had Tic. Also, he prescribed tranquilizers for a short period. By her fourth visit, the patient was suffering no more pain or tenderness around her eye. Four months after that appointment, she was still free of her symptoms.

Mrs. Smith, a fiftyish secretary, said that two months previously she had felt pain in her jaw on awakening one morning, and it had bothered her ever since. Muscles of mastication were all tender to palpation on the right side and external pterygoids on left side were also tender.

"Do you brux?"

"Do I what?"

"Do you grind your teeth, particularly at night?"

"My husband says I do."

This is a familiar story in our clinic. A safe estimate would be fifty to sixty patients a year with this type of problem. And yet, as frequently as these patients are encountered, most general practitioners do not feel equipped to diagnose or treat them, and they are referred here. While the majority of them do seem to fall into Mrs. Smith's age and sex category, many younger persons are presenting with this disturbance. Most such patients are female, but males are prone, too. College students and young working wives rank high among these visitors, but we also have a number of patients on our records as young as age twelve. At the other extreme is a group of elderly patients, most of whom wear complete dentures.

Symptoms vary considerably. Besides the joint and ear areas, the discomfort may center in the maxilla, mandible, side of the cranium, teeth, maxillary sinus, submandibular or parotid glands, or the neck and base of the skull. Many combinations of these symptoms are possible. Pain is usually unilateral, but may involve both sides. Once true temporomandibular joint pathology has been ruled out by clinical examination and special extraoral radiographs, each individual's symptoms must be carefully analyzed.

One very popular theory deals with these situations as a result of faulty occlusion, no matter how minimal. The muscles get sore because the teeth are in imbalance. On the other hand, we feel that occlusal harmony is disrupted by discoordination of the delicate balance of function in the muscles of mastication, although occlusion may occasionally be a contributing factor. We have had a high rate of success in treating these people with medication, muscle reconditioning exercises, and again counseling. Almost without fail, these patients are abusing their masticatory muscles through clenching, grinding, or abnormal habits of jaw movement, and usually without being aware that they are doing it.

The underlying cause? Stress, tension, anxiety, in some form. Sometimes repeated sessions are needed to uncover the real basis. And the dreaded question comes out, not uncommonly, "Do you think I have cancer?" This attitude doesn't exactly relieve anxiety. Once the patient's

acute symptoms have been relieved, and the cause of his pain revealed, he is counseled further. He must be made aware that continued or future stressful situations may bring back his pain. But now it is much easier to live with. He knows what causes it, and he knows it can be treated.

Occasionally we see patients with real pathology of the temporomandibular joint.

Mrs. Stone, a 57-year-old woman, was referred by an orthopedic surgeon. She has rheumatoid arthritis, chiefly involving the spine. Because of pain in the jaw area, the orthopedist requested diagnostic TMJ radiographs. The patient's chief complaint was pain in the right side of the face in the area of masseter muscle. It had started about two years earlier with periodic discomfort resulting from chewing or moving the jaws a lot. Mrs. Stone was examined and extraoral TMJ films taken. While they were strongly suggestive of arthritic involvement, we wanted more conclusive evidence. Through the cooperation of the school and the radiology department of Community Hospital, we were able to have tomogram films taken with an x-ray unit called a polytome. In essence, this amounts to taking "serial section" x-rays through the TMJ at three millimeter intervals, and the resulting films are much clearer than linear tomograms or planograms. Erosive areas were clearly discernible on the periphery of the right condyle. The orthopedist was pleased with the films, and asked us to recall her at ten-month intervals for radiographic evaluation. We now have access to the services of a similar x-ray unit in University Hospital. This will be quite helpful in diagnosis of this and similar disorders in the future.

Mrs. Fraley, a heavy-set woman in her late forties who lives in a nearby city, was in the hospital for tests to evaluate hypertension. The Department of Medicine requested consultation because the patient had pain on the right side of her mouth and limited opening. It was noted in the hospital chart that she was considered to be an anxious person. Otherwise, her medical history was unremarkable. Dr. Goebel discovered that dental work had been done two weeks previously. This had been a long session with her mouth open wide for quite a time. She could open only about 10 millimeters before pain occurred on the right side, and her jaw deviated to the right. Dr. Goebel treated the muscle trismus by spraying the area of the masseter muscle with ethyl chloride for two minutes. Within five minutes, she could open ten millimeters further. Hot compresses were also recommended. Mrs. Fraley was visited the next day just before being released from the hospital and reported that her jaw was feeling much better. She was given a prescription for a muscle relaxant, and a follow up appointment.

Occasionally patients are referred with pain which does not appear to be related to the teeth, but turns out to be just that. Referred dental pain can be a confusing issue. Other patients come to us with inflammatory lesions of the oral mucosa which are not related to infectious processes. Indeed, their etiology is still not known. When anti-inflammatory agents are indicated to help these patients through acute episodes, we use them.

Another recent activity that should broaden our horizons is weekly attendance at the head and neck clinic conducted by the Department of Otorhinolaryngology. In this activity, we have been asked for recommendations for dental treatment in patients scheduled for radiotherapy in and near the oral cavity.

It is felt that this Oral Medicine Clinic is furnishing a service to the community as well as to the school. And while many questions are still unanswered, progress is being made. Anyone who would like to refer patients to the Clinic may do so by calling (317) 264-7474, or 264-8831, or writing to the Department of Oral Diagnosis/Oral Medicine at the School of Dentistry. After the case has been evaluated and dealt with in accordance with the referring doctor's wishes, the patient is returned with a complete report.

Motivating Dental Patients

Bernard L. Hinton, Associate Professor,
*Graduate School of Business, Indiana University**

A number of years ago, shortly after receiving my Ph.D. and thus moving from the rather low economic status of a struggling doctoral candidate, I decided that one thing which ought to be done in view of my new affluence was to have some dental work performed. So I made an appointment with a dentist. When I arrived at his office I was greeted by his receptionist and ushered into a small private cubicle. Now mind you, my feelings of newfound importance were such that I considered my time to be at least as valuable as the dentist's. Like most new Ph.D.'s, I was much impressed with myself and felt that I was deserving of the utmost respect and status. As I sat there somewhat impatiently, I could see the dentist in another cubicle, doing absolutely nothing. My feeling was, of course, "Let's get on with it."

While I was experiencing the usual anxieties concerning what I feared was going to happen, the receptionist brought in a little record, set it on a phonograph, and said, "We want you to listen to this." She then played the record for me, with a 10-minute programmed sequence of slides projected on a small screen. It told me all about a very interesting family of four and emphasized how important it was that all members of this family brush their teeth twice a day.

I have gone into a description of my self-image at that point in time so that you might understand my reaction. From my point of view, I was watching what might be very suitable for kindergarten pupils or perhaps first graders. I did *not* consider it suitable for me and reacted very negatively to the entire presentation. The dentist, of course, thought he was educating me; I felt he was insulting me!

With my anxiety and annoyance both at high levels, the dentist then called me in for a conference. After taking the usual work-up data, he turned to me and said, "Now tell me, how do you *feel* about your teeth?" I don't know if you use that question, but I'll freely tell you what my reaction was: I exploded! I left, giving some vent to my emotions and leaving a totally disturbed dentist, who apparently just couldn't understand my reaction. I never returned. (To allay any anxieties I may have created in you: YES, I did find another dentist; and YES, I did have the work done.)

Now I am willing to assume that this dentist in all sincerity thought that his procedure was functional. He truly believed that he was performing an educational service and was having some impact on motivating me, the patient, to desire better dental care. But it didn't work that way. It's a little difficult to generalize from a case example of one, but my prediction would be that it *rarely* works that way. The question then becomes "why?" How *can* you motivate a patient?

As is so frequently the case with psychological terms, there are two completely different meanings to the word "motivation." Sometimes we refer to motivation as an internal force, what I call a determinant of behavior, that which causes someone to do something. So we have motivation as in, "Why did he do something?" Why are you here at this Teaching Conference, for example? What is your motivation? I'm sure that if I went around the room and elicited responses, I would get a multiplicity of them. Each one presumably would reflect some internal need that you felt, which obviously has to be individualistic.

Thus I can talk about motivation in terms of a choice process, an internal

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* This article was adapted from Dr. Hinton's presentation at the opening session of the Seventh Annual Teaching Conference of the School of Dentistry on September 10, 1971, in Brown County State Park.

phenomenon. Why does the patient go to see the dentist? Why does the patient *not* go to the dentist? Why does the patient avoid certain kinds of procedures? Why is he resistant to your excellent professional advice? After all, you're practicing as a professional and it is presumed that you are fully competent in your field. I'm sure that sometimes it is difficult for you to understand why the patient says, "That's nice, but NO!" Why?

The second meaning of the term "motivation" is what people usually mean when they say "to motivate someone." How do you motivate a patient, for example? Such, an action is an external function or what I will call an influence process. It is my firm belief that as far as motivating someone else is concerned, the concept is simply not valid. If we start with the assumption that all behavior is caused, that one does something for some reason, the ultimate locus of that reason must lie within the person, within his need structures, whatever they may be. If you accept the idea that the individual's behavior is determined by something internal to him, that the patient seeks dental care because of some felt need, whether it is a toothache or some feeling that he may have about dental care, and if you then start talking about "motivating" someone, you find yourself in a logical inconsistency. If the force, the motivational force, is internal, all you can really do is attempt to *influence* the choice process!

An individual who has felt needs selects actions, and he selects from a variety of alternatives. If you are going to have an impact on another individual, you can't simply push him, like a balky mule. The mule just won't push. What you *can* do is to provide him either with an alternative set of choices or with different kinds of perceptions and evaluations of the alternative choices he already sees.

These really are two quite different approaches. Let us discuss the internal process first. The essence of what you usually mean when you say "to motivate" is an interaction between two individuals, one of whom is attempting to influence the internal choice processes of the other. Keep in mind that you, the dentist, trying to influence your patient to seek out better dental care, are doing exactly this, *but from your frame of reference.* What you perceive as being good dental care is a direct function of your value system, and that value system has been highly developed by the process of professionalization.

Professionalization can be defined as "what you learn in dental school," but it can also be defined in terms of value structures. You, as a faculty, support each other's value systems. What is your objective when you teach your students? You want them to become like you. You want them to believe what you believe. You wouldn't be teaching it if you didn't believe it. You really want them to become almost a carbon copy of you, whether you are aware of it or not. That includes not only your knowledge, which you view as valuable and therefore worthy of transmission, but also your attitudes. You say that one particular student will never make a good dentist because he doesn't have a professional attitude. He doesn't have the attitude that you have. Your attitude is professional—what else do you have to judge from? Certainly, what I possess is dearest to me and provides me with the most valid frame of reference! So we evaluate everyone on the basis of our own frame of reference, our own values.

Now that is quite understandable in a learning relationship, but have you considered that you are really doing exactly the same thing when you have a patient in your chair and you give a diagnosis. You implicitly say, "This is my decision about what ought to be done to cure your problem." You implicitly say that the end state of affairs you describe is desirable, but do you really ask yourself whether the patient feels that way? Maybe all the patient really wants is to get rid of that pain in his mouth, and you want to rebuild his dental structure completely.

It may be very difficult for you to understand why the patient says no. What do you attribute it to? Well, you can begin seeking reasons. Maybe he can't afford it. Maybe. But have you considered that the

patient may really be responding to a value structure that is totally different from your own? You believe in dental hygiene. Maybe he doesn't, and if that is the case, what are the ramifications? If you attempt to motivate him from your value structure, you are appealing to nothing. You may be absolutely correct. If the patient follows your advice, he is going to have excellent dental health. But he doesn't care; he simply doesn't value it.

Two distinct kinds of activities are related to patient motivation. The first is the general public campaign of dental health education. Let's label it "Educational Process of the Patient." The second involves a more direct interpersonal relationship, when a patient has subjected himself to the dentist's direct influence. I will argue that there is a critical difference in one's ability to exert influence under these two circumstances; that difference lies in the nature of the relationship.

In the first case, the dentist does not have a personal relationship, and that is why most educational programs aimed at the general public are generally quite unsuccessful. Consider the massive campaign in recent years to get people to wear safety belts. It hasn't worked. It just absolutely hasn't worked. One can use a fear appeal, "If you don't use your safety belts, you are going to die," which assumes that no one wants to die. But people still don't wear their safety belts. One can use a rational appeal, a statistical appeal, one can start young, and one can start old. One can use everything in an entire bag of tricks and maybe 15-20 percent of the people will wear their safety belts.

How many people really brush their teeth three times a day? How successful has that campaign been? My argument is that the nature of the relationship is the crucial point. When a patient has voluntarily established a dependent relationship with the dentist, that is a very important consideration. Note that he is the professional; he is presumed to have the competence, the knowledge and the expertise. When the patient comes to him, he in essence is saying "I am ready to adopt some of your value structure." But what happens next? This is where I think there is a great deal of room for improvement. In my own experience, which I related to you at the outset, I'm sure that the dentist felt he was presenting me with useful, valid information. And when I left, after his emotions had subsided (and he was a little bit emotional, too), I'm sure that he said, "Where did I go wrong? Something must be wrong with that fellow. Here I presented him with good information, I told him what he ought to do, and he rejected it. Why?"

A few minutes ago I made reference to a choice process—how an individual responds to something. Sometimes we make decisions because we have learned through past experience that the results are pleasurable, or painful. I go to the dentist and it hurts, so I don't want to go back. Now admittedly there is not very much you can do about that, but the end result is not only direct experience but vicarious experience as well. A child who has never been to the dentist is afraid of the dentist. Why? Simply because he has *learned,* through a social learning process, that dentists hurt; and if the dentist hurts, he doesn't want to go. Now you tell him, "Ah, but if you don't go to the dentist, your teeth will rot and fall out of your head," or "You will have immense pain, you will develop toothaches."

That's all nice and fine, but the child has never experienced a toothache at this stage of the game. You can *tell* him what may happen but it will have no meaning to him. He will voluntarily visit the dentist when his tooth begins to ache. There's a reinforcement, a very strong reinforcement for a given behavioral act. But telling him it may happen won't convince him.

People rely much more on their personal experiences than on anything they are told. I teach in a graduate school of business and I teach behavioral sciences. The biggest problem I have is not with undergraduates but with graduate students. With students who have no work experience everything is nice and simple. I am the authority figure; I stand up and tell them how it is, how people behave and why. They sit there, nod their heads and write

it all down so they can memorize it and feed it back to me on the exam which they think is what I am reinforcing. At the graduate level, however, you frequently get someone with many years of experience behind him whose company has told him, "Hey, you'd better go back for a master's if you want to get that final promotion." The guy walks in feeling that he is an expert. He's got a lot of experience behind him, and the minute you say something, he says, "But I can think of an example where that isn't true." In other words, his particular experience doesn't agree, so he rejects your point totally.

The same thing happens when I go to the dentist and he says, "Look, you've got a big cavity here. If I don't do something about that you are going to lose that tooth." Well, now, wait a minute. I happen to know that I have had that cavity for at least two years because last time I visited the dentist, two years ago, he told me the same thing. But nothing bad has happened. And if it hasn't happened to me yet, I don't believe that it is going to happen. I'm an optimist. Somebody else will lose all his teeth, but I won't. Because it hasn't yet happened to me.

The problem comes down to how you can influence this matter of choices. You clearly are not going to be able to convince the patient of what is going to happen on a purely rational basis because he doesn't believe your data. He believes his own experience as data.

Please note that I said, "on a purely rational basis," which brings me to a very important point. We all like to think of ourselves as quite rational individuals. We are intelligent, we are rational, we do what we ought to do, we are capable of sitting down and reasoning things out, etc. There is, however, another aspect to all behavior. Some things we do because it is logical and rational to do them. Maybe my rationality says, "You're right, I really ought to have that tooth extracted." But I'm afraid of it. I've got an emotional response.

We all have emotional responses. We all get an increase in our level of anxiety when we talk about going to the dentist, "AH AH, pain, discomfort, inconvenience, I don't want that. I know I really ought to, it's good for me, in the future there will be a nice payoff, it will lead to less future pain. But I don't want to." That's not so difficult to understand. Most of us are well aware of the fact that we behave both emotionally and rationally. When I got up and stormed out of that dentist's office, I knew that it wasn't going to influence him at all. He was going to write me off as some kind of emotional nut, and as far as he was concerned, he was better off without me.

But a very important fact needs to be stated right here. Although we are well aware of our own emotional responses, when we are evaluating someone else's behavior and trying to understand it, for some reason we have this overwhelming propensity to assume that he is going to behave rationally! It's all right for us to behave emotionally because we understand why we are doing it, but why doesn't he behave rationally? I can understand why I don't go to the dentist: because I don't want the pain, because I have all this anxiety, because of all these reasons that I can come up with. Yet if my child has a cavity, and screams and fights and refuses to go see the dentist, I don't understand that. My response is not, "OK, I understand your anxiety, how can I show you that it has no valid basis, or if it does have a valid basis, that the consequences of any other course of action are even more negative? How can I demonstrate to you that this is the thing you ought to do?" I don't react to my child that way. I say, "Look, you've got to do it."

All too often we fail to understand that the other individual is making an emotional response. When a patient says, "I can't afford it," does he really mean that? Or does he really mean that he has a high level of anxiety, that he fears you are going to hurt him, that he doesn't trust you or your profession. Do you ever question whether the patient trusts you? You know so much about what ought to happen that you assume you are going to be accepted as an authority. You assume that the patient is going to say, "That's right," but the patient doesn't necessarily say that at all. He may say, "What you're really trying to do is sell me a very expensive job.

Boy, you must really not be very busy this time of the year." Although he may rarely communicate that frankly with you, it may in fact be the way he feels.

Earlier I mentioned my unfortunate experience with a dentist. Now let me tell you about a dentist I liked, who used a different approach and evoked a different response. By way of background, I should say that at the age of 12 I was missing a healthy percentage of my permanent teeth due to the many cavities I had had, which were usually "treated" by extractions. So at this later stage, some years afterward, my new dentist told me: "Well you need three bridges and you need all this other work." My first thought was, "Whom are you trying to kid? I have lived for over 30 years, and they've been missing since I was 12 and you're telling me that now my teeth are going to have problems. I have had 16 years of experience with my mouth in this condition and nothing disastrous has happened. Just whom are you trying to kid?"

In brief, I had all kinds of negative reactions. Finally, though, you can rest assured, I was convinced. But it wasn't by any kind of "educational technique" that met the needs of the dentist, such as the little slide program that the other dentist had used. This is what happened: When the dentist told me what he felt I needed, I asked him, in effect: "What are you really trying to do? I understand that you have to make a living, but do you have to make it all off of me?" (I was still a little bit concerned about the economics, as I guess we all are.) Well, he then went on to say, "What do you want?" Now that's quite different. He is not saying, "Here is what you should have." He is not saying, "Look, I'm going to push you in this direction because I, the expert, know." He is saying, "What do you want?" He is attempting to tap my needs. So I told him! Well, he didn't agree. "That may be what you want," he said, "but that's not what you need."

I'm not emotional at this stage of the game, am I? I'm not fighting him. He can then begin to demonstrate, to show me that there is a critical difference between what I may want and what I need. As a patient, I have to rely on the dentist's professional competence to tell me what I *need,* but I know what I *want,* and the two can be distinctly different. Somehow my wants and my needs must be made to coincide. This obviously is done by appealing to something in my choice processes. The dentist is not doing it for me; he is not motivating me. All he is saying is, "Look, you didn't understand all of these choices."

I don't resent that. I don't have any negative reaction to it, because he is not trying to push me in any direction. He is only expanding my choice horizons. He is educating me, but he is simultaneously convincing me that my value structure is wrong. *But not from his frame of reference.* He is not saying, "Here's my value structure. Why don't you just accept it?" He is doing something very different, and exerting a much stronger influence on my decisions.

If you will forgive me for waxing academic for just one moment, I want to classify three kinds of influence, labeled "compliance," "identification," and "internalization." Without naming it, I have already discussed compliance. I say to my child, "Father knows best. You need dental care. You must have that cavity filled. You will do it." Another example is the dentist, who implicitly says, "I am the authority figure. I am the dominant figure in this particular relationship." Then he explicitly says, "Please get in the chair." I do it. I comply. He says, "Open your mouth." And the last thing in the world I want to do is open my mouth, but I do it. He follows with a full set of instructions with which I comply. Then, when he finishes, he says to himself: "I have been successful." In his frame of reference he *has* been successful. He has been successful in giving me expert, professional, competent dental care. Maybe that's all he's concerned with. But what he has also been successful in doing is convincing me that dentists are indifferent to human suffering, that dentists really don't care about anything except fixing that tooth. And I'm much more concerned with how much it hurts than I am with the tooth.

What is the result? I have complied, but only because I am in a dependent relationship. Such compliance results in a behavioral change, but never in an attitudinal change. It is like the compliance of an individual in prison: "I will do it, but I don't like it." As a matter of fact, I will probably form a strong emotional reaction against repeating the action.

Now is that important? It certainly is—because the minute I move outside of that dependent relationship, I no longer have to comply. My attitude remains negative. When I go to your dental office once, I comply to everything you say. I comply to making an appointment for the next visit because I am still in a psychologically dependent relationship and I will do what you tell me to do. But I won't keep my next appointment, because as soon as I leave I'm not dependent on you any more. My attitude hasn't changed; it's still negative. A dentist's office equals pain, aversive stimulus, and is to be avoided if at all possible.

The second process I mentioned is that of identification. This is the process whereby an individual will emulate an ideal or idealized symbol. What does a toothpaste company do when it wants to get people to brush their teeth? In its advertising you find some form of sex symbol or status symbol. It is saying, "Here are some individuals who have bright shiny teeth because they use our product. If you use our product, you will have bright shiny teeth and you will be like them."

The primary problem with trying to use this method of exerting influence is that you have no control over whether the person you are seeking to influence will identify with this stated ideal or symbol. You can stand up in front of your students and say, "I believe that in this instance this particular technique or routine is the optimal procedure." If the student identifies with you, if he says, "I accept this individual as an ideal, as meeting my criteria for a model that I would like to emulate," then you can influence his behavior. But you don't have any control over that. So use this approach if it is feasible but in most cases you can't count on it.

We come now to the third way of exerting influence, the one that I am really advocating, the process called "internalization." This is what I was really getting at when I talked about the development of value structures. It is the essence of the development of professionalization. I will also argue that it is the essence of any effective doctor-patient relationship. What you are attempting to do is to change this individual's view of the world. You want him to feel about dental care the way you feel about dental care. Because if he does, if his attitudes have changed, if he feels differently about it, his behavior will follow, he will have become *self-motivating*. He will feel that it is important to secure good dental care and he himself will do whatever is required.

The problem, then is to develop this kind of internalized value structure. It is not easy. To some extent one can use the individual's rational thinking processes. He can be presented with information, shown models. "Look at this example. This is a cast of a set of teeth that were taken care of properly. This is a cast of a set of teeth that were not; note the consequences." The dentist can appeal to the individual on a rational basis, granted only that he understands that an emotional response will go along with any rational response.

I do not think it is a feasible idea to try to make you a psychotherapist. My personal feeling is that in most cases people who have other professional orientations don't make very good psychotherapists. However, this does not mean that you cannot respond with understanding to the emotional motivations, the emotional needs of the patient with full awareness that in most instances these, if aroused, will supersede any kind of rational response.

With that in mind, consider the individual who comes to you with a high level of anxiety as he climbs into your dental chair. How unrealistic it is to assume that he is going to automatically follow a rational argument! You must deal with the emotional responses first; *then* you can do something about appealing to him in your frame of reference. You can really achieve

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Premedication in Pedodontics*

Gary Dilley, Graduate Student in Pedodontics

Ideal premedication should reduce preoperative psychic tension without simultaneously depressing respiration or circulation. It should also promote the ability to respond, but not cause over-reaction to stimuli, nor produce nausea, vomiting or dizziness. The overall effect should be to decrease the hyperawareness or excitability often seen in the child dental patient.[1] However, the principles of proper behavior management must be the practitioner's primary concern. Observing those principles may minimize the need for premedication.

It is generally agreed that only a limited number of drugs should be used for the child dental patient needing premedication. The three drugs most commonly used are Demerol, Phenergan, and Vistaril. However, this informal survey will review a wide range of other drugs as a matter of reference.

Dosages of the following drugs are only ranges or averages, since children vary considerably as to the amount necessary to produce the desired results. No set rule can be used for every patient, such as Young's Rule or Clark's Rule. In situations where premedicants are indicated, general considerations in determining dosage include the following:

1. Past medical and dental history.
2. Age (as age increases, generally dose increases)
3. Weight (as weight increases, dose increases)
4. Psychologic aspects, i.e. an emotional or stressed child will require a larger dose
5. Physical activity of child.
6. Time since last meal (drugs generally act more efficiently on an empty stomach)
7. Time of day.
8. Basal metabolic rate, pulse, and blood pressure.
9. Route of administration[2].

After the patient has been evaluated and the initial dose administered, there is a possibility that the dose may be insufficient. In such cases the medication may be increased in increments not to exceed the safety margin. The proper dosage should be established at the first visit, if possible, for ease of administration at later appointments.

In deciding upon a particular medication, the following criteria should be taken into account:

1. The drug should produce minimum toxicity in therapeutic range.
2. Duration of effect should be of length desired.
3. Onset of action should be rapid.
4. There should be a low incidence of side effects.
5. After effects, if any, should be minimal.
6. The drug should be effective and suitable for outpatient therapy of an ambulatory patient.
7. Dulling of the senses, decreased perception, or interference with mental activity should be minimal.
8. The drug should be available in suitable forms for easy administration and at reasonable cost.[3]

Three major categories of drugs will be discussed: 1) Tranquilizers, 2) Sedatives and Hypnotics, and 3) Analgesics.

Tranquilizers

Tranquilizers include:

1. Phenothiazine derivatives (Thorazine and Compazine)
2. Meprobamates (Equanil)
3. Chlordiazepoxide (Librium)
4. Phenaglycodol (Ultran)
5. Diazepam (Valium)

*This paper was adapted by Dr. Dilley from his Senior Essay in the School of Dentistry.

6. Antihistamines
   a. Hydroxyzine HCl (Atarax)
   b. Hydroxyzine pamoate (Visatril)
   c. Promethazine (Phenergan)

Phenothiazine Derivatives (Thorazine and Compazine)

Thorazine is used to control psychotically disturbed, grossly assaultive, combative, agitated or restless behavior of the patient, regardless of underlying etiology. It may also be used to potentiate other sedatives and analgesics. Thorazine is believed to act by offering protection from stress by altering the ability of the patient to respond to external aggression. It will alleviate anxiety, prolong and intensify central nervous system depressants, and produce antiemesis as well as xerostomia.

Complications may include a hypotensive phenomenon (this is a transient reaction and usually disappears by the time the dental appointment is completed), and thorazine should therefore not be used on the patient with high, low, or labile blood pressure. Also, when this drug is used over a period of time (5-7 days) jaundice, nasal stuffiness, a hypothermia effect, or (rarely) a blood dyscrasia may appear.

Thorazine may be administered orally or parentally in 10 to 20 mg. doses for a 50-pound child, 2 to 3 hours before treatment.

Compazine is very similar to Thorazine, but is stronger and quicker acting. Only 5 to 10 mg. 45 minutes before treatment need be administered.[1,4,5]

Meprobamate (Equanil)

Equanil has both antianxiety and muscle relaxant properties. It is a central nervous system relaxant but does not suppress the autonomic nervous system. It will selectively reduce exaggerated responses to stimuli. Equanil is also noted for not potentiating the barbiturates. Because of the very few side effects, it is a drug of choice for long-term medication.

The most common side effect is drowsiness. Rarely, an allergic reaction consisting of a skin rash may appear.

Kopel[1] states that a 3-year-old may require 200 mg. while an older child may need 400 mg. The drug is given the night before and one hour before the appointment. The drug becomes active in 30 minutes, with maximum effect in 1 to 2 hours. It should begin to taper off in 4 to 6 hours.[4]

Chlordiazepoxide HCl (Librium)

Librium is used very effectively for the relief of anxiety, apprehension, and tension over a wide range of disorders. Due to its sedative effect, some muscle relaxing qualities will be noticed. There may be some drowsiness, ataxia, and confusion. Also it is not advisable to use it in conjunction with other central nervous system depressants for a dental appointment.

Oral dosage for children over 6 years is 10 to 20 mg. daily. It is not advisable to use Librium in children under 6 years of age.[6]

Phenaglycodol (Ultran)

Ultran is a neuro-sedative and therefore a central nervous system depressant. Its anti-anxiety, muscle relaxing, and calming effects are in the same range as those of meprobamate. This drug is apparently free of side effects and has a wide margin of safety. It is useful for extensive operative treatment over a prolonged period. The only untoward effect is possible drowsiness. A normal dose is 200 mg. orally.[1,7]

Diazepam (Valium)

This drug is very similar to Librium but five times more potent. It is useful in symptomatic relief of tension and anxiety states resulting from stressful circumstances. It induces a calming effect without peripheral autonomic blocking action or extrapyramidal side effects. An adjunct is a muscle relaxing quality of the drug.

Valium should not be given to children with severe heart, respiratory, or mental disorders. Valium also should not be used in conjunction with other central nervous system depressants, phenothiazines, or monamine oxidase inhibitors. If large doses are given, drowsiness may occur as well as some mild ataxia.

For children over 2 years, 2 to 5 mg. is administered orally at bed time the night before and 5 to 10 mg. 45 minutes preoperatively. The drug is usually effective in 15 minutes. Valium should not be used in children under 6 months of age.[1,8]

Antihistamines

Hydroxyzine HC1 (Atarax)

Atarax will diminish nervous and psychic tension and will promote emotional peace, but it will not paralyze or induce hypnosis. Emotional calm is attained without depressing normal functions of the central nervous system. Patients tolerate Atarax well, without dulling the senses or changing mental activity. Toxicity of the drug is very low. Atarax also seems to potentiate barbiturates and meperidine and has a wide range of safety. It is very effective when used in conjunction with nitrous oxide-oxygen analgesia.

The only noticeable side effects are slight drowsiness, a slight drop in pulse rate, and possibly some xerostomia.

For children under 4 years of age 10 mg. is given. Older children are given 25 mg. orally 30 to 45 minutes preoperatively. Duration is usually 1 to 2 hours.[1,3,9]

Hydroxyzine pamoate (Vistaril)

Vistaril is nearly identical to Atarax. It is very good for management of emotional stress due to anxiety, tension, agitation, or apprehension. It has a calming effect in the anxious, tense, or hyperkinetic child, without impairing mental alertness. Primary skeletal muscle relaxation has been demonstrated, as well as the control of emesis. Vistaril is very effective in cardiac patients for its ability to allay associated anxiety and apprehension. This drug has a wide margin of safety and no demonstrable toxic effects.

Vistaril will potentiate Demerol and barbiturates, and therefore caution should be exercised when it is used in conjunction with central nervous system depressants. Slight drowsiness may be experienced, and when used in high doses xerostomia may occur.

Children less than 6 years old usually require 25 to 50 mg., while those over 6 years require an oral dose of 50 to 100 mg. daily.[10]

Promethazine (Phenergan)

Phenergan can be considered a "psychic sedative" and is especially good for apprehensive or mentally disturbed patients. This drug will produce a state of quiescence with little or no sign of interference with medullary function and without respiratory or cardiovascular depression. It may produce a light sleep from which the patient may be easily aroused. Pain may also bring the patient out of his state of quiescence. Phenergan is a good antiemetic and has some amnesic quality. One of its indicated uses is to potentiate central nervous system depressants.

The rare side effects are dizziness, blurring of vision, and xerostomia.

Dosage consists of 12.5 to 25 mg. 12 to 24 hours before the appointment and 12.5 to 50 mg. orally one hour preoperatively.[1,11,12]

Sedatives and Hypnotics

Barbiturates

The barbiturates all act in a similar manner by way of central nervous system depression, and only their period of action is different. They will control anxiety and relax the patient. In sufficiently high doses and without pain, they will induce sleep. The barbiturates as a class are habit-forming and cross tolerance is possible with any one of them. It must be remembered that this group of drugs does not remove pain.

Secobarbital (Seconal) and
Pentobarbital (Nembutal)

Either of these barbiturates is readily absorbed with a sedative effect in one half hour. Both are especially effective in eliminating apprehension and uncooperativeness. Physical dependence with these is uncommon. They are both synergistic with analgestics.

Side effects are minimal, with no effect on blood-forming organs, and rarely a skin rash may appear. Tolerance and cumulative effects usually develop very slowly. However, the patient may awaken in a "drunken-like" state and may want to sleep for the rest of the day. Elimination of the drug is slow and it may take 24 to 48 hours to fully rid the patient of the effects of barbiturates.

Contraindications to the use of barbiturates include a diseased or damaged

liver (the site of detoxification), an allergic reaction, or concurrent use of other drugs. If increased doses of Seconal are used, there is a possibility of ataxia, restlessness, nausea and vomiting.

The average dosage is 25 to 50 mg. orally or parenterally; however, an effort should be made to determine the proper dose on the first visit to prevent the excitement stage, which is possible when an insufficient amount is administered. This same excitement stage may be encountered as the drug wears off. If the drug does not produce the desired effect, it may be increased not to exceed the safety margins.

Non-Barbiturate Sedatives and Hypnotics

Chloral Hydrate

This drug may show good results in treating the apprehensive patient. With the increased resistance during daytime administration, choral hydrate produces only sedation. It acts on the cerebral cortex to quiet sensory and motor excitement, and induce sleep. The medullary centers are unaffected and therefore pulse and blood pressure will remain normal. Chloral hydrate is readily absorbed from the gastrointestinal tract, but it may produce a mild irritation to gastric mucosa.

Tolerance and habituation may occur if many repeated doses are given, because the liver gains increased capacity to conjugate chloral hydrate. In massive doses deep narcosis and depression of respiration will occur. Anesthesia may be produced and the margin of safety is small at these levels.

Chloral hydrate is contraindicated in the patient with severe kidney, liver, or heart disorders.

Sedative dosage for children is 10 mg./lb. of body weight to a maximum of 500 mg. one hour preoperatively. A hypnotic dose is twice the sedative dose. This drug reportedly works well when used with Phenergan. Chloral hydrate up to 500 mg., in addition to 25 mg. of Phenergan, may provide excellent results without any nausea.[14,15,16]

Ethenamate (Valmid)

Valmid gives rapid relief of nervous apprehension and provides tranquil cooperation. It has a more rapid onset and a shorter duration than any barbiturate. It too is a central nervous system depressant. In a normal dose, it has no specific effect on blood pressure, pulse rate, or respiration.

Unfavorable effects include some drowsiness, lethargy, and slight hangover. The hangover is less than that produced by a barbiturate. Valmid should not be used on a patient under 10 years of age.

A normal dose is 500 mg. given 20 to 30 minutes prior to dental treatment.[1,19]

Analgesics

Meperidine (Demerol)

Demerol is an analgesic, spasmolytic, and sedative. The analgesic action approaches that of morphine. Its sedative action is definite but not expressive and restlessness is usually relieved. A belligerent patient becomes passive and responds to questions and procedures in an indifferent manner. In a majority of patients, sleep may be induced. With Demerol a slight elevation of the pain threshold is experienced, as well as a decrease in the salivary flow. Therapeutic doses exert only a slight effect on rate and depth of respiration, while heart rate is not affected. The drug is usually well tolerated and non-toxic in therapeutic doses.

Side effects consist of dizziness, nausea, and vomiting in a few cases. The side effects occur within 15 minutes of administration and are of brief duration. With continued use, tolerance and addiction become a hazard.

Doses range from 13 to 75 mg. given intramuscularly or subcutaneously. The drug becomes effective 15 to 30 minutes after injection and lasts for 3 to 4 hours. Demerol and Phenergan in combination are very effective as premedication. It is therefore advisable to use Phenergan orally before treatment. Phenergan will potentiate the Demerol and reduce the nausea produced by Demerol. When used in combination a heavy sedation may occur with loss of rapport and lack of ability to cooperate.[21,20]

Alphaprodine (Nisentil)

Nisentil is a rapid-acting synthetic analgesic that is less intense than morphine but two and one-half times as potent as

Demerol. The patient remains orientated, cooperative, and usually exhibits a sense of well-being. There is little tissue reaction and it therefore can be given in the area of normal dental injection. Nisentil is well tolerated in small doses.

Side effects include itching of the nose, dizziness, ataxia, nausea and vomiting. But these occur in a small percentage of cases. A serious potential side effect is respiratory depression, but this is rare when minimal doses are prescribed. Nisentil is addicting.

Contraindications to the use of Nisentil include liver dysfunction (site of drug inactivation), increased cranial pressure, intracranial lesions, and hypersensitivity to the drug. Also, Nisentil should not be used in conjunction with barbiturates due to respiratory depression.

A dose of 6 mg. gives onset in 10 minutes and lasts for 2 hours. Many of the side effects of Nisentil are lessened or alleviated when it is used in conjunction with Phenergan.[11,20]

A standard precaution to be observed any time a narcotic analgesic is used is to have a narcotic antagonist readily available, either nalorphine HC1 (Nalline) or levallorphan tartrate (Lorfan). To combat any narcotic poisoning or overdose, which could cause respiratory depression, the practitioner should have close at hand an antidote dose. The antidote dose should be withdrawn in a syringe *before* a narcotic analgesic is administered. The dosage for Nalline is 5 to 10 mg. and for Lorfan 0.5 to 1.0 mg. administered subcutaneously, intramuscularly, or intravenously. If the respiratory depression continues, the dosage may be repeated.

Balanced Premedication

A combination of Demerol, Nembutal, and Scopalomine will produce a relaxed, sedated, and cooperative patient, with a reduction in salivary flow. The child in many cases will be amnesic of the dental treatment, but the mental capacity to understand and respond will be materially diminished. After the use of a balanced premedication the patient may lapse into sleep from which he may be easily aroused.

There are few side effects beyond those of the individual drugs.

In administering these drugs the Nembutal should be given first. Fifteen minutes later the Demerol and Scopolamine may be injected. A generalized chart for administration follows:[22]

Age (years)	Weight lbs.	Demerol (mg.)	Nembutal (mg.)	Scopolamine (mg.)
2-3	25-30	20	30	0.15
3-5	30-40	25-30	60	0.2
5-8	40-55	35-40	60	0.2
8-10	55-65	50	90	0.3
10-12	65-80	60	90	0.3
12-14	80-110	75	120	0.6
14-—	110-—	100	120	0.6

Conclusion

Before any drug is administered, it is absolutely necessary for the dentist to have comprehensive knowledge of that medication. The effectiveness and safety of administration are greatly enhanced by having thorough information and wide experience with the drug.

In the experience reported by many clinicians, three drugs seem to predominate as effective premedicants in pedodontics. For the "average" child requiring a premedicant, Phenergan or Vistaril seems to be the most widely selected. For the truly difficult patient a combination of Demerol and Phenergan is usually regarded as the most effective, and is considered to be comparatively safe.

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A Brief Encounter with Forensic Dentistry

Myron J. Kasle, Acting Chairman and Assistant Professor of Radiology

Last October I attended a one-week course in Forensic Dentistry at the Armed Forces Institute of Pathology, which is located in the Walter Reed Medical Center in Washington, D.C. As the title suggests, the course dealt with some of the relationships between dentistry and legal proceedings, with special emphasis upon the identification of human remains through study and evaluation of ante-mortem and post-mortem records. Other topics included the dentist's role in the battered child syndrome and the dentist as an expert witness. The following notes and observations are presented in the belief that colleagues in dentistry may be interested in information and insights gained from the course.

Most of the participants were dentists but several physicians and attorneys also attended. Besides myself, those present from Indiana University included: Dr. Walter Ballard, Pueblo, Colorado; Dr. Jerry McClarren, Washington, Indiana; and Dr. William Hohlt, Indianapolis.

In the keynote lecture, Oliver Schroeder, LL.B., Director of the Law-Medicine Center at Case Western Reserve University, discussed applications of the law to the health sciences. He pointed out that the dentist is well equipped to make proper identification, which is of great importance in settling estates, adjusting insurance claims, and providing peace of mind for survivors in a family.

Dr. Lester Luntz, a dentist who is also a consultant for the Bureau of Identification, Connecticut State Police, then reviewed several famous cases of human identification. According to Dr. Luntz, Forensic Dentistry can be as exciting as any television "whodunit" series.

One example of dental identification that he summarized was the Webster-Parkman murder case, which occurred in Boston in 1846. Dr. John Webster, a faculty member at the Harvard Medical School, was a well educated, high-living man who spent money like water flowing over a dam. After obtaining a large loan from Dr. George Parkman, his good friend and a prominent Boston physician, he proved to be slow in paying the money back. His friend finally requested repayment of the loan and Webster said he would straighten out the account if Parkman would come to his laboratory at Harvard Medical School. Parkman was never again seen alive. He seemed to have disappeared from the face of the earth.

However, the Medical School let it be known that the furnace had recently been used quite a bit by Dr. Webster and that his laboratory had been locked for an entire week following Parkman's disappearance. The laboratory was examined and parts of a human skull with some remaining teeth as well as artificial dentures were recovered from the furnace. After thorough inspection of these parts, Dr. Parkman's dentist stated that if the dentures had been thrown into the furnace, the saliva which had penetrated the porous denture material would have been transformed into live steam and the dentures would have exploded and been obliterated. Therefore, the denture must have remained in the victim's head when it was incinerated, with the result that the live steam which was produced was dissipated slowly while in the head, and the sections of dentures therefore remained intact. The porcelain teeth of the dentures were well preserved, as were the jaws. Parkman's dentist pieced all the dental and anatomic parts together and through a comparison with his ante mortem records was able to arrive at a definite identification of Parkman. On this evidence Webster was found guilty of murdering Parkman and was hanged.

A more recent case cited was the Hartford, Connecticut, circus fire on July 6, 1944 which took 169 lives. The tents burned in a matter of minutes and all that was left of most of the victims were charred remains. The great majority could be identified only through careful examina-

tion of their dentition by a dentist and a comparison of ante mortem and post mortem records.

Identification of unknown bodies in time of war or air disasters was discussed by Dr. Paul Stimson, Professor of pathology at the University of Texas Dental Branch in Houston. Families and insurance companies are not satisfied when they are told that the remains which are sent home are believed to be those of a son, husband, or sweetheart. Because of that fine line of doubt in the survivors' minds, it is apparent that a positive identification must be made. The military has an advantage over civilians inasmuch as new recruits in all services have a panoramic radiograph taken upon entering the service. Ante mortem records are thus quite complete for possible positive identification later. Since fingerprints usually cannot be obtained from a charred body, the best means of positive identification is the posterior dentition.

The anterior teeth, when exposed to high temperatures as in a burning jet, tend to explode due to the high moisture content provided by the pulp and dentin. However, the posterior teeth are well protected by the heavy musculature and bone structures in this region and the steam produced in these teeth is slowly dissipated in high temperatures. Dr. Stimson stressed the importance of having a standardized dental chart which is kept up-to-date. It is almost impossible to keep as close tab on civilian records as it is in the military. However, in Dr. Stimson's opinion, even military charts are not kept up-to-date and are not used as they should be. He emphasized that dentists should make their patients' records as if any day they might be called into court for positive identification purposes. It was pointed out that radiographs are invaluable in comparing ante mortem and post mortem findings. The Chief Medical Examiner or Chief Pathologist depends on the dentist to give him more points of measurement so that these positive comparisons can be made.

When doing a dental investigation on a body, the dentist is well advised to perform a thorough examination the first time because he usually gets only one chance at the body. The medical examiner wants to get the body buried as soon as possible and takes a very dim view of exhuming a body. The cost is considerable and the courts are reluctant to order it.

Dr. Stimson thinks it would be a good practice to place the patient's name or an identification number in the flange of a full denture or another prosthetic appliance. This would help with identification of individuals who have no remaining teeth or few remaining teeth. All that is required is a small piece of paper with the name or I.D. number typed on it and when the denture or partial is flasked the paper is imbedded in the acrylic on final closure.

Intrinsic stains on teeth are of considerable help in making positive identifications and should be recorded. Special stains used on porcelain jackets, partial veneer crowns, or pontics on fixed bridges are also useful in identification and comparison tests. Restorations and types of metals used for these restorations are important in reaching positive identifications. A full record should be kept of all work, past and present, in the mouth of every patient. Then, if the need arises, positive identification can be accomplished in a minimum of time.

The police dentist and the make-up of an identification team were discussed by Dr. Luntz. The three main members of the team are the police identification officer, the forensic pathologist, and the forensic dentist. The police dentist should be familiar with the identification of bodies not only through the dentition but also through bite marks left in soft tissues of victims in assault cases and homicides. Further, the victim will sometimes leave bite marks in the assailant, and these marks can positively identify a suspect or prove him innocent.

Dr. Luntz explained how a dental disaster team goes into action when an air disaster strikes. On June 7, 1971, an Allegheny Convair 580 inbound for Tweed-New Haven Airport in Connecticut crashed while attempting a fog-shrouded landing. Twenty-eight persons perished

while three survived. Within fifteen minutes, a disaster team was mobilized and on its way to the accident scene. All of the victims were burned beyond recognition except the pilot, who was identified by his fingerprints.

To gain entrance to the oral cavity, it was necessary to surgically reflect all the soft tissue surrounding the dentition and thereby remove the maxilla and mandible of each victim. In this manner, the dental charting could be accomplished, as well as the taking of radiographs of the dentition and jaws. After all this charting and recording was completed, the ante mortem records were compared to the post mortem findings for positive identification.

The class was told how the dental disaster team had been organized in Connecticut. So many unidentified persons had been found in this state over a 10-year period that out of desperation, the police identification department asked Dr. Luntz to form a group of dentists to help him. He decided that a team of three dentists plus a police identification officer would be necessary in mass disaster identifications.

It was stressed that the group should consist of independent dentists, preferably associated with the local dental society. Reading books and articles on the subject of Forensic Dentistry is fine for background information, but the best way to understand how a case is handled is to become involved in one. Cooperation between the Medical Examiner's office, general pathologist, forensic dentist, and involved police agency is most important.

Dr. Luntz stated that in dental identification work involving radiographs it is essential to recognize that which is different. Impacted molars, restorations, root canals, impacted cuspids, and determination of age can all be valuable in forensic dentistry. Root remnants, recent extractions, and old healed areas are also valuable for identification. It is very important to correctly mark ante mortem restorations and treatments so that any post mortem radiographs will corroborate comparisons with ante mortem records. Even though ante mortem dental radiographs are available, it is a good idea to obtain medical radiographs where possible. Dr. Luntz described a case in which ante mortem radiographs of a murder victim were obtained from a chiropractor. These records were compared to post mortem radiographs obtained of the victim, thus giving the investigators positive comparison identification.

Another case involved a person who had been shot by an assailant. The bullet was not found with a periapical film and the victim was not aware that it was in his body. However, a panoramic radiograph showed that the bullet was lodged in his maxillary sinus. After it was removed police traced the gun to the assailant, who was eventually convicted on this evidence.

Dr. Lowell Levine, Consultant in Forensic Dentistry in the office of the Chief Medical Examiner, New York City, explained that an office of Chief Medical Examiner was established in New York City more than 50 years ago. Later the Institute of Forensic Medicine was established in conjunction with the Schools of Medicine, Dentistry, and Law at New York University. The scope of the problem of identification and examination in New York alone is almost staggering. In 1970 more than 30,000 medical examinations were performed by the office of the Chief Medical Examiner in that city. Ten thousand autopsies were performed, of which 1200 were for homicide victims and 1000 for drug deaths. The Institute was founded to provide a means of studying sudden or unexplained deaths, and many faculty members of the Medical, Dental, and Law Schools are affiliated with it.

According to Dr. Levine, the philosophy of the Institute and the office of Chief Medical Examiner is to investigate these deaths for the benefit of the living. Air disasters are investigated so that better safety, survival, and rescue methods can be developed. Air safety measures are continually being studied and new ones developed on the basis of the mass records collected through the Medical Examiner's office. Autopsy studies are also performed in the interest of justice. Facts often turn up which will prevent a suspect from being erroneously brought to trial for assault or murder. On the other hand, a homicide may be brought to light through such an

investigation. A case was described in which the charred body of a woman was found in an apartment building fire. At first it was assumed that she had died in the fire, but the fact that her gingival tissue was pale led investigators to believe that she was dead before she burned. Gingival tissue is usually bright red if a person dies from asphyxia due to carbon monoxide, as in fire deaths. The medical examiner and dentist investigator both looked for another cause of death and found that there was a fracture of her laryngeal cartilages. This indicated that she had died of asphyxiation due to strangulation.

Another case was that of a man who was found floating in the Hudson River in the month of December. His fingers had been removed so that there was no chance of fingerprint identification. Both the maxilla and mandible were removed from the body for further study. The following April, the Medical Examiner was called by the Bridgeport, Connecticut police, who wanted to know if the body of a male with two gunshot wounds in the head had been found floating in the Hudson during the previous December. Ante mortem dental radiographs were compared with the post mortem dental radiographs and a positive identification was made.

A situation which seems to be reaching epidemic proportions was then described by Dr. Levine. It is known as the battered child syndrome. Often a child will be brought to a hospital with many bruises and sores on his body. There are frequently bite marks on the skin. The child may be dead on arrival or may die soon after admission. Upon investigation, it usually turns out that the child has been brutally beaten by one or both of his parents and sometimes tortured with cigarette burns on his body. A case in point was one in which a couple, both narcotic addicts, were arrested and charged with felonious assault on their oldest child. The child was taken from them by the welfare agency and placed in the hospital under protective custody. A younger child was missing and the couple was told they would be let out on bail if they would produce the second child. The couple refused to produce the second child and it was feared that the child might be dead. A child's skeleton was discovered in an abandoned lot near the couple's home but the mandible was missing. Some child's clothing was found in an old suitcase in the same area. The police eventually found the mandible and radiographs revealed that the six-year molars had not erupted but were still in their bony crypt. It was determined that the child belonged to the couple and they eventually confessed to beating the child to death.

Captain E. D. Woolridge, Chief Dental Officer, U.S. Coast Guard Base, Governor's Island, N.Y., who is both a dentist and attorney, said that dentists are quite likely to see these repeated beating cases because the mouth is very easily injured. The physician may not recognize this because he does not usually deal with the oral cavity. Captain Woolridge pointed out that the syndrome is increasing by astronomical numbers. In 1970 alone, 2343 cases of child beatings were reported in the city of New York. It was projected that 5400 cases would be reported in 1971. This situation is not limited to New York, nor is it found only in the lower socio-economic strata of the population.

Data are very difficult to collect because many cases are never reported to the authorities. Since dentists may see the child sooner than the physician, they should become aware of clinical and radiographic signs which may tip them off to repeated beatings. Clinically, there may be old bruise marks on the face, discoloration of the skin, healed cuts, facial scars, or intraoral scarring of the mucosa. Radiographically, there may be fractured bone healing, callous formations around fractured bone sites, and missing or fractured teeth. Discolored maxillary incisor teeth often indicate repeated trauma from beatings on the face. Lip lacerations are common as are torn frenum attachments. In one reported case the parents beat a child and threw him down a flight of stairs to make it appear as if an accident had caused the child's death. Bite marks on the victim's body are not uncommon.

It was pointed out that dentists not only

have a moral obligation but also a legal duty to report such situations to the authorities since many states now have laws governing this form of child abuse.

Captain Oscar Lilienstern, a member of the Judge Advocate General's Corps, AFIP, discussed the preparation of the expert witness and listed types of cases in which a dentist may be called, such as malpractice, professional liability, or criminal cases.

Before a person is allowed to testify as an expert witness, his qualifications as an expert must be established. He will be asked certain questions about his training, experience, and professional affiliations. As long as the person meets minimum requirements as set by the court, he may be accepted to testify. The purpose of the testimony of an expert witness is to obtain a statement of his opinion on the issues involved in the case.

his point. A blackboard, charts, models, or slides can be helpful. Once a dentist has agreed to serve as an expert witness, he should insist that the attorney brief him

It was pointed out that an expert witness is wise to use illustrative materials to make thoroughly on the facts in the case.

The dentist serving as an expert witness should speak in non-technical language because the average jury does not understand professional terminology. As an expert witness, he should always ask for clarification of a question he doesn't understand.

Probably the most important advice is that a witness should never lose his temper, even if provoked by the cross-examining attorney. It is part of the game to try and fluster him.

Selection of Dental X-ray Film

Jack D. Carr, Assistant Professor of Radiology

Most dentists are using the fast X-ray film, and if properly exposed and developed it gives a fine result. Although medium speed film is a fine grain film, it requires about four times the exposure that fast films need. This added radiation to the patient is not reasonable and is not recommended by the Radiologic Health groups.

The use of a 2 film packet is very important but often neglected. Any time that the film is to be used by the general dentist and also a specialist a two packet film should be used. It is a tremendous advantage for the dentists involved to be able to consult with each other by telephone while both have the films on their viewboxes.

Also if one film is lost or scratched during processing the other film may be used and if required can be duplicated. (See article on duplication by Dr. Myron Kasle, Journal of the Indianapolis District Dental Society, Feb. 1969.)

The general dentist is obligated to furnish films of good quality to the specialists and the general dentist should be the one to keep a record of the amount of radiation that the patient receives. In some situations the specialist may need further X-rays for his particular area but he should take two film packets so that he can send a copy to the general dentist. This often eliminates unnecessary radiation to the patient and increases cooperation between the dentists.

It is interesting to note that the two film packet costs about one cent more than the single film packet.

Since Dental Radiology is not a recognized specialty, it is difficult to obtain proper consultation in some of the unusual cases. Dr. Lewis B. Spear limited his practice to Dental Radiology but since his death we have not had the advantage of expert consultation of a dental radiologist.

The desire of the American Academy of Dental Radiology to obtain recognition is definitely not an attempt to take radiology from the general dentist but to assist him with difficult cases.

Chancellor's Comments...

Maynard K. Hine, Chancellor

One of the responsibilities of every division of every university is to develop an effective continuing education program for the citizens of the state and members of the various professions. The School of Dentistry has been an active participant in these endeavors; Dr. Robert Derry, Director of Continuing Education for Dentistry, has conducted a long series of courses for dentists.

Other divisions of IUPUI also are rendering significant services in this area. Because of rapid advances and changes in knowledge and techniques, the prevention of professional obsolescence will continue to be important, both to practitioners and to their patients, clients, or employers.

Also, the School of Medicine reaches innumerable Indiana physicians each year through postgraduate courses. Members of the faculty regularly visit 14 community hospitals in the state to confer and instruct practicing physicians, Regularly, for six hours each week day, television beams to 51 hospitals throughout the state programs aimed at physicians. In addition, the Medical School Library maintains communication with 150 community libraries, where physicians can obtain copies of journal articles and other published information.

Each year, the School of Nursing enrolls many practitioners in short courses, conferences, and television seminars. This School also is employing and exploring the capabilities of television to broaden the impact of its continuing education programs.

The Indianapolis Law School, working in cooperation with the Indiana Continuing Legal Education Forum, offers lawyers annually courses and seminars. The Graduate School of Social Service and the Herron School of Art also conduct related activities.

The Purdue University academic missions at IUPUI carry additional responsibilities for continuing education. In engineering and technology, business and industry have many needs for such programs, a number of which are taught on-location at plants and offices.

These examples indicate the diversity and extent of our faculty's involvement in maintaining and advancing the standards of professional services offered to Indiana citizens after they have completed their formal education. These examples also indicate the commendable willingness of many practitioners to participate in programs of continuing education.

In the health care professions, where changes in the patterns of delivery of service are taking place, and where public attention has increased, the needs for continuing education are especially significant. How these needs may be translated into possible requirements is an important question. A recently-published report by the United States Department of Health, Education and Welfare dealt with the credentials of health personnel. One of the recommendations in this report supported the principle of *required* participation in continuing education programs. While acknowledging the complexity and potential problems associated with establishing such requirements, the recommendation has obvious implications for each of the health professions.

Finding better ways to help all practitioners to continue to strengthen their professional knowledge and skills is a challenge to be met cooperatively, by individuals, by their associations and societies, by governmental agencies, and by the universities, including, most emphatically, IUPUI.

Notes from the Dean's Desk...

Ralph E. McDonald

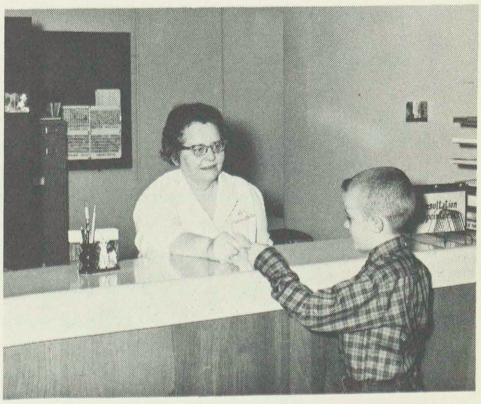
On December 22, 1971, the alumni, faculty, and staff of Indiana University School of Dentistry lost a dear friend. Miss Alice Krick died after an illness of several months.

Miss Krick's association with dentistry dates back to the early 1930's. While attending Central Business College she began working part-time in the private office of Dr. Frederic R. Henshaw, who was then Dean of the School of Dentistry. When the School received funds from the Children's Bureau of the United States Public Health Service for the development of a children's clinic, she joined the Dental School assisting staff. Dr. Drexell A. Boyd was the Director of the newly formed clinic and Miss Krick began her service to children which spanned almost four decades.

Alice Krick lived her full and active life for three purposes: to help her family, which included ten foster children; to participate actively in the work of her church; and to give faithful service to the Department of Pedodontics. More than 1500 dentists in practice today will remember Alice as the Appointment Clerk in the Children's Clinic, but she served in many more capacities. During the time that Dr. Boyd served as Chairman, and during the early years when the writer of these notes served as Chairman of the Department, she acted as their secretary, dispensing clerk, and appointment clerk. As we look back, we wonder how one person could perform so many tasks and very effectively too. As the Department grew in size and it became necessary to increase the number of assisting staff members, Miss Krick continued to do what she enjoyed most: working with the students and parents in making appointments for child patients. She seldom found time to leave her desk for lunch and rarely was able to leave in the evening at the usual quitting time. There were always a few more parents to call to fill canceled appointments so that the students coming to the clinic the next day would not be inconvenienced by a canceled appointment. She was always ready to assist faculty members and graduate students with the scheduling of patients for special research studies. She realized that the doctors were doing important work, but she also knew that the child patients included in the study would also benefit by receiving dental care that might not otherwise be available to them.

Miss Krick watched "her clinic" grow, from the days when Dr. Boyd was the Chairman on a half-time basis and the only faculty member in the Department, to the time when the faculty included five full-time members and six parttime members. In recent years, with the development of the Dental Auxiliary Utilization Program in Pedodontics and a graduate program, Miss Krick was joined by seventeen full-time assisting staff members.

Christmas was always a special time for Alice. She received great enjoyment in giving to the child patients gifts that were provided by the Riley Cheer Guild. Somehow she seemed to know which children were likely to receive few other gifts at



Miss Alice Krick, Appointment Clerk in Pedodontics (1936-1971).

Christmas. Thus, she played Santa Claus each year to hundreds of children.

Miss Krick participated actively in organized dentistry and served two terms, 1940 and 1954, as President of the Indiana Dental Assistants Association. She also held life membership in the American Dental Assistants Association. Her contribution to the School of Dentistry and dental assistant organizations is not likely to be surpassed in a long time.

Mrs. Diane Rohlfing Scott is completing her first year as a full-time faculty member in the Department of Dental Hygiene. She received her Associate in Science degree with honors from Indiana University School of Dentistry in 1968. In 1969 she was awarded the Bachelor of Science degree in Public Health Dental Hygiene with highest distinction. Prior to joining the Dental School faculty she had experience in private practice and as an employee of the Preventive Dentistry Research Institute. While working in the Institute, she served as coordinator of the Fluoride Self-Application Programs throughout Indiana. During her employment with the Research Institute, she also served as a clinical instructor in the dental caries etiology program for dental hygiene students at Indiana University-South Bend, Indiana University-Fort Wayne, and in the Indianapolis program.

Mrs. Scott's interest in dental education is further evidenced by her participation in continuing education seminars and table clinic programs in cities throughout the United States. We welcome Mrs. Scott to our faculty.

The School of Dentistry Fund Drive directed by our national chairman, Dr. Albert C. Yoder, Jr. has been successfully concluded. Mr. Robert J. Stebbins reported to the alumni at the luncheon in Chicago on February 14 that gifts were received in the amount of $51,400. This figure is essentially double that of last year. In addition, the alumni and friends of the School have given endowments in excess of $32,000. Approximately two-thirds of the money will be placed in our student scholarship and loan funds. We also plan to purchase several items of new equipment for the school, including an atomic absorption spectrophotometer for the Department of Dental Materials. The faculty and students join me in expressing our

(Continued on page 77)

Mrs. Diane Rohlfing Scott, Instructor in Dental Hygiene.

Dr. Albert C. Yoder, Jr., receives a plaque from Mr. Robert J. Stebbins, in recognition of his services as the School of Dentistry National Fund Drive Chairman.

Table Clinics Get Good Reception at 1971 Fall Conference

Malcolm E. Boone, Chairman, Table Clinics

Table clinics presented at the 1971 Fall Conference of the School of Dentistry Alumni Association were a smashing success. In all, there were 22 table clinics, presented by 25 persons, in the Solarium at the Memorial Union Building on the IU campus.

Our clinicians included graduate students from the School of Dentistry and alumni from all parts of the state. We also had undergraduate students, dental hygienists, and other auxiliaries. All of them deserve a rousing vote of thanks and so do the four anonymous judges, who said that they had a tough time picking the winners.

Dr. Eugene Day of Indianapolis won the Alumnus Award; Richard Fischer, junior dental student, received the Undergraduate Award; and the new Graduate Student Award went to Dr. David Bales. Thanks are extended to Dr. Charles Pope for supporting these awards.

Looking toward next fall's conference, we are considering locating the table clinics in a more convenient place. Also, we are hoping for increased alumni participation. An entry blank for the 1972 program appears in this issue.

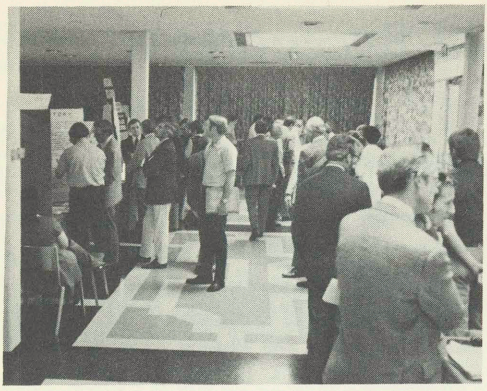
Those who participated in the 1971 program, with their clinic topics, were: Dennis Bailey, Junior, Anemia; David Bales, D.D.S., Cracked Tooth Syndrome; Joseph F. Barnett, Senior, Aluminum Denture Bases, the How and Why; Mrs. Kathy Byrn, R.D.H., and Miss Linda Kerchoff, R.D.H., Dental Health Task Force Project; School Plaque Program; Miss June Brose, Senior, Cardio-Pulmonary Resuscitation; Robert E. Douglas, Senior, Posterior Palatal Seal Area, Stephen L. Fehrman, D.D.S., Diane C. Dilley, D.D.S., and Frederick R. Swain, D.D.S., Management of the Heart Disease Patient; Richard B. Fischer, Junior, Teardrop Diabetic Screening Test in Dentistry.

Also Kent Fritch, Senior, The Final "Joker" in Dentures; Miss Carole S. Heine, R.D.H., Personal Pollution: Have You Been Educating for Plaque Control?; Phil Goodman, D.D.S., TMJ Dysfunction; Michael R. Johns, Junior, A Study of Cleft Palate Rehabilitation; Leroy E. Kochert, D.D.S., Fixed Cross Arch Splints; Roy A. Smuddle, D.D.S., Anatomical Impressions; Frederick H. Simmons, Senior, Fastest Temporary Coverage: It's Good!; Paul O. Walker, D.D.S., Emergency Oxygen Therapy; John E. Ward, D.D.S., Complete Dentures: Lingualized Occlusion; George A. Welch, D.D.S., A Case Study of Endosseous Blade Implant; Jeffrey L. Laskin, Senior, Dental Dissection; Eugene A. Day, D.D.S., Recall Simplified; Emory W. Bryan, D.D.S., Ferti-Scriber Bite; Ronald Miller, Senior, Has Your Mandibular Injection Failed You?

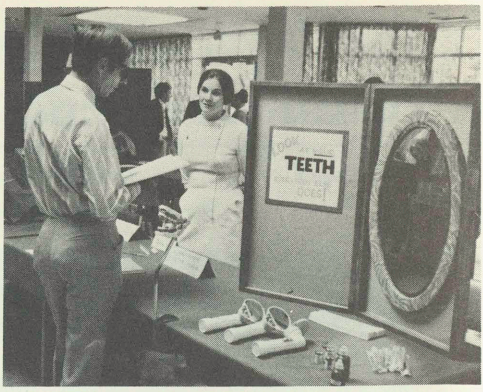
Fall Conference to Open September 21

The I.U. School of Dentistry Alumni Association will hold its 28th Annual Fall Dental Alumni Conference, September 21 through September 23, 1972, on the I.U. Bloomington campus. The Conference will open with a golf tournament on the I.U. Golf Course.

Highlights of the three-day event will include professional sessions, table clinics, the annual banquet and class reunions. Programs will be planned for the dentists' wives. Football Coach John Pont and I.U. Athletic Director James W. Orwig will speak at the traditional pressbox luncheon. They will brief the group on the Big Red versus Texas Christian game to be played on September 23.



The 22 Table Clinics at the Fall Conference attracted many visitors and much favorable comment.



Mrs. Kathy Bryn stands ready to answer questions at the Table Clinic that she and Miss Linda Kerchoff presented.

Winners in Table Clinic competition at the 1971 Fall Conference were, from left: Dr. David Bales, Graduate Student Award; Dr. Eugene Day, Alumnus Award; and Richard Fischer, junior dental student, Undergraduate Award.

INDIANA UNIVERSITY
SCHOOL OF DENTISTRY
ALUMNI ASSOCIATION

TABLE CLINICS

September 22, 1972

2:00 - 5:00 p.m.

You Are Invited To Participate

Tell About Your Favorite Technique

Share Your Ideas

Prize award for Best Student Table Clinic

Prize award for Best Alumni Table Clinic

Return to:

Malcolm E. Boone, D.D.S.
Chairman, Table Clinics
1121 W. Michigan
Indianapolis, Ind. 46202

Name .....

Address .....

Title of Table Clinic .....

Dental Hygiene

Suzanne S. Boundy, Director

INDIANAPOLIS CAMPUS

The first Alumni Day for Dental Hygiene graduates from Indiana University was held on April 8, 1972. Under the chairmanship of Carmine Griffis McDonald '63, Planning Committee members Karen McCoskey '62, Jaclyn Hite Gray '57, Carole Sue Heine '63, Barbara Smith '70, and Carla Totten '55, provided an interesting and informative program.

The day's activities included class gatherings, a luncheon with entertainment, and conducted tours of the various departments of the School of Dentistry. The class presidents or representatives from each class served as hostesses. Graduates from the Fort Wayne, Indianapolis, and South Bend Campuses attended.

Continuing Education

Eighty-five participants from Illinois, Indiana and Ohio attended the Continuing Education Course, "Diagnosis & Oral Medicine for the Dental Hygienist" in November. These included graduates from Dalhousie University, University of Detroit, Indiana University, Indiana University at Fort Wayne, Indiana University at South Bend, Ohio State University, University of Michigan, University of Minnesota, Southern Illinois University, and West Liberty State College. The dates of graduation spanned thirty-four years, with the class of 1971 having the largest number attending—seventeen. In addition, first year, second year and senior dental hygiene classes attended the one-day course. We were pleased that sixty-five Indiana University graduates followed the precept that "you should be a continual student."

Indianapolis graduates who attended include:

Class of 1952—Gloria Huxoll, Pauline C. Revers

Class of 1953—Shirley W. Day

Classes of 1955—Elaine Lovan, Carla Totten

Class of 1958—Carol Fitch

Class of 1959—Nancy K. Blackburn, Ruth Ann Cadle

Class of 1962—Karen M. Beard, Carol J. Risk, Barbara Cohen Soloman

Class of 1963—Sharon Grist, Carole Heine, Ann Mann, Ellen J. Morrell, Kay Raag

Class of 1964—Sandrajean Hayes, Linda O. Monroe

Class of 1965—Sandra McWilliams, Anita Weaver, Kathy Ziegler

Class of 1966—Judy Gray, Janet L. Moore, Carol Poe, Sylvia Smith

Class of 1967—Diane Hicks

Class of 1968—Marilyn Farmer, Nancy Hazzard, Diane Scott, Patricia L. VanDorn

Class of 1969—Katherine K. Dunnewold, Margret Gossweiler, Susan Griese, Connie Held, Sheryl McClish

Class of 1970—Linda D. Cole, Sharon Gwinn, Patricia Hefner, Carol Olson, Barbara Smith, Becky Thompson

Class of 1971—Sheila Berger, Patti E. Brown, Claudia Byers, Mary Jo Falvey, Pamela Fryer, Gretchen L. Hamilton, Kathy Kemmer, LeAnn Kilgore, Mary Jane Mesmer, Carol Rakestraw, Jayne Roupp, Cathy S. Schafer, Janice I. White, Constance J. Wolfcale

Clarellen Simon '62, has enrolled in the Bachelor of Science in Public Health Dental Hygiene Program on a part-time basis.

Congratulations

Mrs. Carolyn Humphreys Lucas '64, is a Contributing Editor to the *Journal of the Indiana Dental Association.*

Mrs. Carmine Griffis McDonald '63, B.S. '64, was appointed at the Fall Conference to the Board of Directors of Alumni

Association of the School of Dentistry. Mrs. Carla Totten '55, B.S. '67, serves as ex-officio member of the Board.

The following students were named to the Dean's List for the first semester, First Year Class: Sally Esmon, Marcia Cady and Jacqueline Scofield; Second Year Class: Victoria Myers, Teresa Garrett and Debrah Cahill.

Indiana University graduates serving as officers of the Indiana Dental Hygienists' Association include President: Mrs. Ann Cleveland Mann '63; President-Elect: Mrs. Patricia Wade '63, Secretary: Mrs. Ellen Jones Morrell '63, B.S. '64; and Treasurer: Mrs. Shirley Whaley Day '53.

Community Service

Eleven Dental Hygiene students from the first and second year classes have been giving dental health talks in various communities through a Speaker's Bureau Committee of the Junior American Dental Hygienists' Association. They visited preschool, kindergarten and high school classes in Anderson, Indianapolis, Manchester and Whiteland. Almost three hundred pupils heard talks ranging from topics such as oral hygiene to Dental Hygiene as a career. Jeanne Kummeth Binkley of Goshen served as Committee Chairman and coordinated the program.

All second year students participated in the annual Student Clinic Day by presenting table clinics. Winners were chosen to represent the school at the Junior American Dental Hygienists' Association District V Meeting in Big Rapids, Michigan, and the Indiana Dental Hygienists' Association state meeting.

Dental Auxiliary Education

Ralph G. Schimmele, Director

Time has a unique way of slipping by, and with its passage comes the realization that another academic year has been completed. It is trite but true that each year passes somewhat more quickly than the previous one, and disappointingly some items on our list of priorities are yet to be accomplished.

Those faculty members who were new to the University just last September are now experienced in their assignments and certainly deserve our appreciation for a job well done. We know from previous experience of a new program that the "first" year at a new facility is the most difficult one, and it is our belief that the Evansville faculty will attest to this fact. Because of their fortitude, they have earned an extra plaudit.

With the beginning of the 1972-73 academic year in August of 1972, a milestone will have been reached in Dental Auxiliary Education at Indiana University School of Dentistry. The first laboratory technician program will begin at Indiana University at Fort Wayne. This will be the first campus to offer all three auxiliary programs, although it is anticipated that other campuses will offer the same three programs as space and funds are identified for this purpose.

Because of lack of funds, plans for program expansion to additional campuses have been temporarily halted. Alternate routes for funding are being explored by the administration of the School of Dentistry. Seeking funds from Federal sources is tedious, time-consuming, and highly competitive. By having been involved in a small segment of the total Dental School effort, we wish to acknowledge the fact that, without the expertise of the Dean's office, our task would have been much more difficult.

The full-time faculty members involved in auxiliary education met in January at the Student Union Building in Indianapolis for their annual mid-year meeting. Representation from the four campuses and seven programs resulted in eighteen individuals in attendance. Everyone thought the day was productive, and the one com-

plaint registered by all attending the meeting was: One five-hour session is not enough time.

The year 1971-72 has been a good one. Without the help of a great many of you in administration, faculty, and staff, nothing could have been accomplished. Many thanks, and we look forward to your continued support.

DENTAL AUXILIARY EDUCATION INDIANA STATE UNIVERSITY— EVANSVILLE

Gordon E. Kelley, Director

The auxiliary program at Evansville is beginning the second semester of the first year of operation with much more enthusiasm than in September. The dental clinic and the laboratory lecture room are now within 10 days of completion and all of the students are quite anxious to see just how all of this mysterious equipment really works. Classes have been held in the lecture room since the semester began and we have learned to sequence things in amongst the workmen.

The Evansville campus program has a double handicap. We are always one hour behind Indianapolis, timewise, and this year our semesters have been on the old system which has school beginning in the middle of September and ending in January. Needless to say, this has caused some havoc with our television classes. We fully expect to be on the same school schedule as the other programs next year, but the time difference will always be with us.

The renovation delays and the schedule differences should make the program graduates among the most flexible of any auxiliary in the state.

The first capping ceremony for the first dental hygiene class was held on Sunday, January 30, 1972, and was very well received by all who braved the zero temperatures and icy roads. We were honored to have had Chancellor Maynard K. Hine deliver the address to the girls, and we are sure his presentation had much meaning. A total of twelve girls received their caps with the single violet stripe.

The dental assisting class is probably suffering the most from the lack of facilities. However, the First District Dental Society members who teach part-time have done an excellent job of providing information and facilities which make up for our temporary deficiencies. All fifteen girls in the assisting class are doing well in the program.

DENTAL AUXILIARY EDUCATION INDIANA UNIVERSITY AT SOUTH BEND

Alfred Fromm, Director

On January 16th, a Capping Ceremony was held for 20 first-year students. There are 14 students in the second-year class, who have instituted preventive programs by talking to parents and children in Head-start Centers throughout the city. In addition, teams of two students each are covering 20 schools and presenting dental health education during Children's Dental Health Week. Also, they are preparing table clinics for JADHA. The students are also giving presentations to third grade studdents throughout the City of South Bend. Mrs. Jacqueline Heine, Supervisor of Dental Hygiene, recently addressed a luncheon group of the Elkhart Dental Auxiliary, concerning careers in Dental Hygiene. She illustrated her talk about our program with colorful slides.

In the Dental Assisting Program we have 20 students. Under the direction of Mrs. Betty Keleman, Supervisor of Dental Assisting, they are now studying industriously to take the Certification Examination in May. The Dental Assisting students are deeply involved in Children's Dental Health Week. Under the guidance of Mrs. Ruth Ann Heath, Assistant Supervisor of Dental Assisting, they will present a "Brush-In" involving 500 students at one of the local grade schools. During this presentation, they will use many colorful and informative posters that were made by both the Dental Assisting and Dental Hygiene students. In addition Dr. Fromm, Mrs. Keleman, Mrs. Heath, and Mrs. Heine will appear on radio and television

during Children's Dental Health Week. Both classes are planning table clinics and posters for the Indiana State Meeting.

It appears that registration for the 1972-73 scholastic year will contain capacity classes.

DENTAL AUXILIARY EDUCATION FORT WAYNE CAMPUS

Phillip E. O'Shaughnessy, Director

Spring semester will be our last semester in the present building since next fall we will begin classes in a new educational building on the campus. It will feel good to be able to stretch out in our new facilities. Although we are not planning to expand our class size in dental assisting or dental hygiene, we will be adding a third auxiliary program, Dental Laboratory Technology.

Our dental assisting students are already looking toward the dental assisting certification test on May 15, followed by graduation on May 19. These activities plus the May meeting, for which most of the students will be presenting table clinics, will mean a very busy month for the students. And, although now with snow on the ground and the cold wind blowing down our backs, May seems a long way off, we know from experience that now is the time to start preparing.

We have had several members of the Indianapolis faculty lecture to our students, including Drs. Cunningham, Johnston, and Chalian. We appreciate our close association with the dental school.

Many of the local and area high schools are having Career Days and our faculty and students have participated in several. We are always ready to "spread the word" about our dental programs, and we are pleased when we are asked to participate in Career Day Programs.

Our students were involved in National Children's Dental Health Week. Along with their working colleagues, the students visited all the local and area elementary schools.

Our senior dental hygiene students have begun their field experience programs in Wabash, under the direction of Mrs. Ed Knafel of our faculty. This seems to be a most enjoyable part of their training; and at the same time does a great deal of good for the school children of Wabash.

Our first year dental hygiene students were capped January 16. Congressman Ed Roush of Indiana's Fourth District gave the address. In spite of the below zero weather, the flu, and the Super Bowl, attendance was excellent. We were quite pleased that all the students who entered in September were capped.

Faculty members joined with those from dental auxiliary programs in South Bend, Evansville, and Indianapolis for a joint meeting at the Union Building of the Medical Center. There was much sharing of ideas, problems, and plans. We feel that we all gain from these joint meetings which are held several times a year.

Our second year dental hygiene students will participate in a Clinical Research Program in conjunction with the School of Dentistry in Huntington, Indiana during March and April.

Seven students will receive their Bachelor of Science Degree in Education with a major in Dental Hygiene this May. Five of the students are from our 1971 Dental Hygiene class and two from our 1970 class.

Fall Meeting 1971

DENTISTRY—CLASS OF 1972

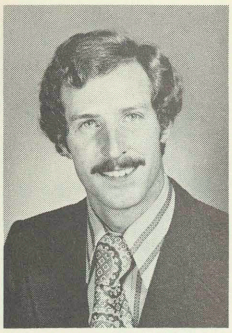
Four years ago graduation seemed so very far away. Now, looking back, it seems such a short time since we entered dental school. It seems only yesterday that we had our first dental science course with Drex. Alas, I remember spending four weeks to make a tray former, naturally measuring out the proper water/powder ratio. Then came crown and bridge technic and the first of many faculty proclamations of "do over." We also must not forget the two weeks we spent setting just the anterior teeth for our first denture in technic.

Finally we were ready to cross the street and begin applying our knowledge and ability to clinical cases. In only four hours all of Black's Principles were applied and that first occlusal amalgam was placed and carved, but somehow it didn't resemble the masterpieces we constructed across the street. Then came the first bridge and with it the first broken solder joint, remake of both abutments, remake of the pontic, re-make of one abutment and finally cementation of that first bridge, followed by an all night celebration. It was in complete denture clinic, however, that we first understood the meaning of "postoperative difficulties," but what an overwhelming sense of pride when, after only the ninth postoperative adjustment, the patient was finally able to smile, and the instructor smiled too. And let's not forget the lecture courses and the many dimes spent at the Xerox machine. Where would we have been without those old examinations?

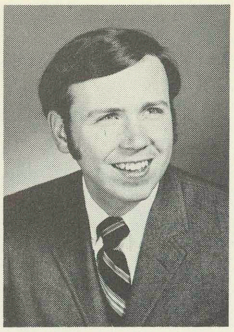
Senior year brought increased pressure to fulfill the requirements, involvement in XL programs, improved clinical proficiency, and naturally more time spent at Bea's. We shall always remember the parties, the pitch games, the tremendous victory of the seniors over the faculty in basketball, and the highlight of the year, the senior razz banquet where we officially recognized the best and the worst at the Indiana University School of Dentistry.

Our dental education was a fine one, and we owe a great debt to IUSD for providing us with the knowledge and ability to practice the art and science of dentistry. With our graduation from student to doctor we suddenly find ourselves being propelled from the younger generation to the establishment. Hopefully, however, we shall remain sympathetic with many of the problems which students face in order to provide the driving force for improvement in education at IUSD so that we may always be known as the alumni of the "finest dental school in the U.S.A."

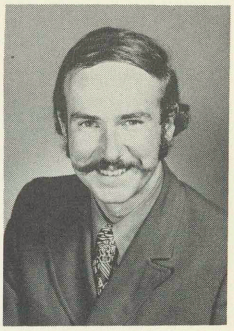
Craig McEwan, President
Class of '72



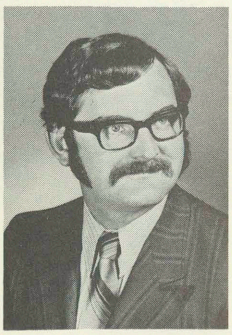
James Ballard



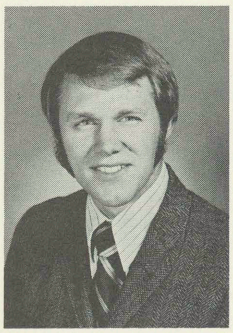
Joseph Barnett



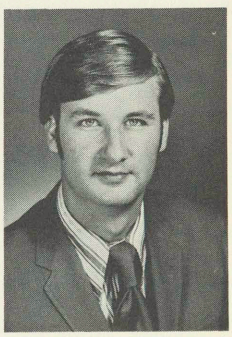
Thomas Barrick



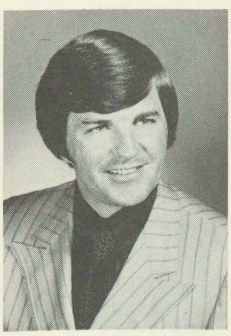
Douglas Bateman



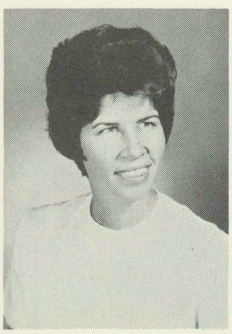
Charles Bewick



Dennis Bowman



Stephen Branam



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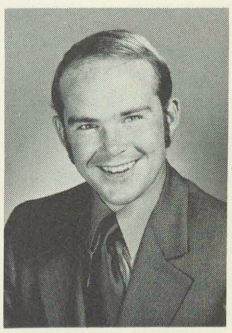

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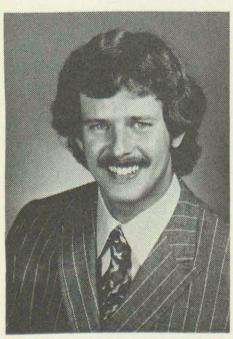

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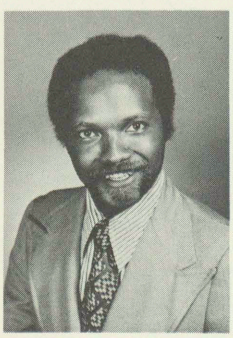

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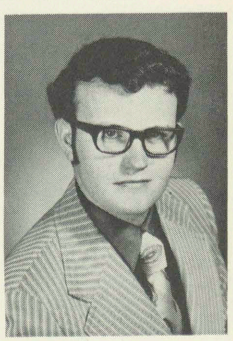

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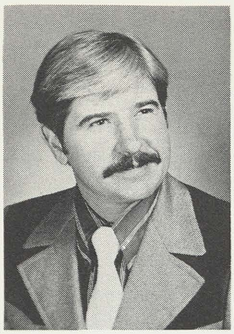

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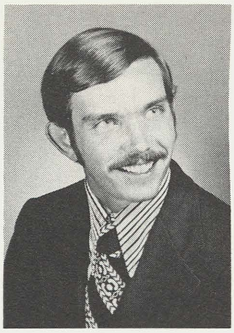

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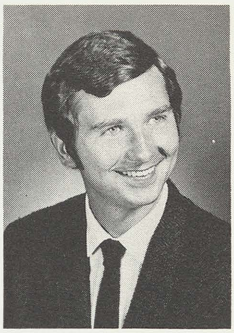

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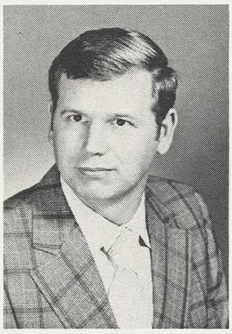

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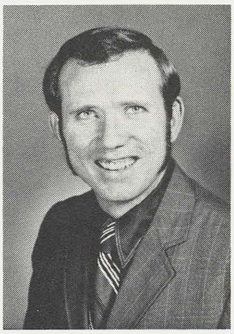

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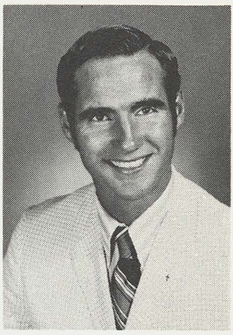

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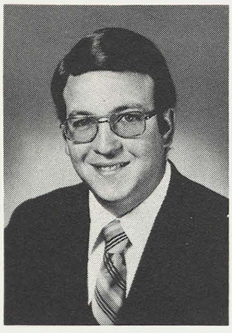

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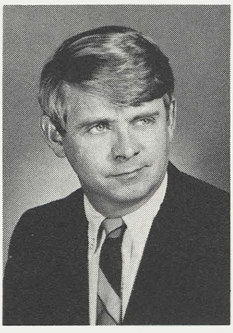

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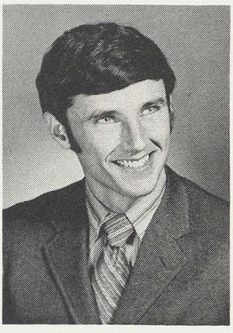

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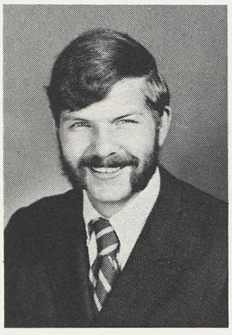

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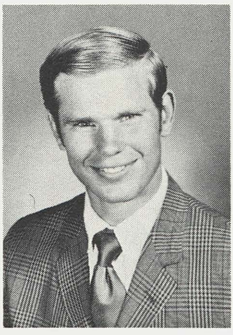

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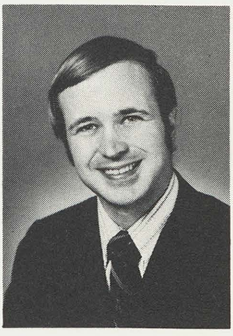

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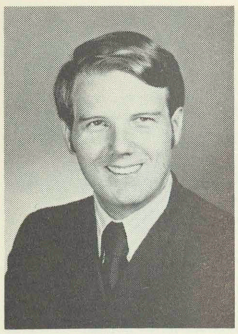

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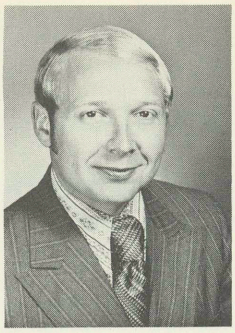

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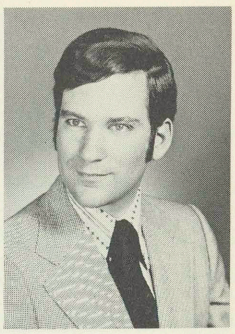

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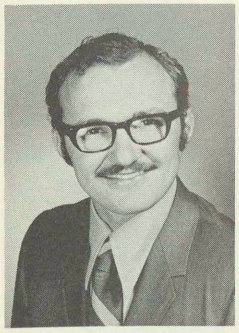

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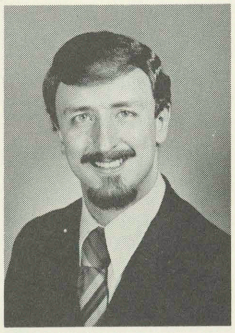

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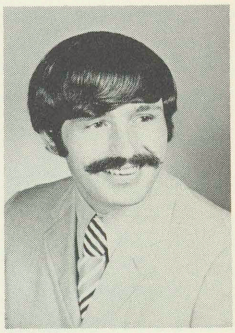

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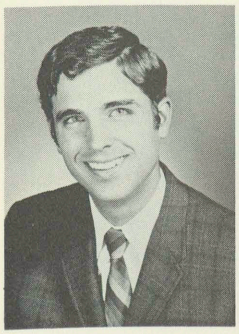

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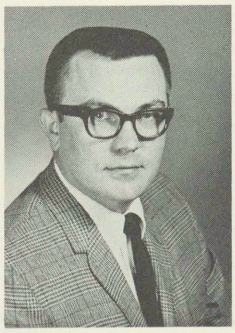

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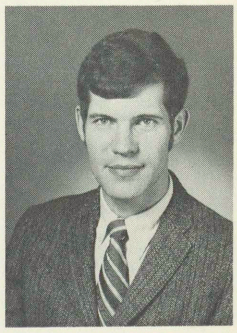

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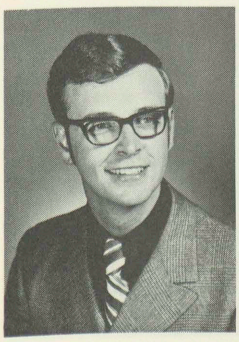

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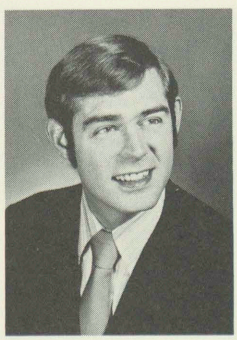

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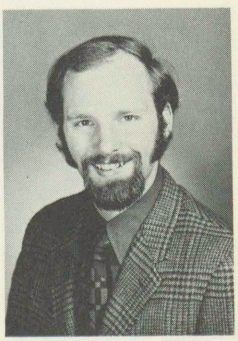

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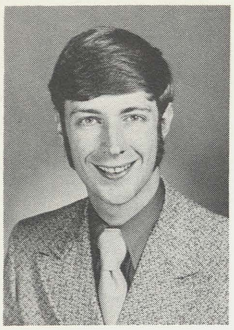

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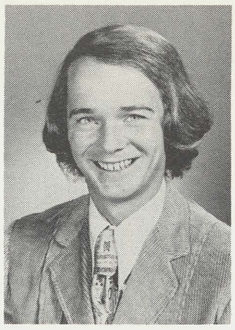

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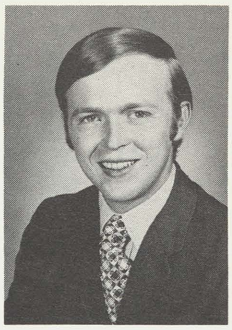

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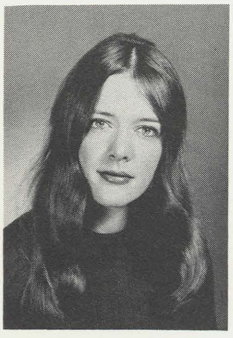

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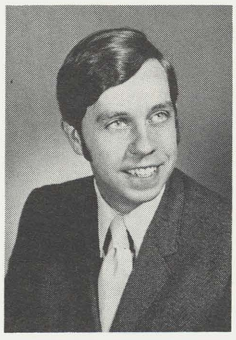

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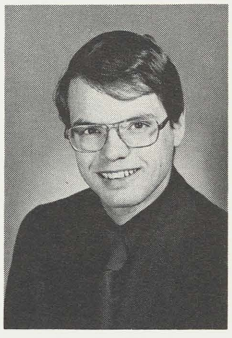

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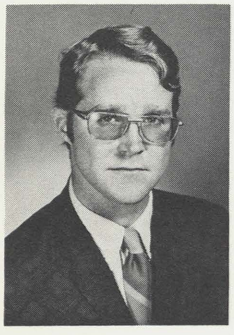

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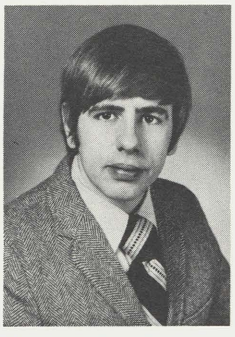

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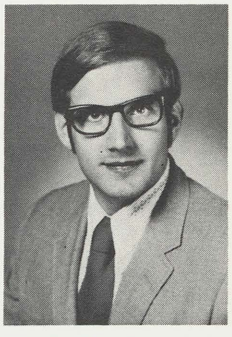

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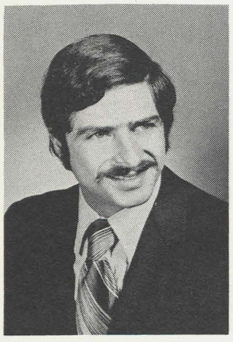

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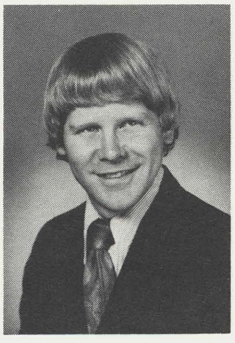

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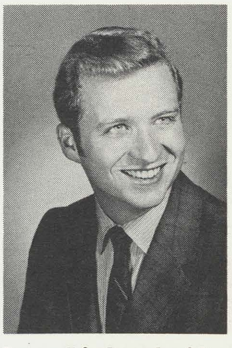

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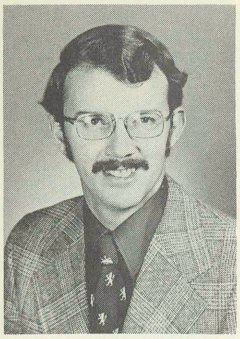

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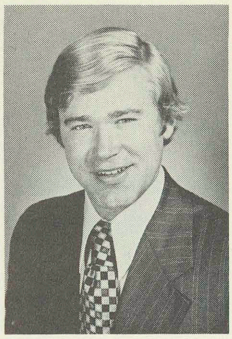

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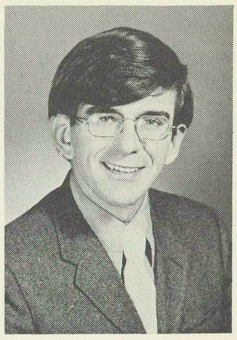

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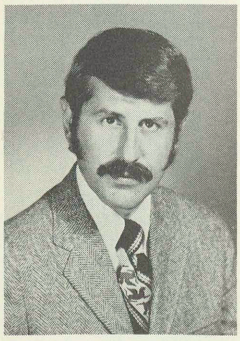

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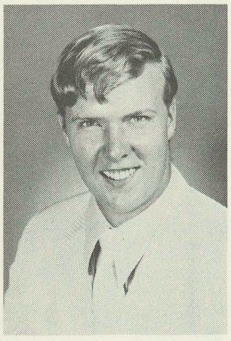

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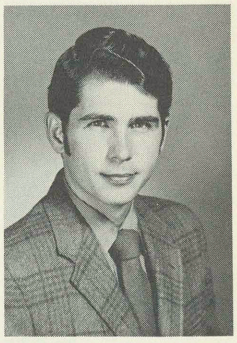

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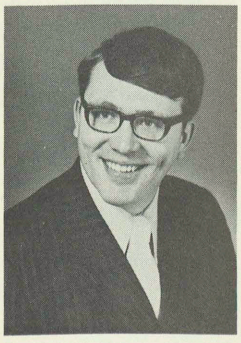

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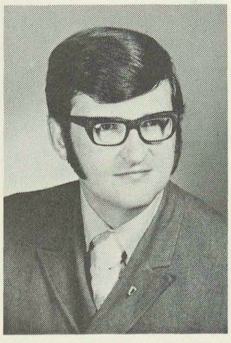

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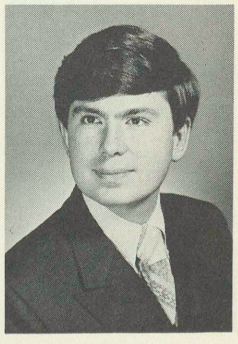

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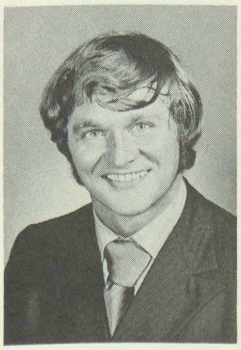

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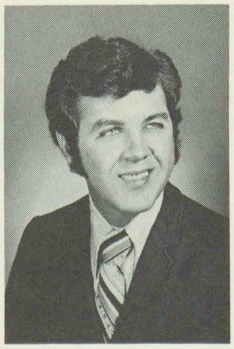

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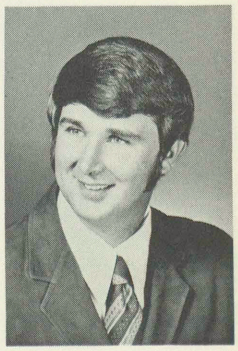

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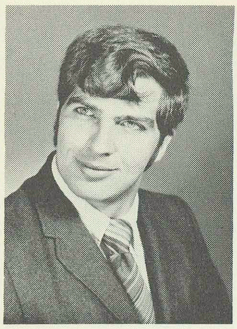

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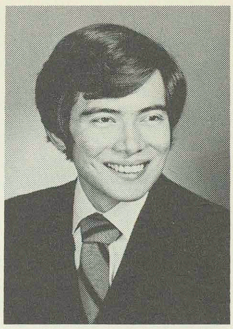

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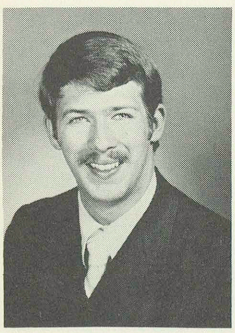
Robert Morris



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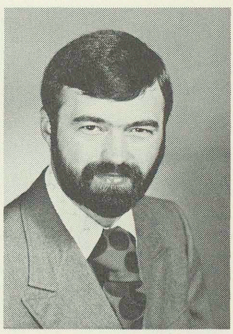

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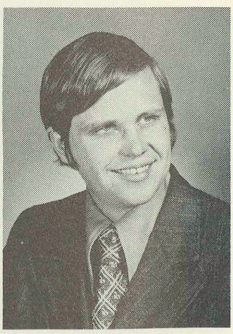
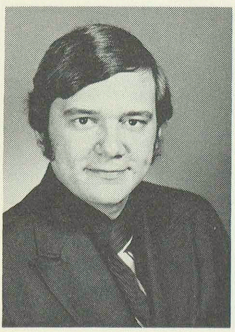


John Overman



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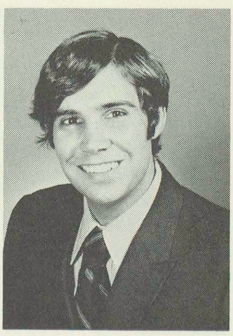

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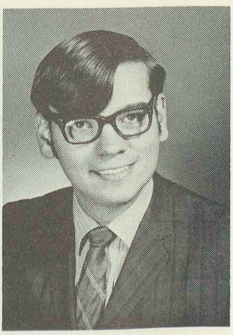

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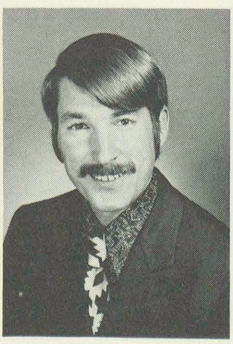

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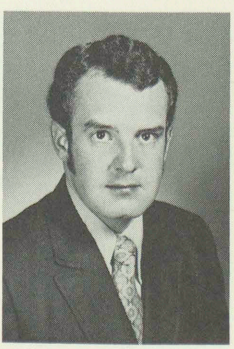

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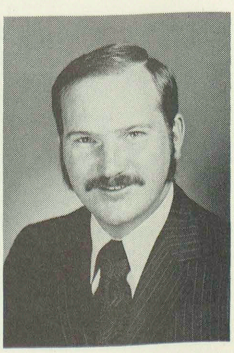

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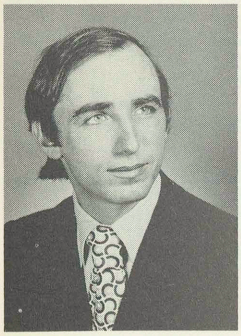

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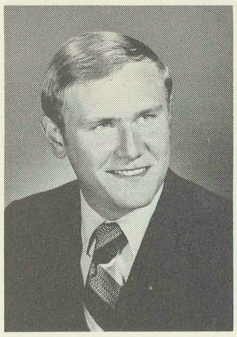

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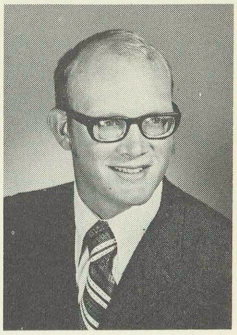

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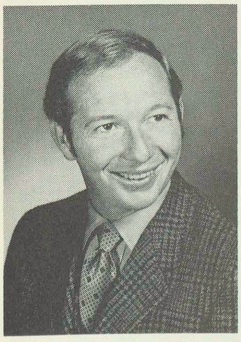

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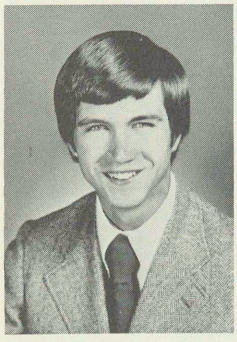
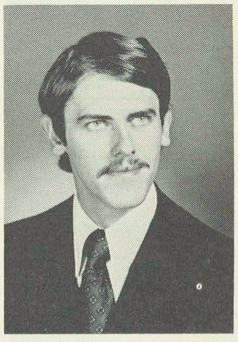


Gary Schinbeckler



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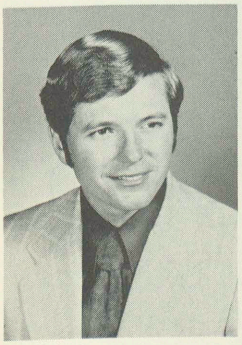

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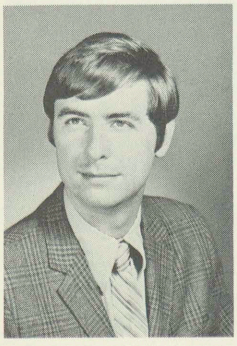
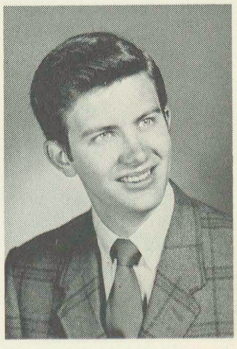
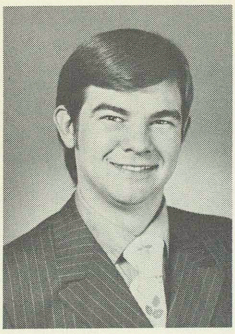


Dennis Skirvin



Glenn Smith



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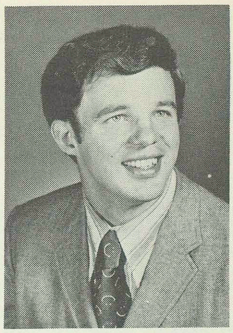
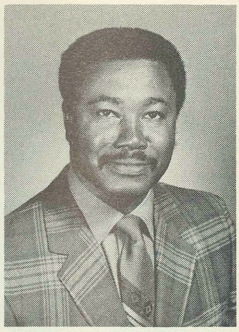


Richard Stackert



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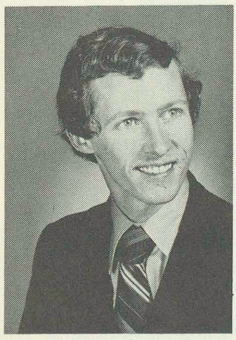

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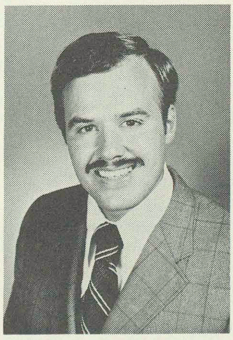

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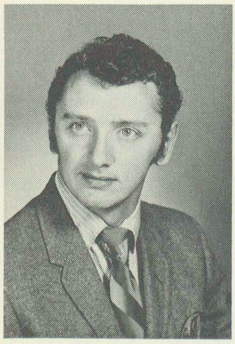
Charles Valentine



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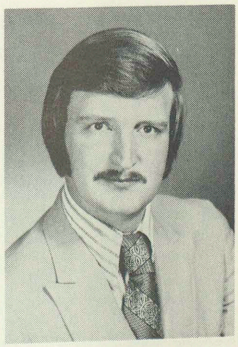

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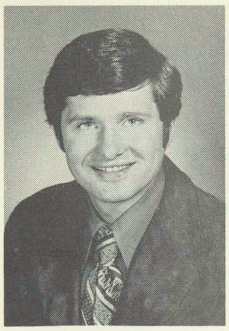

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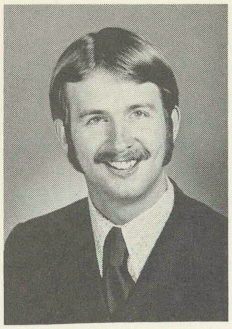

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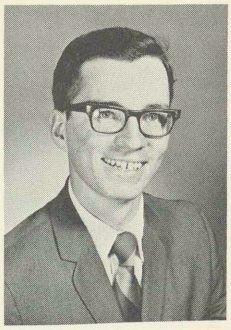

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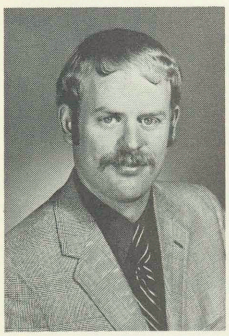
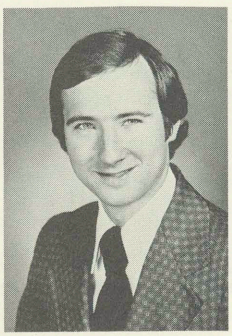
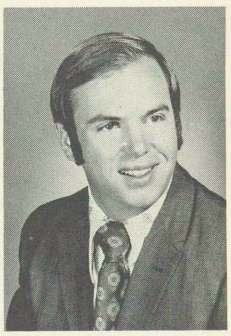


James Weideman



Alan White



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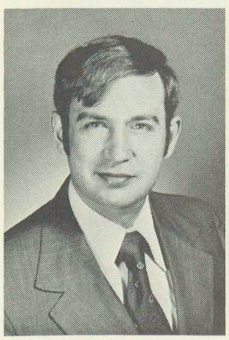

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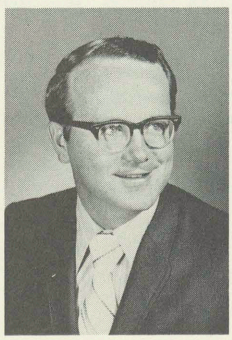
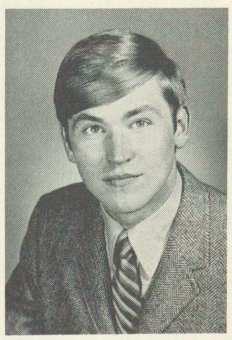


Ronald Wines



Glenn Wisnieski

Not pictured:
Gregory Crawford

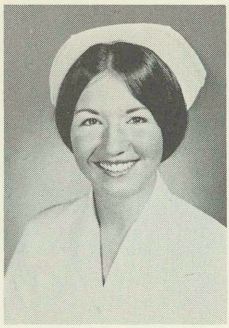
DENTAL HYGIENE–CLASS OF 1972

As we become Indiana University's twentieth graduating class of dental hygienists, we can look back happily at the first days of college, letters of acceptance, capping, boards and graduation. We find it hard to believe that all of these events are now memories and no longer dreams. Time is slowly erasing the long hours of study, frustration, and worry, leaving us with the pleasing memories of our successes, our friends, and all of the good times we have had together as a class.

We are now completing our education and planning for the future. Each of us will be going our separate ways. Many will hear wedding bells, others will go into private practice, and some have chosen to continue their education. No matter which way we choose to go, we can't neglect those people who have made our education possible. Our appreciation goes to our parents, the faculty and Indiana University for helping us pursue our dreams. As we graduate, we realize that yesterday is already a dream of happiness, but more importantly, that tomorrow is a vision of hope.

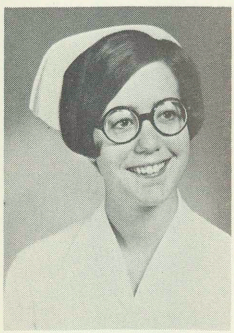
Connie Swackhamer
President of the 1972
Dental Hygiene Class

Jeanne Binkley

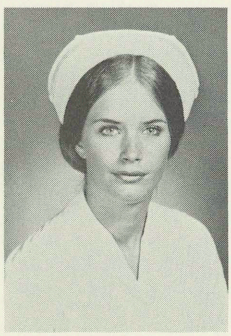


Jane Blair

Lyndall Bradfield



Nancy Bridge



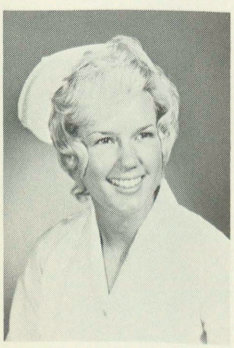
Debrah Cahill

Victoria Casady

Kay Cline

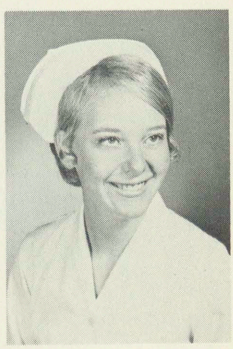
Teresa Garrett

Stephanie Hanika

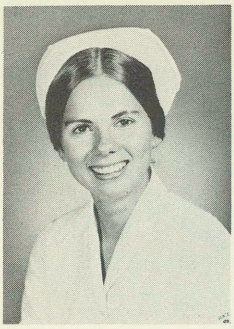


Judy Hershey

Helen Hodges

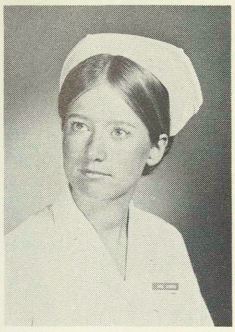


Sandra Holm

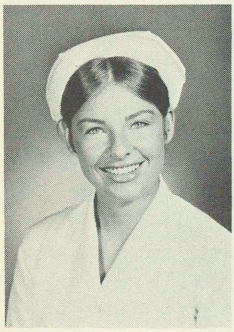


Marcia Hooper

MaryAnn Huelsmann



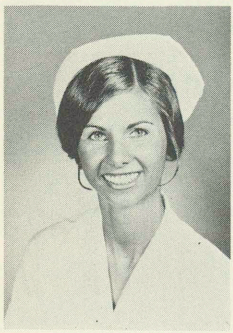
Sally Kimpel



Jean Longfield

Rita Martz

Martha McCabe



Ann McDowell

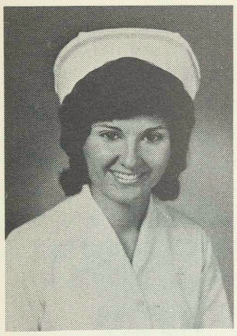
Suzanne Miller

Victoria Myers

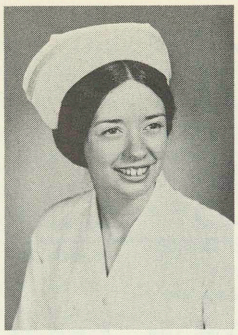
Rita Peck

Brenda Perry

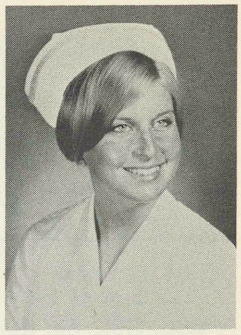
Virginia Schmitt



Cynthia Slowik

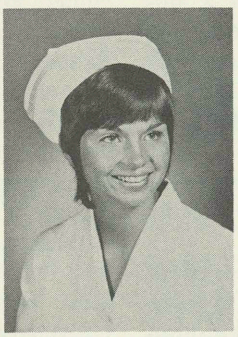


Cathy Jo Smole

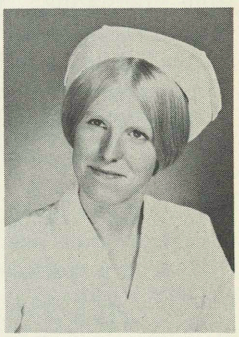


Merry Spoolstra

Joan Stahl



Sandra Stauffer



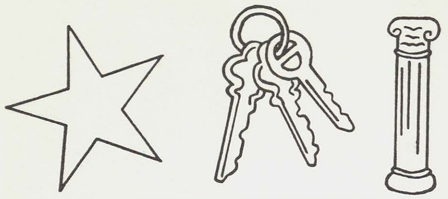
Kathy Sterzik

Connie Swackhamer

Babette Taylor

Colleen Trimble

Pamela Williams



Paul Starkey

Who runs the dental school? Does the Dean decide who is admitted? Can the chairman of a department keep a student from graduating? Who decides if a student shall be recommended to receive a degree? Who establishes the curriculum? If a teacher wants more lecture time, does he go to the Dean and simply ask for it, with the Dean judging whether or not the request is justified? Who is responsible for providing the opportunity for the faculty to improve their teaching?

There are specific answers to these questions and they are not grabbed off of some skyhook. I believe that as interested alumni you'd like to be aware of the administrative mechanisms functioning in your school. Reproduced for you below is a document, our Constitution and Bylaws for the School of Dentistry, which provides these answers. Perhaps a review of the development of this document will be of interest.

In July of 1968, the President of the University at that time, Elvis Stahr, appointed a committee of faculty members representing each of the schools in Indianapolis to develop a Constitution and Bylaws for the Faculty of Indiana University at Indianapolis (IUI). In January of 1969 the campus was designated as Indiana University-Purdue University at Indianapolis (IUPUI), and the faculty of Purdue University at Indianapolis was included. Dean Maynard K. Hine was named Chancellor of IUI in November of 1968 and Chancellor of IUPUI in January of 1969. The Constitution and Bylaws was developed by the committee commissioned by President Stahr, with the addition of a representative from Purdue University at Indianapolis, and that committee actually produced the document during a portion of the administrations of President Stahr, Interim President Herman B Wells, and President Joseph Sutton. The committee was composed of a member from each of the schools of IUPUI at that time and included Professor Bernard Bogar from the Downtown Campus; Dr. Robert Forney, School of Medicine; Professor Edith Green, School of Nursing; Professor Eugene Schlebecker, Herron School of Art; Professor Rudolph Schreiber, the American Gymnastic Union; Dr. Paul E. Starkey, School of Dentistry; Professor Genevieve C. Weeks, Graduate School of Social Service; Professor James P. White, School of Law; Professor Howard Wisner, Purdue University at Indianapolis; and Dr. A. Donald Merritt, Chairman, School of Medicine. The document was presented to the Faculty of IUPUI on April 30, 1969, and later that year was adopted through a mail ballot. Included in the document was the following statement:

> To fulfill its responsibilities, the faculty of each of the colleges, schools or comparable divisions composing Indiana University-Purdue University at Indianapolis shall draft a constitution and bylaws governing the exercise of faculty authority. Each unit's constitution and by laws shall be approved by its respective faculty and filed with the Secretary tary of the Faculty.

Accordingly, Dean Ralph E. McDonald, who succeeded Dr. Hine, appointed a committee of faculty members of the School of Dentistry to draft such a document for the School. The members of that committee were Dr. Charles Burstone, Dr. H. William Gilmore, Dr. S. Miles Standish, Dr. Starkey, and Professor Paul Barton, who served as Chairman. After many hours of intensive deliberations and hard work, the committee on January 19, 1970 presented the results of their efforts to the

Faculty of the School of Dentistry. The document was adopted and since that time the administration and faculty of the School of Dentistry have acted within the framework of that Constitution and By-laws. Very few revisions have been made. It is printed below and although I realize that few, if any, of you will read the document in its entirety, some may wish to refer to particular sections of it as I continue this report.

FACULTY CONSTITUTION FOR INDIANA UNIVERSITY-PURDUE UNIVERSITY AT INDIANAPOLIS SCHOOL OF DENTISTRY

(As amended in September, 1970, and June, 1971)

ARTICLE I. THE FACULTY

Section 1. Source of Powers
Subject to the limitations imposed by the laws of the State of Indiana, the Board of Trustees of Indiana University, and those imposed by the Faculty Constitution for Indiana University-Purdue University at Indianapolis, this Constitution confirms and establishes in the Faculty of Indiana University-Purdue University at Indianapolis School of Dentistry the powers and duties herein specified.

Section 2. Membership of the Faculty
All those holding full-time or part-time appointments with the academic rank of instructor or above, and the Librarian of the School, shall constitute the "Faculty" of Indiana University-Purdue University at Indianapolis School of Dentistry.

Section 3. Voting Members
All members of the Faculty, as defined in Section 2, shall be Voting Members of the Faculty.

Section 4. Associate Members
The Faculty Council may elect administrative officers who do not hold academic rank, and other full-time employees, as Associate Members of the Faculty. An Associate Member shall have all privileges except that of voting.

Section 5. Emeritus Members
An Emeritus Member of the Faculty shall have the same privileges as an Associate Member.

Section 6. Certification of Faculty Status
The Dean shall certify to the Secretary of the Faculty upon request the names of all Voting Members, Associate Members, and Emeritus Members.

ARTICLE II. OFFICERS

Section 7. Presiding Officer
The Dean of the Indiana University-Purdue University at Indianapolis School of Dentistry shall be the presiding officer of the Faculty. In his absence, a presiding officer shall be designated by the Dean.

Section 8. The Secretary
The Secretary of the Faculty Council as hereinafter defined shall also be the Secretary of the Faculty. He shall assume his office at the first regular meeting of each academic year. In his absence, a substitute shall be designated by the presiding officer.

Section 9. The Parliamentarian
The Parliamentarian of the Faculty Council shall also be the Parliamentarian of the Faculty. He shall assume his office at the first regular meeting of each academic year. In his absence, a substitute shall be designated by the presiding officer.

ARTICLE III. MEETINGS

Section 10. Regular Meetings
The Faculty shall hold two regular meetings each year, one in June and one during September or October. Robert's Rules of Order shall govern the conduct of the Faculty meetings. At the autumn meeting the Dean shall report in detail on the state of the School of Dentistry. He may make such recommendations to the Faculty and call such problems to their attention as he deems pertinent. Other meetings may be called by the Dean, or in his absence, by an Associate or Assistant Dean. The Secretary, on petition of twenty Voting Members, or on request of the Faculty Council, shall call a special meeting of the Faculty.

Section 11. Notice of Meeting
The Secretary of the Faculty shall notify, by mail, each Voting Member, each Associate Member, and each Emeritus Member of the Faculty at least one week in advance of the date of a regular or special meeting.

Section 12. Quorum
Ten per cent of the total number of Voting Members shall constitute a quorum for the receiving of reports and for other business authorized by this Constitution.

Section 13. Record of Meetings
The Secretary shall prepare and circulate to the Faculty the minutes of all Faculty action. He shall retain the original and file a copy with the Dean.

ARTICLE IV. THE FACULTY COUNCIL

Section 14. Officers
The Dean shall be the Chairman. The Secretary and Parliamentarian shall be elected by

the Faculty Council. In the absence of the Dean, the presiding officer shall be designated by the Dean. In the absence of the Secretary or the Parliamentarian, a substitute shall be designated by the presiding officer.

Section 15. Membership

A. *Ex-officio Voting Members*
Ex-officio Voting Members shall be:
1. All full time Faculty members.
2. All part time Faculty members holding department chairmanships or administrative titles.

B. *Elected Representatives*
1. Part Time Faculty. There shall be two members of the part time Faculty, elected by the part time Faculty, to serve a term of two years beginning with the July meeting. The election shall be scheduled and conducted by the Secretary so that one of these representatives is elected each year.
2. Basic Sciences. There shall be a total of two representatives of the Basic Sciences, elected for a two-year term by the chairmen or designated representatives of the following departments: Anatomy, Biochemistry, General Pathology, Microbiology, Pharmacology, and Physiology.
The Secretary of the Faculty shall arrange with the appropriate departments to have these representatives elected in June every other year, and shall notify the elected representatives to be present at the July meeting of the Faculty Council,

C. *Student Representatives*
1. There shall be two undergraduate representatives, elected by the Student Affairs Council or such other student body as may be designated by the Dean, to serve a one-year term.
2. There shall be one graduate student representative, elected by the graduate students, to serve a one-year term.

Section 16. *Meetings*

The meetings of the Faculty Council shall be called by the Chairman. The regular meetings for the year shall be scheduled prior to July 1st and the Secretary shall send the agenda for each meeting to the members of the Council.
The Council shall hold an election meeting each year during July. The Secretary and the Parliamentarian, and committee members as provided for in the Bylaws, shall be elected at that meeting, to take office immediately. Annual reports of committees shall also be presented at the July meeting, and copies shall be filed with the Dean.
On petition of ten members of the Faculty Council, the Secretary shall call a special meeting of the Council.
Ten voting members of the Faculty Council shall constitute a quorum.

Section 17. *Responsibilities*

The Faculty Council shall carry out the following administrative responsibilities in the School of Dentistry:

1. Elect the membership of Standing Committes as provided for in the Bylaws.
2. Formulate and approve educational policies, including didactic and clinical components of the curriculum as well as experimental programs.
3. Approve student instrument issue.
4. Approve admission policies for the undergraduate, dental hygiene, graduate, and postgraduate programs.
5. Approve policies regarding dental auxiliary programs.
6. Approve Dental School calendar.
7. Approve library policies.
8. Approve policies on continuing education
9. Approve reports and actions of the Standing Committees.

ARTICLE V. COMMITTEES

There shall be the following Standing Committees of the Faculty Council:

Admissions
Constitution and Bylaws
Continuing Education
Curriculum
Faculty Advisory Committee on Administrative Affairs
Graduate Education
Library
Nominating
Research
Student Affairs
Student Promotions
Teaching

The Faculty Council shall create such ad hoc committees as it deems necessary to perform the work of the Council.

ARTICLE VI. AMENDMENTS

The Constitution may be amended by a three-fourths vote of the Faculty members present and voting. Voting may be at any regular meeting, provided that notice of the proposed amendment, endorsed by five Faculty members, has been given to the Secretary of the Faculty ten days before that meeting and circulated by the Secretary to the voting Faculty five days before the meeting. The Bylaws may be amended by a two-thirds vote of the Faculty members present and voting. As with the procedure for amending the Constitution, voting may be at any regular meeting, provided that notice of the proposed amendment, endorsed by five Faculty members, has been given to the Secretary of the Faculty ten days before that meeting and circulated by the Secretary to the voting Faculty five days before the meeting.

ARTICLE VII.

FACULTY RESPONSIBILITY

The previous provisions of this Constitution have identified specific rather than general allocations of authority and duties to Faculty committees and the Dean. The separation of residual authority and duties is not intended. In general the spirit of this Constitution is that those duties and powers having to do with the formulation of goals and standards of dental education shall be those of the Faculty and those duties and powers having to do with the execution of express goals and standards of dental education and with institutional administration shall be those of the Dean and his administrative staff.

BYLAWS OF THE FACULTY COUNCIL

(as amended in September, 1970, and June, 1971)

1. Robert's Rules of Order shall govern the conduct of the meetings of the Faculty Council except insofar as the Bylaws make express provision to the contrary.
2. A Nominating Committee shall present a slate of nominations for all committees, except when otherwise provided for herein. The Nominating Committee shall be elected each year by the Faculty Council and shall consist of four elected members and the Dean as Chairman. Nominations for membership on the Nominating Committee shall be taken only from the floor.
3. The duties of the Secretary shall be as follows:
   a. He shall keep comprehensive minutes of the proceedings of the Faculty Council and circulate all actions promptly to the general faculty. He shall retain the original and file a copy with the Dean.
   b. He shall prepare a summary of the activities of the Faculty Council each year and distribute it to the general faculty.
   c. He shall notify the Council Members of meeting times and, in consultation with the Chairman, shall distribute the proposed agenda to the Council Members at least one week prior to each regular meeting.
4. Any elected member of the Faculty Council who is to be absent for a period of two months or longer shall be replaced on the Faculty Council for the duration of his absence by the nominee who is next in order of votes.
5. The composition of committees shall be as follows:
   a. Faculty Advisory Committtee on Administrative Affairs
      The Committee shall be composed of five faculty members. Four shall be elected by the Faculty Council, and the Secretary of the Faculty Council shall be Chairman.
      The Committee shall receive communications from the faculty and the Dean on such matters as personnel, faculty promotions, tenure, and recruitment, facilities, equipment and supplies, allocation of space, patient care, and clinic organization. The Committee shall in turn advise the Dean.
   b. Admissions Committee
      The Admissions Committe shall consist of at least six members, elected by the Faculty Council, and such additional resource people as may be designated by the Chairman. The Dean or his designated representative shall be Chairman. The Committee shall recommend admission policies and select students for admission to the undergraduate program.
      A subcommittee shall be appointed by the Dean to perform the same functions for the Dental Hygiene Program, with the Director of Dental Hygiene as subcommittee chairman.
   c. Continuing Education Committee
      The Continuing Education Committee shall be composed of six members elected by the Faculty Council. The Director of Continuing Education shall be the Chairman.
      The Committee shall be responsible for the planning and execution of all continuing education programs not leading to a degree or certificate.
   d. Curriculum Committee
      The Curriculum Committee shall be composed of a Chairman appointed by the Dean and six members elected by the Faculty Council. The Committee shall maintain a continuing review of the Dental School curriculum, with a view to recommending such changes and innovations as it considers desirable. The Committee shall also be responsible for recommending curricula for special students. A subcommittee shall be appointed by the Dean to perform the same functions for the Dental Hygiene Program, with the Director of Dental Hygiene as subcommittee chairman.
   e. The Library Committee shall consist of the Librarian and five faculty members appointed by the Dean. The Dean shall appoint the Chairman.
      The Committee shall recommend library hours and rules and consider requests for new publications and subscriptions. It shall also advise the Dean on matters relating to library budget and personnel.

f. Graduate Education Committee
The Graduate Committee shall consist of all members of the Graduate Dental Faculty. The Chairman shall be the Director of the Graduate Dental Program. The Graduate Committee shall recommend admission policies, select candidates for the graduate programs, review graduate curricula, recommend new courses in the professional graduate program, give preliminary approval of new courses or course changes in the academic graduate program, and recommend policies.

g. Research Committee
The Assistant Dean for Research shall be the Chairman. The Research Committee shall be composed of the director of the animal research quarters and four other members appointed by the Chairman. The Committee shall review all new or continuing research grant applications, and serve as consultants in the preparation of new grant applications, as required.
It shall serve as a review board for clinical research projects involving human volunteers or the use of new drugs or therapeutic agents. It shall also determine policies and coordinate research activities requiring the use of experimental animals and the utilization of the animal research quarters.

h. Student Promotions Committees
There shall be a Student Promotion Committee for each of the undergraduate classes and the dental hygiene classes. Each committee shall be composed of the Department Chairman, or his designate, from each department offering a course for that particular class. The Director of Clinics shall be a member of the committees for the junior and senior classes. The Chairman of each Committee shall be appointed by the Dean, and the Dean shall be a member of each committee.
Each Committee shall report to the Faculty Council its recommendations for promotion, nominations for degree certification, probation, withdrawal, or dismissal, for each student in each respective class at the end of each semester. The committees, in joint effort, shall study grading policies periodically and make such recommendations to the Faculty Council as are deemed appropriate.

i. Teaching Committee
This Committee shall be composed of a Chairman appointed by the Dean, and six members elected by the Faculty Council. The Committee shall provide the faculty with opportunities for the improvement of teaching. It shall also maintain a continuing review of the availability and uses of such teaching aids as television, projecting equipment, tape recorders, movie projectors, and overhead projectors, and present findings and recommendations to the faculty.

j. Student Affairs Committee
The Student Affairs Committee shall consist of four faculty members elected by the Faculty Council, two undergraduate students elected by the undergraduate Student Affairs Council, or such other student body as may be designated by the Dean, and a representative of the Dean. The Dean shall appoint a member of the Committee as Chairman. The Committee shall maintain liaison with the Student Affairs Council or comparable student body on matters of common interest. It shall also review student affairs as they pertain to student conduct and discipline, professional attitudes and behavior, and related matters.

k. Constitution and Bylaws Committee
This Committee shall be composed of three Faculty members elected by the Faculty. The Dean shall be the Chairman of the Committee. The Committee shall maintain a continuing study and review of the Constitution and Bylaws, accept suggestions for changes or additions from Faculty members, and report its recommendations.

6. If a vacancy should occur among the elected members of a committee, the Dean shall appoint a replacement to serve until the next election of the Faculty Council.

Back to the questions. Who runs the dental school? The Constitution and Bylaws delineate administrative and faculty authority. The Dean is the Chairman of the Faculty Council, however, and this stipulation provides an opportunity for close integration of the responsibilities of both faculty and administration. The document of the School of Dentistry is commensurate with the document of the IUPUI faculty, which identifies the powers of the faculty which are subject to the limitations imposed by the laws of the State of Indiana, and the Board of Trustees of the University. The legislative authority of the Faculty includes the general power and responsibility to adopt policies, regulations, and procedures intended to achieve the educational objectives of Indiana University-Purdue University at Indianapolis and the general welfare

of those involved in the educational processes.

Among other responsibilities necessary to meet the obligations of its general powers, the Faculty specifically reviews and approves the curriculum, nominates candidates for degrees, fixes the academic calendar, and advises the administration concerning policies affecting the general welfare, privileges, tenure and responsibilities of the Faculty, standards for appointment, and procedures for academic promotion.

If you will refer to Article V. COMMITTEES in the document reprinted above, you will see there listed the committees established to exercise and fulfill the authority and responsibilities of the Faculty. The 5th Bylaw explains the commission of each of these committees.

Who runs the dental school? The answer is the administrative staff and the Faculty. The Dean and most of the administrative staff are members of the Faculty. There is a delineation of authority between administration and Faculty but not between the persons involved. Article VII, FACULTY RESPONSIBILITY is a neat little statement reflecting the general philosophy of this delineation.

Just as students in recent years have demanded more voice in their educational discipline, so have educators in the functions of the educational institutions. In my opinion, this is a very healthy situation. Faculty members are far more motivated today to consider improvements in teaching methodology and curriculum. To be truly interested in curricular developments designed to prepare our students better for the future practice of dentistry, an educator must be able to contribute input and otherwise to participate fully in decisions related to improvement and progress.

Our Constitution and Bylaws have been in effect since January of 1970. The spirit of cooperation between administration and faculty is excellent. The Faculty is active in all areas of its responsibility. Sure, there are more committees, a greater demand on the educator for his time in this concern, and sometimes some discomfort in thought, because he must deliberate on matters of broader scope than his own particular discipline. For many years the life of the dental educator was really quite tranquil. There were no changes of great magnitude to worry about. Learning disciplines were greatly curtailed during summer periods, and the faculty had freedom of time to prepare rather leisurely for the next academic year. Those days are gone. Almost all of the members of the Faculty I know put in many more hours than the normal 40-hour work week. Many of us are uncomfortably pressed by the necessity to deliberate on proposed changes in our disciplines which we know are necessary to "gear up" so that graduates of the future will have a satisfactory learning experience for their future practice. We may be uncomfortable, but we are not shirking our responsibilities.

The Dean of the School of Dentistry has supported the philosophy of our Constitution and Bylaws. The Faculty has responded and I am convinced that our School of Dentistry will continue to maintain its superb reputation and to progress.

On January 4, 1972, the Faculty Council, without a dissenting vote, approved in principle a significant change in our curriculum. By the time of publication of the next issue of the Bulletin, perhaps I can report to you on our progress in developing this changed curriculum.

Yours for better dental health for all!

Fall Meeting 1971

The Bookshelf

Mrs. Helen W. Campbell, Librarian

Every library is unique in some detail. The physical layout and the staff come to mind immediately as being different in each one. Some libraries are crowded, some are spacious, and there are even those which are beautiful. As for the individuals who keep the wheels turning, there are short librarians and tall ones but hardly any in 1972 who say "Quiet, please" to people who come to use the book collection.

Even though all are collections of books, each library specializes in the history of its own community. In the case of our Library, that means collecting the history of dentistry in Indiana as well as the history of our School.

The Indiana State Dental Association was organized in 1858. A preliminary meeting of the dentists of the City of Indianapolis was held at the office of Dr. J. F. Johnson on September 28, 1858, to discuss the formation of a state association and on December 28 of that year, 114 dentists assembled to adopt a Constitution and by-laws. On March 29, 1879, the General Assembly of the State of Indiana promulgated "an act to regulate the practice of Dentistry in the State of Indiana," which led to the founding of this School.

An announcement on May 20, 1879, went out "To the Dental Practitioners of Indiana' stating that "a meeting of dentists in Indiana, will be held in this city at the office of Dr. Heiskell, 76 East Market Street at 2 o'clock P.M., Monday, 23rd of June next, for the purpose of forming a Dental College Association. . . . " The catalog of the Indiana Dental College reported that its first session would begin on October 1, 1879, and continue until March, 1880.

The complete file of Indiana Dental College catalogs forms the nucleus of the "special" nature of our materials. But we also have many other one-of-a-kind historical items, including handwritten records of the Board of Trustees of the Indiana Dental College, minutes of faculty meetings, and other record books. Among the most interesting items are two of the first three diplomas issued by the Indiana Dental College. R. W. VanValzah (Terre Haute, Indiana), W. E. Swigert (New London, Missouri), and E. J. Church (LaPorte, Indiana) were the 1880 graduates and the Library owns the ones issued to Dr. Swigert and Dr. Church. To anyone else, these items would mean nothing, but to the Indiana University School of Dentistry these represent the "beginning" and are priceless!

We have the responsibility of caring for the official records of the Indiana State Dental Association and the early records of some of the component societies, also. Recently, as part of a gift to the School, we acquired an early license to practice. According to records of the State Board of Dental Examiners, the first license was issued on July 11, 1887. Our rarity is No. 188, dated July 21st, 1887, and was issued to Thomas P. Wagoner of Knightstown, Indiana, and signed by the members of that first Board:

P. G. C. Hunt, Robt. Van Valzah, Samuel T. Kirk, Edward J. Church, and Milton H. Campbell

This is history, and it is our responsibility to collect it, care for it and make it available to those who are interested.

Theses written in partial fulfillment of requirements for Master's degrees at this School are "special" items in our Library and abstracts of sixteen of them follow:

RETENTION OF RESIN RESTORATIONS BY MEANS OF ENAMEL ETCHING AND BY PINS

Alvin James Ayers, Jr.

An investigation was conducted into the effect of acid etching of the enamel and the use of pins on the retention of direct filling

resins when used for restoration of fractured incisor teeth. The retention secured by these techniques as related to the cavity design also was studied.

Four different cavity preparations were used. The retention of the resins in all four was compared when there was no pretreatment of the enamel, when the enamel was etched by 50 per cent phosphoric acid, and when pins were used for retention. Retention was assessed on the basis of resistance of the restoration to displacement by a lingual force. No significant difference was observed in retention as related to cavity design in the control specimens. In all four cavity preparations, acid etching of the enamel and the use of two retentive pins increased the resistance of the restorations to displacement. (However, when only one "L" shaped retentive pin was employed in conjunction with a flat incisal preparation the force required to accomplish displacement was no greater than for controls.) The acid etch technique when employed with a cavity preparation that extended 1.7 mm. or more onto the lingual surface of the enamel generally offered a higher resistance to lingual force than double pin retained restorations. There was no significant difference between the resistance offered by a circumferential preparation when the resin was retained by either acid etching or by two pins.

In the acid etch technique the enamel surface area and its distribution are important factors in retention.

DENTAL DEVELOPMENTAL AGE VERSUS CHRONOLOGICAL AGE AS PREDICTORS OF CHILDREN'S FUNCTIONING IN FIVE DEVELOPMENTAL SKILLS AREAS

Douglas Harvey Barton

The purpose of this study was to test the relationship between dental developmental age and chronological age as they relate to other aspects of the child's development. The dental developmental age was determined on 74 children, 40 males and 34 females, ranging in age from two to 11 years. The sample population was chosen at random from patients at the Indiana University School of Dentistry. The socio-economic status was determined according to the North-Hatt Occupational Scale; 14.3 per cent of the children fell in the upper class, 84.3 per cent in the middle class, and 1.4 per cent in the lower class. Analysis by race showed that 71.6 per cent of the sample were Caucasian, 23.0 per cent were Negroid, and 5.4 per cent were Oriental. Panoramic radiography, with the S. S. White Panorex, was used to evaluate dental developmental age. Two independent observers scored the radiographs and double blind procedures were used. To determine dental developmental age, Wolanski's method of tooth formation evaluation was used. To determine functioning of children in five developmental skills areas, the Alpern-Boll Developmental Skills Inventory was used.

Dental developmental age and chronologic age had a significant positive relationship to children's functioning in five developmental skill areas. There is a chronologic period when determination of dental age appears to be difficult. The data available and methodology for determining dental developmental age of the four-year-old female and the five-year-old male seem to be inadequate.

Dental developmental age seems to be a better predictor of general developmental skills for males than it does for females, specifically in the two to eight-year-old group. The highest correlations were found in the youngest age group, i.e. the two to five-year-olds. The correlations between dental developmental age and chronologic age, and between those two indices and the five developmental skills ages remain highly significant in the younger ages but decrease consistently as the child becomes older. The specific age as well as the sex of the child has a definite effect on the correlations obtained.

The use of dental developmental age is good but not superior to the use of chronologic age for predicting functioning for normal children. This may not be the case for atypical children. More study is indicated.

A STUDY OF THE CORRELATION OF INCISAL BITING FORCE AND CEPHALOMETRIC PATTERNS

Frank Wayne Denzinger

This study was initiated in order to obtain quantitative information on the possible correlations of incisive biting strength and representative cephalometric measurements as taken from the lateral cephalometric headfilm. It consisted of an examination of 150 subjects and a determination of their incisive biting strength.

The results of the study indicate that the five cephalometric measurements chosen were of little predictive value in determining incisal biting force.

A STUDY OF THE EFFECT OF PORCINE CALCITONIN ON THE SERUM CALCIUM AND PHOSPHORUS LEVEL OF THE MACACA RHESUS MONKEY

John M. Foley

The current investigation involved a study of the effect of porcine calcitonin in the *Macaca rhesus* monkey with regard to exogenously produced perturbation of the serum calcium and phosphorus concentrations during 24 hour investigative periods.

Minimal doses of 0.5 MRC u/Kg of the hormone were delivered to the animals by the intramuscular route of administration in a 16%

sterile gelatin base. This dosage of the hormone produced an immediate hypocalcemic and hyperphosphatemic response which was clearly observable and lasted for periods of 6 to 9 hours.

Similar perturbations of the serum calcium and phosphorus concentrations were observed upon the administration of actinomycin D in intravenous 0.5 mg doses; but the onset of the changes in serum chemistry were not apparent until the 9th to 12th hour of the investigation. The difference of time interval of the onset in serum disturbances produced by calcitonin and the antibiotic is considered as direct evidence for different intracellular sites of action of calcitonin and parathormone.

Radioactive iodin ablated the thyroid gland and the attendant parafollicular or calcitonin producing cell in 30 days time and in doses of 30 millicuries of I^{131} per animal. In addition to histologic evidence of effective ablation of the gland, similar antibiotic and hormone regimens, to those already described, revealed a loss of the finely modulate rebound response of endogenous parathormone activity to exogenous stimuli.

THE VALIDITY OF THE HISTOLOGIC DIAGNOSIS OF PERIAPICAL LESIONS ASSOCIATED WITH PULPLESS TEETH

Charles E. Gregory

This study was an attempt to evaluate the accuracy and validity of the histologic diagnosis of periapical lesions associated with pulpless teeth. Numerous articles in the dental literature concerning the incidence of periapical granulomas and apical periodontal cysts in periapical lesions reflect a seeming lack of agreement among oral pathologists in histologically diagnosing such lesions.

Thirty-five biopsy specimens of periapical lesions (most containing varying amounts of proliferating odontogenic epithelium) were diagnosed independently by 13 oral pathologists. There was unanimous diagnosis of only two of the 35 lesions submitted.

Also, serial sections were made of 30 biopsy specimens (all over six millimeters in diameter) in which the original diagnostic cuts (representative sections) were void of proliferating odontogenic epithelium to see if proliferating epithelium and/or cyst formation could be detected in the subsequent serial sections.

A HISTOLOGIC EVALUATION OF THE EFFECT OF THREE ELECTROSURGICAL MODALITIES ON MICROSCOPIC AND LARGE EXPOSURES IN THE CANINE TEETH OF DOGS

Paul P. Hatrel

The histologic effects of three electrosurgical modalities (electro-section, electrocoagulation, and fulguration) were tested on microscopic and large pulpal exposures in Class V cavities in the canine teeth of dogs. Controls consisted of Dycal capped exposures and Dycal was also used over the electrosurgically treated exposures. All cavities were restored with a Temrex base, Copalite, and amalgam. After three weeks the teeth were extracted and prepared for histologic study.

In most cases, applying the electrosurgical currents did not prevent the flow of pulpal fluid or hemorrhage. This was more evident with the large exposures. No correlation was found between the specific current tested and the histologic reaction. With all currents there were some normal pulps with complete dentin bridge formation. In other specimens there were either localized or generalized reactions.

The effect of the three currents was less severe in the microscopic exposure group than in the large exposure group. The severe reactions consisted of pulpal necrosis incisal to the exposure site and "odontoclastic resorption" apical to the exposure site. This reaction was observed only in teeth with small or very small pulp chambers. Normal pulps with complete dentin bridge formation were observed in teeth with large pulp chambers.

This study indicates that the use of electrosurgery is probably not as effective in pulp as a calcium hydroxide compound used alone. However, the pulp tissues in teeth with large pulp chambers survived the three applications of electrosurgery.

AMERICAN DENTAL ARTICULATORS: THEIR HISTORY OF DESIGN AND USE

James E. House

Gathered from United States Patent records, dental literature and personal communication are many bits of information concerning dental articulator use and design which have been put into this single source. It develops a new classification of dental articulators into eighteen types. This classification is based upon a sorting of mandibular movements recognized by the dental profession during one hundred thiry years of history from 1840-1970. Each classified type demonstrates how different designers of dental articulators tried to duplicate these jaw movements within mechanical devices.

This investigation should be of interest to future designers of dental articulators since history proves that many designs are repeated several years after previous investigators have shown earlier like designs to be valueless. Also of interest is the magnitude of effort and thought by the many dental investigators of the past toward understanding mandibular movement and constructing mechanical devices to duplicate these movements.

A HISTOMORPHOLOGIC STUDY OF THE MANDIBULAR JOINT OF THE I.A. RAT

L. Stefan Levin

This study was undertaken to evaluate the histomorphology of the mandibular joint of the *i.a.* rat, and to provide additional information concerning the characteristics of this animal.

At the time of sacrifice at 15, 30, 45, and 60 days of age, the *i.a.* animals were examined grossly and were weighed; blood was drawn for hematocrit determination; livers and spleens were removed for histologic study; long bones were radiographed; and heads were sectioned sagitally, radiographed, and then sectioned coronally for histologic study of the mandibular joint. Heterozygous animals and Wistar animals were used as controls.

One of the basic differences between the *i.a.* rats on the one hand and the two groups of control animals on the other was that the mandibular joint in the *i.a.* rat was less well developed and was smaller than that of the controls; in addition, there was a marked increase in the number of unresorbed cartilaginous cores in the subcondylar areas of the *i.a.* rat mandibular joint. *I.a.* animals were smaller in size and weight than controls, and exhibited numerous erupted molar teeth; hematocrits were within the limits of the control group. Radiographic findings in the long bones confirmed previous studies.

PULP CAPPING IN MONKEYS WITH A CALCIUM HYDROXIDE COMPOUND, AN ANTIBIOTIC, AND A POLYCARBOXYLATE CEMENT

George M. McWalter

The pulps of 74 permanent teeth of four monkeys were exposed and left contaminated with saliva and plaque for three to 5.5 hours. The pulps then were capped either with Keflin (an antibiotic) or Dycal (a calcium hydroxide compound) or Durelon (a polycarboxylate cement). Varnish and then amalgam were inserted over these agents to assure an adequate seal. The teeth were surgically extracted at 15, 50, 100, and 200 days.

Of the 25 teeth treated with Keflin, only eight percent reacted satisfactorily.

Of the 24 teeth treated with Dycal, 96 percent gave a satisfactory response.

At the 50-day intervals, and later, success in this group was 100 per cent, with all teeth having completed dentin bridges as demonstrated by serial sections and Procion vital dye markings. The calcified bridge usually formed directly against the Dycal.

Durelon was used to treat 25 pulps. At the 15-day interval success was limited but at 50 days it rose to 75 per cent. Combining the 100- and 200-day teeth, a 90 per cent success figure was obtained. With Durelon a calcified bridge section forms at the exposure site.

From this study, Dycal is highly recommended as a pulp capping agent. Although Durelon is not recommended as a pulp capping agent, its innocuous effect on the pulp is remarkable.

A STUDY OF SUBCUTANEOUSLY IMPLANTED PROCION LABELED HOMOGENOUS TEETH, HOMOGENOUS BONE, AND AUTOGENOUS MARROW

James Edward Naylor

This study was performed to observe the biological interaction occurring between subcutaneously implanted teeth, bone, and marrow. Procion labeled homogenous rat molars were extracted from donor rats and implanted in the subcutaneous abdominal tissues of recipient rats. Each animal received four implants, the tooth alone, the tooth with homogenous bone previously stored at —20°C, the tooth with autogenous red marrow obtained from the femur, and the tooth with both frozen bone and red marrow. The animals were sacrificed at 1, 2, 3, and 4 weeks, and 2, 4, 6, and 9 months. Microscopic examination was made of decalcified sections stained with hematoxylin and eosin. Comparable unstained sections were viewed with fluorescent light microscopy.

This examination revealed that teeth implanted without marrow formed osteodentin internally while undergoing progressive resorption externally. When the tooth was implanted with marrow, extensive osteoclastic and osteoblastic activity occurred. The resorption at times caused pulp exposure and increased pulp replacement. The bone deposition occurred on all tooth surfaces. The marrow's resorptive activity was seemingly reduced by the presence of periodontal fiber remnants and the addition of frozen homogenous bone, while its invasive activity was increased by the presence of lateral canals.

THE EFFECT OF VARIOUS DOSAGES OF SODIUM FLUORIDE IN PREVENTING RICKETS

John Robert Pravel

This study was initiated because in recent years there has been a notable increase in rickets reported in hospitals in such countries as Canada, Scotland, and Greece. These countries have not added vitamin D to various foods as

(Continued on page 78)

Alumni Notes

Mrs. Cleona Harvey

Hello Friends! and a great big happy belated wish for a wonderful 1972 from 335 South College, Bloomington, Indiana 47401. Yes, I moved to Bloomington in March after my brother died. I do hope that you will keep on writing to me because that is what I need in order to have a good column. One week I received five letters filled with news—you can't imagine my joy—and I am sure you will receive the same joy when you read them. I guess my "scolding," as one correspondent put it, must have helped. Anyway, you who did write are wonderful and I just wish I could answer each of you. Since I can't, I just added little notes as I went along.

To those of you who didn't write—I hope you made a New Year's resolution to do so in the future! I shall be looking to hear from you soon and often. Everyone is so eager to know what classmates are doing and some alums tell me that they read the entire column because it is an education to read of the experiences of the old as well as the new grads.

Christmas of '71 was a *ringer* with so many of you sending greetings and good wishes for the column. I don't know when I have ever enjoyed a Christmas Season so much.

I was on the Bloomington Campus last Tuesday and at Ball State this week. We are not recruiting as we have many more applicants than we can possibly accept, but we are doing counseling and guidance work with the predents with the hope that the incoming students will be well prepared for dentistry. It is a great satisfaction to me to be able to help a student plan his or her schedule and thus enhance their chances of being accepted to dental school.

This was Dean McDonald's idea that I stay on as a consultant and visit other campuses. It has really been a pleasure for me and I am grateful to the Dean for affording me this opportunity. So you see I am keeping busy, but not "too busy." I thoroughly enjoy this leisurely life after the 37 hectic years I spent trying to be all things to all people—but I loved it! I must admit I feel quite "smug" when the snow falls and I can just smile knowing I don't have to contend with the weather—at least not very often.

If any of you have any ideas or suggestions of something you would like us to incorporate in this report to our alumni don't hesitate to let us know. If there is some part of your letter you prefer not to have printed, please let us know. All you have to do is just tell us.

God bless each of you—and keep those letters coming! Now for news of the Classes as we begin with the Class of

1904

We were pleased to get a note from Dr. Denzil C. Barnhill giving us his new address of 4443 North Arlington Avenue, Jamestown Apartments, Indianapolis, Indiana 46226. Dr. Barnhill is retired now but when I first came to Indianapolis to be with the dental school in 1944 he was very active in all things to do with dentistry. Thank you, Dr. Barnhill, for writing us.

1905

Deceased: Arthur G. Barrett of Danville, Indiana 5-29-71

1917

A Christmas note from Dr. and Mrs. Carl French of Sun City Center, Florida, said, *"What's this I hear about a youngster like you retiring? Hope you are enjoying your new leisure as much as we do. If not, hurry down to God's country."* Bless you dear people, but I like Indiana with snow, ice and all!

1918

Deceased: Joseph E. Pulley, of Chicago, Illinois 7-1-71

1921

Deceased: Robert L. Goster of Milford, Delaware 4-12-70

1922

Deceased: George B. Fults of Wabash, Indiana 5-17-71

1923

Deceased: Harold T. Dailey of Delray Beach, Florida 7-17-71; Fernie King of Indianapolis, Indiana 7-30-71; Garnett R. Perry of Shelbyville, Indiana 8-31-71.

1924

Dr. Fred J. Decker, State Hospital, Norristown, Pennsylvania, 19401 reports, *"I have been Chief of Dental Therapy for the previous 25 years. Our hospital is accredited as is our dental clinic."*

Deceased: W. Dale Lentz of Indianapolis, Ind. 7-27-71; Alvah C. Fennell of Key Biscayne, Florida.

1925

Dr. John D. Austin '56 wrote us: "It is with regret that I must report the loss of my father, John C. Austin, Class of 1925, on October 13, 1971. Although he practiced in Arizona, he was always a 'Hoosier' and was so proud of his school.

"He remembered the names of all his classmates and most of the other students while he was in school as well as all of the faculty. He was particularly proud of the achievements of Chancellor Hine, who he felt brought great honor to our school."

Thank you, Dr. Austin, for writing us concerning your father. I could wish that all sons would be as kind to their parents and as thoughful of us. It is our desire to get the news to our readers and this news, though sad, will be appreciated by many as all who knew your father respected him.

1926

Dr. and Mrs. Howard Maesaka of 115 Makani Avenue, Wahiawa, Hawaii, 96786 included in their Christmas greeting his card, which says *"H. K. Maesaka, D.D.S., Re-Tired — no address — no phone — no business — no money;"* He always did have a lot of fun and I guess retirement hasn't changed him a bit. Keep it up, Dr. Maesaka, we are all for you.

Deceased: Glandon R. Mast of Terre Haute, Indiana 7-16-71

1927

Deceased: L. Dale Arthur of Charlotte, North Carolina 7-29-71

1928

Dr. Robert J. Meyers of 301 E. 45th Street, Indianapolis, Indiana 46205 gave us some interesting news, *"Made a trip to Hawaii in '71 and visited with Dr. Nakamori and wife. We have 27 grandchildren and one great-grandchild. Who can top that? Am semi-retired."* Thanks, Dr. Meyers—I know your class mates will enjoy that bit of news and maybe I will get a letter from one or more of them who can "top that"! I hope so.

1929

Deceased: William R. Merritt of Elkhart, Indiana 6-20-71

As usual, we were pleased to receive a Christmas card from Dr. and Mrs. James Sakurai of 2714 Tantalus Drive, Honolulu, Hawaii 96813. And as usual our minds went back to the lovely visit we had in their gracious home in that beautiful land of Hawaii.

1930

Dr. Eugene H. Williams, 257 Gold Mine Drive, San Francisco, California 94131 tells us, *"Not in the practice of dentistry. Served 16 years as chemist for the U.S. National Bureau of Standards. Now teaching English and Americanization to the foreign-born in San Francisco Community College District."*

1932

Dr. Harold C. Asher, 689 Black Oak Ridge Road, Wayne, New Jersey 07470 delighted us with his letter, which goes as follows: *"Dear Mrs. Harvey: NO, THIS IS NOT FOR YOUR OBITUARY COLUMN as mentioned in the last issue of the Alumni Bulletin, but since you have complained about not hearing from enough of the Alumni Members I thought maybe I could help a little to lessen that problem.*

"Since there is nobody left around the school except perhaps Dr. Harry Healey who was there during our time, you come the closest to being the connecting link, and now that you have retired there is no one left to whom we can go who would have the slightest idea of our identification.

"After nearly forty years I have taken down my shingle and IF AND WHEN the Planning Board of this town should see fit to approve the sale of our three acres for a sub-division my wife Bert and I will be heading for Lake Havasu City, Arizona, to live.

"When my classmate Nakamori and I visited the school three years ago this spring, we couldn't believe our eyes, because what these kids of today have as compared to what we had forty years ago, it just doesn't seem like we had anything at all. Now with this new addition, the facilities must be fabulous.

"I've been wading through this Fall issue of the Bulletin and it sorta looks like the gals are taking over our school. This Women's Lib business is going too far.

"Thanking you for your continued interest in the Alumni of I.U.S.D., I remain, Very truly yours, Harold C. Asher, D.D.S. '32"

Dr. Asher, your letter did me more good than a tonic. One of the things I miss most, since I have retired, is not getting to be "hostess" to all of the returning grads. That was always so interesting and the tales you all could tell of what happened when you were in school were tremendous. Do write again, as you do it so well, and it is letters like yours that make this column interesting.

1933

Deceased: Bernard D. Lefrak of Paterson, New Jersey 6-4-71

1935

It is always nice to be remembered and Dr. and Mrs. M. J. Bean of 5 Pangborn Place, Hackensack, New Jersey thought of us at Christmas with a card which said *"Joy to the World and especially to you."* I liked that!

I received a lovely three-page letter from Dr. and Mrs. John E. Buhler, 2 Johnson Road, The Crescent, Charleston, S. Car. 29407. I wouldn't dare quote it all. He said so many nice things about me that my head will never be the same size again! But I will let you in on some of his letter: *"You will find it hard to believe that I had it on my mind to write you ever since the 1970 graduation at IUSD and thank you for the concerned help you gave John during his four years with you. . . . I am prompted to write this note—long, long overdue in response to the cute thing you wrote in the Fall 1971 issue of the Alumni Bulletin, page 40, about John and Ethiopia."* He went on to tell me that John (Class of 1970) is in Ethiopia, and he and his wife gave Dr. and Mrs. John E. Buhler their first grandchild in November 1970. He thinks Charleston is the best place in the world to live and suggested that perhaps at this very time it may be cold in Indianapolis! I refuse to tell him how cold but it has been cold enough to make history. At least when he wrote his letter in January we had one of the coldest days ever recorded for Indianapolis! Such is life but we like it. Thanks for your good letter, Dr. Buhler, and hope your son sees fit to write me sometime. I can always be optimistic.

Deceased: Dr. Isidore Rosen of Cleveland, Ohio 10-25-71

1937

Dr. Michael J. Shelsy, 33 Pearl Street, Pittsfield, Massachusetts 01201 had a bit of news: *"My son, David, is associated with a dentist in Dorchester, Mass.; Dr. Michael J. Shelsy is taking a three-year postgraduate course in Orthodontics; son Peter has decided upon a dental career and is a junior on the Bloomington Campus of Indiana University."* I might add that in visiting the Bloomington Campus for counseling we have seen Peter several times and he is a very fine young man and we hope he gets accepted to I.U.S.D.

1942

Dr. R. Wurtz, 2148 South Meridian Street, Indianapolis, Indiana 46225 had this to say and I must admit I enjoyed every word of it: *"Not that I have a lot of news to give you but I am just a*

little tired of never seeing '1942' in print. I would certainly hate to have an obituary notice (we have been out of school 30 years now) the only reason for '42 appearing in the news.

"I did take a trip with my wife to Scandinavia and Ireland in 1970, and on the surface it seemed that their National Health Programs would be a panacea for all the dental problems, even in the USA. However, I'm not too sure it would work in the USA as well as it seems to be working in the sparsely settled regions of the abovementioned countries. I never had a chance to talk to any private dentists to ask them what they thought of the Program.

"Now that I've 'broken the ice' for 1942 let's hear from some more of us." Isn't that wonderful? I couldn't have made a stronger plea for letters for this column—thanks a bunch, Dr. Wurtz.

1945

I mentioned in the Fall issue of 1971 that Dr. Charles Vincent had called me when he was in town and now he has written me and also sent me a Christmas card. Sometimes I really rate. He said, *"Just a few lines to tell you how wonderful it was to talk with you during my recent short visit to Indianapolis. Isn't it marvelous to be able to renew old friendships?*

I have enjoyed my rest in Indiana but must confess I'm looking forward to returning to Scandinavia. I seem to feel much at home in that part of the world. I have greatly enjoyed my time in Norway, but look forward with great expectation to returning to Sweden for the next few months.

"I know I.U. will miss you greatly, but I hope you will enjoy your much deserved 'retirement'. From what you tell me, I have the feeling you will remain active in many fields. My best wishes to you for all good things. Let's keep in touch." Then he gave his address as University of Gothenburg Dental Clinic, Department of Pedodontics, 40033 Gothenburg, 33, Sweden. Have fun, Dr. Vincent. It sounds like you are happy and that is good.

1947

Captain J. W. Pentecost, DC USN, 2153 Foxwood Ct, Orange Park, Florida 32072 sent us some interesting tidbits, as follows: *"I am now Senior Assisting Dental Officer at NAS Jacksonville, Florida. Son, Robert, graduate of Class '71 of I.U.S.D., is now stationed in Okinawa. My father, Dr. P. J. Pentecost of Tipton, Indiana, is believed to be the oldest practicing dentist in the state of Indiana. He is 93 years of age. That makes three generations of dentists, all I.U. graduates."* I think that is pretty wonderful—glad you shared this with us.

Dr. and Mrs. Marvin Tuckman of Fair Lawn, New Jersey included us in their list of persons to whom they sent greetings at Christmas. I don't know when I enjoyed Christmas as much as I did the one in 1971.

1948

Dr. P. M. Whisler, 212 Live Oak Lane, Largo, Florida 33540, writes, *"Our oldest son, Michael, graduated from Florida State University in June and is now working for the IBM Company in Tampa."* Good to hear from you, Dr. Whisler—do write again soon.

1952

Dr. N. J. Buechler, 436 S. Lombardy Drive, South Bend, Indiana 46619, writes, *"Nothing new—just getting older."* I guess that news about tells it for most of us but I hope Dr. Buechler thinks up something more exciting than that for our next issue. But come to think of it, getting old is somewhat exciting as a lot of people never live to do that! Maybe we are not just getting older, we are getting better!

Dr. Hal Glasser of 231 Regulus Avenue, Virginia Beach, Virginia, 23461 really wrote us a letter and here it is: *"So happy to learn how wonderfully you are enjoying retirement. That is the reward for having served so commendably all those years in the past.*

"As my military career approaches thirty years I, too, anticipate retiring and busying my time with another career.

"Didn't notice any news from the Class of '52 in the Fall Alumni Bu'letin, so will say hello to all my colleagues and hope to see them in Naptown at reunion time.

"Am currently stationed with the Atlantic Fleet Anti-Air Warfare Center facing directly on the south end of Virginia Beach, Virginia. It is a delightful location in which to live and practice dentistry serving a popu'ation of about 3,500 sailors. I operate a modern 5 chair clinic with a staff of 2 recent graduates and 6 technicians.

"I have been here 1½ years now since returning from tour with the USMC in the West Pacific. Visited with Harvey Chong on way out and back. He is such a tremendous individual—hasn't changed a bit in all these years. His family suits his image perfectly. Also saw Sandy Asahina and his lovely wife and children in Honolulu.

"My family has pretty much grown now and moved into the new world. It is different. Just 2 boys still at home and when they leave the nest we will be free to travel and visit at our own leisurely pace.

"I often think back upon the happy years at IUSD when as a struggling student life somehow seemed much simpler, the chief hurdle then being academic achievement. How different it is today.

"I see Tom Garman quite often. He has done an outstanding job for the Navy and next summer he expects to retire and move to the forefront of the new school at the University of Georgia in Augusta. Truly an outstanding individual and Navy dentist. It will be a great loss to the Navy and Georgia's gain.

"None of my sons have shown a keen interest in dentistry, so I shall not be able to emulate John Pentecost's father-son act. It is a real accomplishment. My third son, Drexel, is pursuing the medical school road and expects to commence work on the M.D. degree next fall.

"I trust this finds you in vigorous health and very pleased to know how happily you are spending your retirement days."

Dr. Glasser, you are a real friend—such a newsy letter mentioning so many other alums—do write again, please.

1954

Col. and Mrs. Robert C. Johns and family, USAF Hospital Tachikawa, Box 7006 A.P.O. San Francisco 96323 sent us a Holiday Greeting. As I remember, they are in Japan.

1955

Drs. Ursula and Werner Bleifuss, 18786 San Quentin Drive, Lathrup Village Michigan, 48016, remembered us with good wishes for Christmas and the New Year. Thank you so much.

Deceased: Dr. R. T. Murrell, Indianapolis, Indiana 12-28-71

1956

Dr. Gerald Glass and wife (our Anne Ackerman!) and sons Paul and Jerry sent us greetings and added: *"Hi! Have thought about you two—enjoying slowing down a bit, Mrs. Harvey? Or are you?"* That is a good question and I could answer with a "yes" and a "no". When I have things to do they all come at once—but then I should be used to that. I am loving every minute of this "retirement" and I am so glad. Thank you for thinking of us.

1957

From Dr. and Mrs. Pedro Colon, Box 1222, Caguas, Puerto Rico, 00625 we received our usual greeting at Christmas. It is good to be remembered and they never forget. I do hope I can visit Puerto Rico and a hundred other places sometime. But then I don't really care to travel —so I just get out my map and hunt up the places from which I receive cards and dream a while.

Dr. and Mrs. Waldo Scales, 160 Marine Street, St. Augustine, Florida blessed us with a letter which I shall share with you: *"Greetings, Yo'all: Another year has passed and it seems as though the years pass faster than ever before. We are all well at the present and the children are very excited over the coming of Christmas.*

"Waldo was very ill during the month of July with a kidney infection. He was hospitalized 8 days during this illness. Things were pretty rough for a while during that period, but we all recovered.

"The two boys are both very active. They both had a very enjoyable summer swimming 4 hours a day so they could stay on the 'swim team.' Raymond is 8½ years old now and Bill is 11. Jane Michele is 4 years old and is still the apple of her father's eye. She is very spoiled and into everything. She went to nursery school 1 month this year and decided she had had enough school, so now she is our 'Nursery School Dropout.'

"Waldo got the honor of being chosen 'Who's Who in the South' for 1971 and 1972 and he also was chosen for 'Southern Personalities' for the 1972 edition. I'm very proud of his receiving these two distinguished honors.

"The Scales did not get to take a vacation the past year due to Waldo's illness, but hope to take the week off after Christmas and rest with the children. I manage to keep busy, working full time at the office and trying to keep up with the children.

"Once again we wish to extend to all our readers a very 'Merry Christmas and the Happiest New Year'. May God bless you all and let us hear from you real soon."

I am sure you all realize that Elizabeth wrote the letter but she is good at it and enclosed a picture of their two boys and one daughter and they are fine looking children and I am sorry I can't let you see it—just take my word for it that Janie is a doll—no wonder her father is so crazy about her. But the boys are okay too—as most of you know—somehow or other I have always been partial to boys. That is why I stayed at the dental school so long! Incidentally, I'm sure we are all glad Dr. Scales and family recovered.

1958

Dr. Alegria C. Zita of 1357 Felina, Paco, Manila, Philippines wrote on her Christmas Greeting: *"I read from the Alumni Bulletin that you retired this year. You really deserve a rest after serving the dental school for many years. Please extend my best wishes to every one at the dental school. Warmest regards."* Thank you, Dr. Zita—believe me your warm wishes help out in this freezing weather we are having. I have to keep telling myself that I really like Indiana!

1959

Mrs. David Eberly wrote us that *"David S. Eberly is now Lt. Col. in the United States Air Force. The service has given our family adventures in the Philippines, Bermuda, Texas, Washington, D.C., and now North Dakota. We are always learning about many things such as beautiful wooden carvings from the Philippines, Bermuda's beautiful clear water for underwater sights, Texas's Mexican influences in buildings, Washington, D.C. for sights of history and North Dakota's 5,000 acres of wheat and potato farms. Soon we hope to move to a new place and new adventures."* Their address is 1842 A,, Missouri Avenue, Grand Forks AFB, North Dakota.

I am glad our dental students have the good sense to marry girls who remember to write to me. I really appreciate it and hope more wives will take the hint.

1960

Dr. Don Nesler has resigned from the Dental School and is spending full time in his private practice at 1003 Hume Mansur Building, Indianapolis, Indiana. This is some scoop I received first hand—you see, Dr. Nesler sees to it that my gums are properly taken care of. He did this while at the dental school and when he left I left with him—for dental work, that is! All joking aside, he is a mighty fine dentist and a personable individual. He makes you like visiting "your dentist" and that is something, even for me.

Dr. Dilia C. Rieser 1022 Villa Ave., Indianapolis, Indiana 46203 (bless her heart) sent me a lovely card at Christmas. I am so proud of all the women dentists we have and they are an asset to the profession—of that you can be sure.

1961

Dr. Ronald J. Schoeps and Staff of 51 N. Main Street, Spencer, Indiana 47460 sent us a card on which was pictured a dental chair with Santa Claus practically standing in the chair, with the dentist saying, *"You must learn to relax, Mr. Claus!"* I got a big laugh out of that card.

Dr. Merlin Wuebbenhorst, wife Lora, and children Wendy, Hope and David of 2021 Northwest Third Ave., Delray Beach, Florida 33444, sent me a very touching card and I want to share it with you: *"Two things upon this changing earth can neither change nor end; The splendor of Christ's humble birth, The love of friend for friend."* Isn't that beautiful? Then he added a note, *"It was good seeing you this summer. Hope you are staying healthy and not too active during your retirement."* Well, I must confess that today I am too active—I have been typing like mad to get this column ready for Dr. Phillips and I have filled so far 10 pages of typing beginning with the Class of 1904 —so have 10 years to go. But it will get done and you will all read it with interest, I hope. Bless you for your good wishes and be grateful for sunny skies and the love of Him who cares for all.

1963

A pretty card from Dr. Pete Leonard, wife Alice and children Cathy and Hap, of 1601 Audubon Drive, Columbus, Indiana 47201 reminds us that even the recent graduates haven't forgotten us and for that we are thankful.

1964

Dr. Marshall S. Manne informs us that he has been promoted to Associate Clinical Professor at Washington University School of Dentistry. Also, he has moved his office to Ballas Medical Center, 777 S. New Ballas Road, St. Louis, Missouri 63141. I almost forgot to include the news that he has a new daughter, 8-month-old Melissia Beth. Congratulations on all three events, Dr. Manne, and thanks for telling us about them.

Dr. Michael F. O'Halloran, 4200 California Street, San Francisco, California 94118, writes: "Appointed Chairman of Preventive Committee San Francisco Dental Society, November, 1971. Married former Susan Gonzalez on September 1, 1969—no children." Thank you for the news and congratulations and best wishes for your success in every way.

Dr. Stephen L. Wilson, 100 West Fairchild, Danville, Illinois 61832, tells us, *"Indiana University School of Dentistry Orthodontic Postgraduate Program August 1969 to June 1971—now a practicing orthodontist."* I do hope you like what you are doing and I am sure you are missed at jolly IUSD but not by me since I left about the same time you did. Best wishes.

1967

Dr. J. L. Holloman, 1716 Ed Carey Drive, Harlingen, Texas, reports three interesting things which have happened to him: *"(1) I was awarded 'Distinguished Alumni Citation of 1971' by Vincennes University on the 19th day of November, 1971. (2) Counselor to Rio Grande Valley Dental Assistant Society. (3) Was awarded the 'Pacemaker' award by the Student Senate for outstanding contribution to the area and society as an alumnus student senate member at Vincennes University, November 19, 1971."* Then I turned the card over and found more, *"Have been giving lectures on 'Surgical Correction of Malocclusion' and "Preventive Surgical Orthodontics' to local societies. The weather here in the Valley is just fantastic year around. In fact, today 1-27-72 it is 82 and bright sunshine. We need a periodontist real bad—if anyone is interested please contact me at once."* Dr. Holloman, it sounds as if you were making history in all sorts of ways. It was good to hear from you and know that you are doing so well.

Dr. Thomas J. Wells very thoughtfully gives us a change of address from 718 High Street, Fort Wayne, Indiana to 660 B Aspen Lane, Laredo, Texas 78040. Sounds like quite a move and we hope you enjoy Texas as I understand it is something else.

1968

Dr. Robert P. Messersmith reports a change in his office address from 1625 Holly Lane, Munster, Indiana and 510 Hill Street, LaPorte, Indiana 46350 to 3028 Chamblee-Tucker Road, Apartment P-4, Atlanta, Georgia 30341. We are so glad you remembered to send us your

change of address and we do wish you well in Atlanta—a beautiful city and quite a few I.U. dentists there—at least they were in 1967 when I was there. The city of "Gone With the Wind" should prove to be quite exciting—I hope you find it so.

1969

A clipping from the Indianapolis Star of September 26, 1971 told us that Dr. J. P. Fleming would open his office for dentistry on Monday, September 27, at 5913 East 10th Street, Indianapolis, Indiana. Dr. Fleming served two years in the United States Army Dental Corps at Fort Belvoir, Virginia.

Dr. Richard Shelly of 320 E. 6th Street, Bloomington, Indiana 47401, confirmed our "grapevine" information as he reports that: *"Dr. Marc Smith joined me in practice in Bloomington. He returned from Vietnam in July. We ask all to stop by."* Since we have been counseling his dental assistant in her application to dental school (she has been accepted) we hear wonderful things about Dr. Shelly and his new office and associate, as well as his very fine practice. Hope to drop in and see them some day.

1970

So glad to hear at last from Dr. Patrick E. Barrett, who announces the opening of his office for the practice of general dentistry at P.O. Box 149, Kingston, Washington, 98346. The address we gave in the Fall Issue of the Alumni Bulletin is probably his home address but this is the office. Best of luck Dr. Barrett, to you and yours. We would enjoy a letter someday when things settle down for you.

So glad to hear from Sue Beastall, wife of Dr. Howard Beastall, that they are living at 420 9th Street, Naval Air Station, Corpus Christi, Texas, 78419. She writes, *"I was so glad to see your home address in the Alumni Notes as I have wanted to write you for some time now. Howard loves the Navy and has extended for a year. We are seriously considering making it a career. The clinic here is small and at present Howard is doing all the prosthetics.*

"We have two girls now—Julie, 21 months and Kim, 7 months. They are really a joy and make each day a new experience. Corpus Christi is beautiful and we love all it offers. Howard got his private pilot's license in the summer and we fly when time permits. The weather here is perfect for it. This warm climate is so different after being in Indiana all our lives.

"I hear from Shirley Shazer occasionally and she keeps me posted on the OD/OM Department as well as the School. I hope you are well and enjoying retirement." As most of you will remember, Sue was Dr. Mitchell's secretary while Howard attended dental school. She was well liked and now she is certainly in my good graces after such a lovely thoughtful letter. Do it again sometime, Sue, it is always good to hear what our alums are doing. And I am enjoying retirement—I keep saying that but I am not doing it to convince myself—I really am enjoying it!

Dr. Dan Cox, Florida Correctional Institution, Lowell, Florida 32663, made me feel better about crying the blues as he wrote: *"You gave me a guilty conscience in your recent column in the Alumni Bulletin, so I thought I'd better let you know what is happening in the land of sunshine. Today (1-18-72) it is raining and about 60—not exactly what we like to let the northerners know about. Up until this week we have been experiencing a very pleasant and I might add unusual winter with temperatures in the high 70's and low 80's.*

"As you know, I moved to Florida last January and took an intern position at Florida State Prison in Raiford. This summer the Florida Boards were given and I was fortunate enough to pass them. After I passed the Boards I was offered the position of Chief Dentist at the Florida Correctional Institution for Women. I moved to Lowell in late July.

"For the past several months I have been making preparations to start in private practice and it appears that it may finally come about around April 1, 1972. My office will be in Daytona Beach, only a few blocks from the shore. You may

want to make a note of my new address as of April 1—420 North Halifax, Daytona Beach, Florida 32018.

"The last year of working in a prison has definitely been interesting and educational but not what I would care to continue as my life work.

"How have you been enjoying the well deserved free time you now have? If you ever get to Daytona be sure and let me know. I would be happy to see you.

"Well, I've almost used 2 sheets of paper and that's a record. Thank you for all your assistance while I was a student and after. Keep scolding the alumni as the column is very interesting."

Thank you, Dr. Cox, for those kind words and for saying again that everyone who graduates from IUSD should write me. That isn't exactly what you said but we both agree that is what should happen. Then I guess I would never get all the typing done and would feel as if I were back on the job. Well, I have to do this but twice a year and it is a chore I enjoy. Reading all these letters is such fun, and I do appreciate your taking time to write.

Dr. Louis Poulos sent us a new address for him: 3445 Burton St. S. E., Apt. 8 Grand Rapids, Michigan 49506. Since Dr. Poulos was in California I can only think he likes cold weather like I do—particularly now that I don't have to get out in it very much. Thank you Dr. Poulos and do write us a note one of these days and tell us about the new practice.

From the December, 1971 issue of the Indiana Alumni Magazine we learned that Capt. Roger L. Thompson is serving with the U. S. Army in Vietnam. He is assigned to the 934th Dental Det., APO San Francisco, 96350. We hope he sees this and writes us about what is happening over there to him.

1971

Dr. Joe W. Bernier, 12412 Village Square Terr, Rockville, Md., 20852, gave us some news about himself and several others: *"First of all, I must thank you for all the help that you gave me during my stay at Indiana—it was really appreciated. I know you need information for your 'Alumni Notes' and also just plain enjoy hearing about your 'boys'—so let me give you some of the information I have collected.*

"First, I assume that I'm the grapevine that mentioned John Buhler was possibly going from Hawaii to Ethiopia—well he and 'Cricket' and their one-year-old girl are now in Asmara, Ethiopia and they are having a ball according to their last letter.

"I am now half way through my internship here at Walter Reed and I feel like a thief—since I'm learning so much and still getting paid for it! My orders for next year assign me to 'Vint Hill Farms Station' in Warrington, Virginia. We have to report around the middle of July. It is a beautiful small post and Shelly and I are really looking forward to going there. Incidentally, an Indiana alumnus (I don't know what year but it can't be long ago), Dr. 'Mark' Davisson, is the senior resident in the fixed prosthetics section—man, he is a whiz with his hands!

"I have seen a number of alumni here at Walter Reed. They come for the Dental Education programs they present here. Just this month I have seen Bill Priddy, Noble Sevier, and 'Chuck' English (I've forgotten where he is stationed). If I pick up any more information I'll pass it along. Best wishes from one of your 'boys'."

Then he included the following names and addresses for which we are most grateful: Capt. John E. Buhler, Jr. 076-36-8960, c/o Dental Clinic USAH Asmara, Ethiopia, A.P.O. New York, 09843; Maj. Nelson M. Davisson, 518 Dartmouth Ave., Silver Springs, Maryland, 20910; Capt. William H. Priddy, 115118 Concord Drive, Woodbridge, Virginia, 22191. He added a P.S.: "We hear from Al and Bev Gross and they are doing fine—Capt. Allen Gross, 12350 Mercy Blvd. #327, Savannah, Georgia, 31406."

Thank you, Dr. Bernier. It is letters like yours that make me count my blessings and one of those is that I had so many years with such fine young men as you. I really am a very lucky person and I realize it more each day as the letters roll in from all over the world. And wherever they go my "boys" are the best!

Dr. David Bristow, 4532 Mimi Drive, Apt. B, Indianapolis, Indiana 46227 sent a greeting for Christmas and the New Year. It seems only yesterday that we were interviewing you and many others for the Class entering in 1967 and here you are full-fledged dentists. Wonderful!

Back in September of 1971, Dr. Randolph L. Kixmiller, Charlotte Memorial Hospital, P.O. Box 2554, Charlotte, N.C., 26201, wrote Dr. Bogan a letter concerning his work and Dr. Bogan passed it along to me. I am going to quote all of it as it is so interesting: *"I have enclosed some literature about Charlotte Memorial Hospital and its internship program. After spending two months here, I am very delighted that I chose the internship. I have seen and done more than I could ever hope to have seen and done in a private practice situation during a comparable period. The hospital accepts three dental interns each year. The learning sources are unlimited. We attend some lectures with the medical staff on general topics, X-ray conferences, and tumor conferences. In addition, the dental staff meets once a week for lectures from practitioners from the Charlotte area. Recently we have also been meeting with the local Navy Dental Reserves and reviewing treatment plans and discussing problem cases. We not only treat patients in the clinic, but also assist the oral surgeons in the operating room. Additional learning experience has come from the emergency room. Every third night the dental intern is on call for emergencies that would require the services of the dentist or oral surgeon. As you can probably see, there is a great responsibility placed on the dental intern and it is quite a challenge.*

"I hope that this bit of information might be helpful to a graduating senior who might be interested in an internship. I will be glad to speak with anyone interested in the program."

Since we try to see that the seniors get copies of the Alumni Bulletin I hope, Dr. Kixmiller, that some of them may be interested. We did enjoy your letter.

Dr. Dominic Lu 160-10 89 Ave., Apt. 15B, Jamaica, N.Y. 11432, wrote me in November and I shall quote parts of his letter as I know you are interested in how he is progressing: *"I finally moved down to New York City from Indiana at the end of June. It took me 2 days and 2 nights to drive here. This is the first time I've ever driven such a distance in my life. I barely made it in time to get here to start my internship because two weeks before I left Indiana, Dr. Dirlam removed my impacted third molar at the school. He did a wonderful job, for an attending dentist here who made a post-op check-up for me said the operation was well done.*

"I live only 2 blocks away from the hospital. Though this area is considered one of the better areas in N.Y., there are still many crimes around. Very few people go out after dark. Many patients are sent to our hospital as victims of muggings or stabbed by some unknown gangster. Since all the head and neck injuries are handled by dental interns, I have sutured a lot of facial wounds since I came down here.

"My mother in her last letter asked about how you are doing after you retired. She expects to go to Mexico next year to attend the International Surgeon's Conference to be held in Mexico City.

"Since I came, I've been in Chinatown many times, and found a couple of really good Chinese restaurants. If you have a chance to come to N.Y., be sure to let me know. I will take you to the best Chinese restaurant in Chinatown where you will get some real Chinese dishes, not that kind of Americanized Chinese dishes served in Indianapolis Chinese restaurants.

"With my best regards, please also convey my best wishes to Chancellor Hine and Dean McDonald whom I still miss a lot."

Then I received a beautiful Chinese doll and some chop sticks from Dr. Lu and a note that he had been ill with the flu but was feeling better. I would like to take him up on the Chinese dinner as I like Chinese food, even the kind they serve in Indianapolis! I also appreciate his mother's interest and concern for my well being.

Dr. and Mrs. John W. Miskuf, Fort Bragg, North Carolina added a note to their Christmas greeting: *"Things are get-*

ting along very well here at Fort Bragg. We just wanted to drop a line during this season to wish all of our good friends a happy holiday and spread the word that we are enjoying the Internship down here immensely. (The ocean fishing isn't bad either!)"

That last statement leads me to believe that Dr. Miskuf is enjoying his work while he endures it, as my grandmother used to say.

Dr. and Mrs. Navroze Kotwal, and son of 106, B. Desai Road, Bombay 36, W 13, India, sent an artistic card with a note from Mahabanoo who, as most of you will remember, worked in Preventive Dentistry and Dental Materials during the two years her husband was in graduate work in Orthodontics at I.U. She talked of the war in which India has been engaged and of the curfews and blackouts necessary in war times. But no complaints, just a wish that peace could come to the world and particularly at Christmastime. We heartily agree with her sentiments and hope and pray that this old world can find peace—they found the moon, didn't they?

Dr. Stephen Roesener has opened a dental office in the Brendon Plaza Building, 56th and Fall Creek, Indianapolis, Indiana. We wish him success in every way.

Dr. Gary Pfleeger, 614 Lafayette Life Building, Lafayette, Indiana, informed us that he has set up a general practice by himself at the above address. Again, we send best wishes for success. I know it must be very difficult to go from school to practice but such is the usual course and it seems to work.

Dr. Richard Wagner of Nieuwe Zijds Voorburgwal 152, Amsterdam, The Netherlands, wrote us in January as follows: "My parents forwarded the Fall issue of the Alumni Bulletin to me here in Amsterdam. I was pleased to find your address inside so that I could write you this letter. It was nice to read that you are enjoying your much deserved retirement.

"I have been in Amsterdam since the last part of October, and I am enjoying life in Europe very much. The atmosphere here is very friendly, and I have made many new friends. Amsterdam is beautiful with its canals and antique houses. I am living in one of these old houses in the center of the city about a half bock from the palace. However, my apartment is very modern, since the inside of the building has been completely redone and I am the first person to live in it since the remodeling.

"I am a full-time member of the faculty of the Dental School at the University of Amsterdam. The Dental School is new, having only graduated two previous classes. The building is beautiful and very modern, and they are just putting the final finishing touches on it now.

"Dental School here consists of six years. However, there are no predental college courses as in America. The students start treating patients their fourth year of school and in the clinic each student has his own unit where he treats all of his patients except those for pedodontics, surgery, and orthodontics.

"I am presently with the prosthetic department and teaching in the clinics of the fourth year students five half days a week. However, since the students are doing most aspects of dentistry at their units, I teach not only prosthetics but also operative dentistry, periodontics, and endodontics. Some of the techniques are different here, but I was surprised at the large number that are also similar.

Two half days a week I spend in the preclinic where the students do technical work similar to what we did our first two years in dental school. The week's other three half days I spend treating patients myself.

"I am finding the work here very rewarding, especially teaching and working with the students. It is interesting to see European views on dentistry and life in general. Language is no problem, since everyone understands English. Several of the students' books are in English. (For instance, they use Phillips' book on dental materials). But I am taking a course one night a week to learn something of the Dutch language. Also, I am very happy

with Amsterdam's convenient location for travel. Since I have arrived, I have been with some of my new Dutch friends to Paris and later to London for Christmas. (We went to Christmas services at Westminster Abbey which was very inspiring in such a building of historical importance). I hope to travel to Brussels next month.

"It took a lot of thought before I made the final decision to come here for a while, but now I know that I made the correct one. I hope that you will drop me a note sometime, since I would enjoy hearing from you very much. I hope this finds you well."

What a wonderful letter and so carefully thought out and giving us all sorts of interesting information. I promise to write before long and probably long before you see this in print!

Dr. Terrence L. Wiak, 829 119th Street, Whiting, Indiana, sent us a brief note, *"Toured Europe in July and August and then set up private practice in Whiting. I share a building with a gynecologist and an obstetrician."* You are off to a good start, Dr. Wiak, and we appreciate having this information. Best of luck and do write again before too long.

Dr. Oksana Withey of 2916 Embassy Court, Indianapolis, Ind. 46224, sent us personal wishes for a happy holiday and a good new year. Thanks, Oksana, I am so glad to hear from you and send my best wishes for your success.

1975

How is that!??? I received a beautiful Christmas Greeting from the Class of 1975. I think that is a good note to end on, don't you? They are the last class I helped to process and select and I am sure they are the best yet!

MOTIVATING PATIENTS

(Continued from page 20)

this change in value structure, you can "motivate" him with all of your data, with all of your logic, with all of your understanding of professional care, but you must take care of his emotional responses first. When a dentist suggests to me, "We ought to do this and this," my first response is, "Why? Justify that for me." And I can just see the dentist looking at me and implicitly saying: "What do you mean, justify it? That's my professional judgment. Who are you to question it?"

Well, I do question it, because it's my mouth! He may resent my attitude, but I believe that he *shouldn't* resent it. He should recognize that what I am really saying to him is "Look, if you explain it to me, you can reduce some of my emotional concerns. Bring me to the place where I can accept your frame of reference, and you won't have to worry about motivating me. I'm a self-motivating system. But you've got to deal with my emotional responses *first* and *then* I'll listen to your rational arguments."

DEAN'S NOTES

(Continued from page 34)

sincere thanks for your gifts that demonstrate your loyal support of our programs.

Dr. H. William Gilmore has consented to serve as National Chairman for the School of Dentistry Fund Drive during 1972. Please join me in supporting Dr. Gilmore as he carries on this year's program.

PREMEDICATION

(Continued from page 26)

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[13] Album, M. M.: Sedatives, analgesics, and belladonna derivatives in dentistry for children, J. Dent. Chil 26:7-13, 1st quarter, 1959.

[14] Anderson, A.D.: The use of barbiturates in dentistry, Northwest Dent 24:191-194, Oct, 1945.

[15] Robbins, M.B.: Chloral hydrate and promethazine as premedicants for the apprehensive child, J. Dent. Child 34:327-331, Sept, 1967.

[16] Czarnecki, E.S. and Burnes, W.S.: Choral hydrate for the apprehensive child, Pa. Dent .J. 30:40-42, Feb, 1963.

[17] Greenwald, A.S.: Relief of tension in dental patient: a controlled study with hydrophenamate, JADA 69:708-714, May, 1964.

[18] Albrecht, Willard: Personal Communication, 1965.

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[20] Hollingsworth, B.C. and Young, C.D.: Routine use of alphaprodine (Nisentile) as premedication, J. Col. Dent Assoc., p. 31-32, Mar, 1964.

[21] Droter, J.A.: Meperidine Hydrochloride as a dental premedication (a clinical evaluation), Dent. Survey 40:53-57, July, 1964.

[22] Buckman, N.: Balanced premedication in pedodontics, J. Dent. Child. 23:141-153, 3rd quarter, 1956.

Dr. Donald J. Walden, Class of 1951, was recently appointed to the Committee on the Health Services Industry. The committee is advisory to the Cost of Living Council, the Pay Board, and the Price Commission. The date of the appointment was November 10, 1971. Dr. Walden is shown receiving the appointment from President Nixon. Originally the committee was meeting weekly in Washington but now convenes approximately every three weeks.

THE BOOKSHELF

(Continued from page 65)

the United States has done. There is also a danger of infant hypercalcemia when vitamin D is added to the food and long-term unknown effects in adults.

It had been reported that fluoride given to rats in large quantities decreased the severity of rickets as seen in radiographs . This study used microradiographs to visualize bone, tetracycline injections to mark the apposition of bone, and various other criteria to show the degree of calcification that occurred during the treatment of rickets with various dosages of fluoride.

The results indicated that there was no beneficial effect from fluoride in the prevention of rickets for the dosages used during the time of the treatment.

A COMPARISON BETWEEN CREVICULAR FLUID FLOW, GINGIVITIS, DENTAL PLAQUE, AND POCKET DEPTH IN CHILDREN

Frank E. Short

The purpose of this study was to compare crevicular fluid flow, gingivitis, dental plaque, and pocket depth in children. Through the use of filter paper strips, crevicular fluid samples were collected from the anterior maxillary teeth of 50 children, ages eight through 14. The volumes of crevicular fluid samples collected were determined by comparison with a known volume of crevicular fluid. Gingival, plaque, and papilla scores were assessed, and measurements were obtained of the plaque width and sulcus depth at the point of crevicular fluid sampling.

All sulci tested demonstrated crevicular fluid flow which ranged from .01 to 2.25 microliters. Analysis revealed that the correlation between sulcus depth and gingivitis was statistically significant. There were no strong correlations between crevicular fluid flow and any of the other variables. This leads to the conclusion that crevicular fluid flow is not a reliable indicator of gingival health in children.

A HISTOLOGIC STUDY OF THE EFFECTS OF HYDROCORTISONE ON THE APICAL PERIODONTIUM OF DOGS

Richard Grant Smith

This investigation was designed to evaluate the histological response of the apical periodontium to hydrocortisone.

Vital pulp extirpations were performed to 56 root canals. Twenty-nine apices were overinstrumented and 27 were not. Hydrocortisone was

placed in approximately half of the canals; the others received no medicament. The animals were operated so that when sacrificed, three-day, 14-day, and 45-day specimens were obtained. The sections were stained with hematoxylin and eosin and with a bacteriologic stain.

The most severe inflammatory reactions were in the overinstrumented groups; however, the reactions were much milder in the hydrocortisone-treated, overinstrumented apices. The non-overinstrumented hydrocortisone-treated apices had the mildest inflammatory reactions of all groups. Hydrocortisone did not seem to affect the bacteria concentration in the tissue or the ability of the leukocytes to phagocytize the bacteria. It was not determined whether the hydrocortisone affected the ability of the leukocytes to destroy bacteria after ingestion.

This study indicated that hydrocortisone is extremely effective in reducing inflammation associated with pulp extirpation and instrumentation. The possibility of a corticosteroid antibiotic combination as an adjunctive drug in endodontic therapy appears to be encouraging.

A CEPHALOMETRIC ANALYSIS COMPARING ANTEROPOSTERIOR MANDIBULAR GROWTH OF TREATED AND NON-TREATED CL I AND CL II PATIENTS

David V. Tillmanns

This study was conducted to investigate any anteroposterior mandibular growth that occurs after orthodontic treatment is completed and to determine how it might compare with growth in untreated subjects of comparable age.

The research sample consisted of 15 males and 23 females who prior to orthodontic treatment had either an Angle Class I or Class II division 1 malocclusion. The control group of 14 males and 16 females had normal Class I occlusions. All subjects were Caucasians.

A standardized technique for taking lateral cephalometric radiographs was used at the time of debanding and 2½ to 4½ years later for follow up (post-treatment) radiographs.

The deband and post-treatment radiographs of each subject were traced and superposed. Measurements were compared to the expected normal values of the control group at a comparable age.

With the "t" test, the following significant differences of 0.05 probability or less were found. Effective mandibular length was less than normal in the male Class II treated malocclusion at the time of debanding, and actual mandibular length was greater than normal in the female Class I treated malocclusion at the time of deband and post-treatment periods.

Growth was compared between the Class I and Class II treated malocclusion samples within each sex group. No significant differences were observed which suggests that the growth potential of the mandible, with either a Class I or Class II malocclusion, will be the same after treatment.

THE CARIOGENIC POTENTIAL OF MILK

Roberto Vianna

Reports differ concerning the cariogenic potential of milk. Some authors indicate that plain milk can cause dental caries, while others believe that the disease results from adding carbohydrates to the milk. Still others suggest that milk has a protective effect and may contribute to caries prevention.

The present study investigated the capability of human milk, plain bovine milk, a milk formula, and milk with honey to produce caries-like lesions in an environment which simulated the oral cavity.

Four groups of eight sound bicuspids each, which had been extracted for orthodontic reasons, were mounted on a mouth simulator. The teeth and complete apparatus were sterilized with ethylene oxide. The teeth were then inoculated with human saliva and covered with linen cloth to facilitate bacterial colonization. Each day the various groups of study teeth were exposed to one of the four milk solutions during a 2, 4, or 8-hour period. After each period, a sterile chemical solution simulating human saliva was dropped (8-12 ml/hr) over the cloth to provide a mouth-like environment. A control group was not exposed to a milk preparation.

The results indicate that after six weeks, all milk solution groups showed unequivocal signs of decalcification, with an intensity proportional to the period of exposure to the study solutions. Plain bovine milk produced the least decalcification, followed in order by milk formula, human milk, and milk and honey. It can be inferred, from these results, that milk itself, without addition of extra carbohydrates, has the potential to produce dental caries if left stagnant over the tooth surfaces for a sufficient time.

A STUDY OF THE PHYSICAL PROPERTIES OF LATEX AS RELATED TO ORTHODONTIC TOOTH MOVEMENT

John William Vornholt

Latex elastics have long been used in orthodontics, and force decay has always been a disadvantage. Reports differ on the load-deflection properties of rubber. Decay in elastic bands has ranged from 8% to 74.9%, depending on test conditions.

A study was designed to ascertain (1) whether better quality controls would minimize decay and give better reproducibility in force

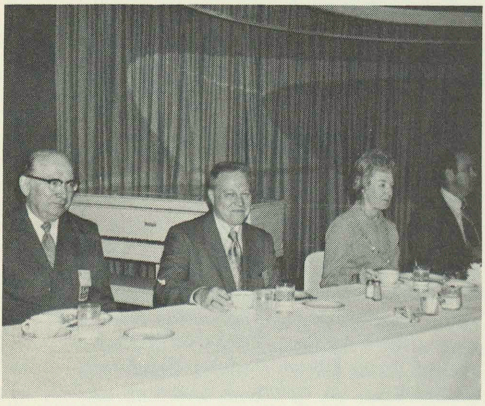
from one elastic band to the next; and (2) whether the amount of stretch to which the elastic body is subjected affects the rate of decay.

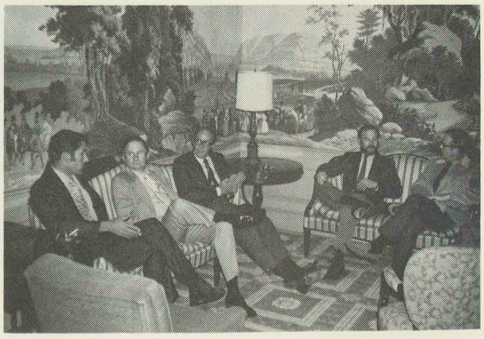
The quality control testing consisted of selecting elastic bands of identifcal size, shape, and color. This was followed by testing each one with a 100 gram weight and separating out all elastics which tested out to a given length. This test-controlled sample was then used to study the physical properties of latex.

A load-deflection study was performed from this test-controlled sample, and revealed a curvilinear relationship. From the load-deflection curve, four force values were chosen which would represent 1) minimal stretching in the elastic deformation range, 2) maximal stretching in the elastic deformation range, 3) minimal stretching in the permanent deformation range, and 4) maximal stretching in the permanent deformation range.

In the decay phase of the study, four more groups of elastics from the test-controlled sample were loaded with the four force values previously mentioned. The force was then measured after one and 12 hours and after one, seven, 14 and 21 days. Thus the decay of force could be calculated for each group over a three-week period.

The results showed that more rigid quality control does produce a more predictable decay rate and force. The load-deflection properties of latex elastic were shown to be curvilinear, and the decay rate was affected by the amount of stretch to which the elastic body was subjected. However, if the elastic was stretched within the elastic deformation range, the decay rate remained the same regardless of the length of stretch. Therefore, it is recommended that the clinician use latex elastic in the elastic deformation range and thereby reduce the decay rate.





More From The Fall Meeting

Tour of Hawaii Scheduled For Dental Alumni

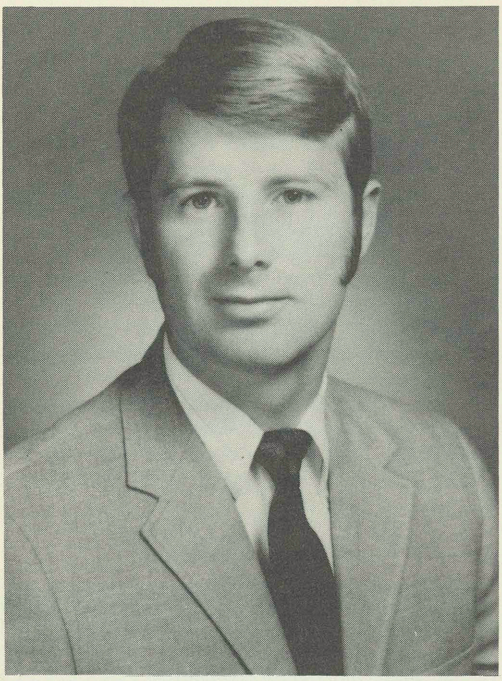
Mrs. Katie Brown

The I.U. Dental Alumni Association extends an invitation to all alumni to participate in the San Francisco and Hawaii tour from October 29 to November 8, 1972. Alumni will attend the American Dental Association's San Francisco Convention from October 29 to November 2. The Pan Pacific Conference in conjunction with the 70th annual scientific session of the Hawaii Dental Association will follow the ADA Convention from November 2 to November 8.

The group will depart from Indianapolis by chartered United Air Lines jet. The first destination will be the new Holiday Inn at Fisherman's Wharf, San Francisco. Next the group will be flown to the Sheraton Waikiki in Honolulu, and alumni will be greeted with a "Welcome to Hawaii" cocktail party followed by an Hawaiian banquet.

Once in Hawaii, alumni can participate in guided tours, or they can see the islands on their own. The cost per person for the tour is $520 including tax. This includes hotel accommodations for nine nights, first class airplane fare, handling of baggage, transfers between airports and hotels, and tips to drivers and guides.

Further information can be obtained from the I.U. Alumni Association, 1300 West Michigan St., Indianapolis, Ind. 46202.



Dr. E. K. Phares

Pedodontic Award Won By Dr. Phares

Dr. E. K. Phares, class of 1971, now on active duty with the Navy Dental Corps, attached to the Marine Corps Air Station at New River, Jacksonville, North Carolina, won the 1971 Student Achievement Award of the American Society of Dentistry for Children.

The award, given each year for excellence of work in pedodontics during the junior or senior year of dental school, includes a cash prize of $300 and a trip to the ASDC annual meeting, held last year in Atlantic City.

Dr. Phares' award-winning case presentation described the dental treatment of a five-year-old girl during his senior year. He performed emergency treatment on fractured front teeth and minor orthodontic care, restored other teeth, and instituted a program of preventive dentistry for the child, including preventive dental hygiene at home.

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