MOMENTUM

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News & Viewpoints for Eastman Dental Center Alumni & Friends

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published by the Eastman Dental Center Rochester, New York William D. McHugh, D.D.S., Director Jo Helfer, Editor

Research



Philip J. Hanes

Philip J. Hanes, who will receive his specialty certificate in Periodontology and his Master's degree in June 1985, has been named assistant professor of periodontics in the School of Dentistry at the University of Mississippi Medical Center in Jackson.

Dr. Hanes, who was born in Dallas, Texas, earned a B.A. in biology from the North Texas State University at Denton. His interest in dentistry was whetted by watching the devoted care a pedodontist gave his youngest brother, who has Down's syndrome. Dr. Hanes says, "I originally thought I might go into Pedo, but changed my mind." He has retained a more than casual interest in the field. His wife, Dr. Carole McKnight, who will receive her speciality certificate in Pediatric Dentistry from EDC in June, has been appointed an assistant professor in pediatric dentistry at the University of Mississippi as well.

After graduating from Baylor Dental School, Dr. Hanes practiced privately in Denton for six years and taught in the dental hygiene program at Texas Woman's University. He became interested in Perio when he was asked to co-teach a course in the subject. He sold his practice in 1980 to accept a full-time teaching position at the University of Mississippi. Two years later he came to EDC intent on being trained to do research and to prepare to be a full-time academician.

Dr. Hanes enjoys bicycling, traveling, going to the

movies, and reading. He says, "We see all the new films and although I haven't been able to do much other than scientific reading since I've been here, I do like the big novels by Leon Uris and James Michener!"

Dr. Hanes won the 1984 Michael G. Buonocore Award for research by a junior investigator. The award has been given annually since 1979 by the Rochester Chapter of the American Association for Dental Research. His presentation follows.

Cell and Fiber Attachment to Demineralized Root Surfaces

by Philip J. Hanes

An ultimate goal of periodontal therapy is the regeneration of a new connective tissue attachment to the periodontitis affected root surface. Such regeneration has been reported in instances where the root has been surfacedemineralized with citric acid. However, the results obtained with this technique have not been predictable.

Alterations occur in the root surface affected by periodontal disease including a loss of fiber attachment, alterations in mineral density and contamination due to exposure to the oral cavity. Studies of periodontal healing associated with selective root surface alterations have demonstrated epithelial migration adjacent to denuded, root-planed root surfaces, while connective tissue fiber attachment occurred after root surface demineralization. The regeneration of connective tissue attachment which occurred in these studies occurred in a tooth reimplantation model system in which the altered root surfaces were replanted into a normal peridontium. This normal periodontium could conceivably still have contained periodontal progenitor cells arising from the periodontal ligament or alveolar bone and could have been responsible for the new attachment. In order to further clarify the role of root surface characteristics in facilitation or inhibition of new connective tissue attachment, it was decided to examine periodontal wound healing in an environment devoid of periodontal progenitor cells.

A model was developed for this purpose in which root surfaces from extracted human teeth, were implanted into incisional wounds in the skin of Sprague-Dawley rats. Dentin specimens were obtained from beneath root surfaces covered by periodontal ligament. Each rectangular specimen had a face of root surface dentin and an opposite surface composed of pulpal dentin. One-half of the specimens were treated with citric acid, pH 1 for 3 minutes (experimental group), while the remaining implants served as untreated control specimens. Specimens were implanted

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vertically into incisional wounds on the dorsal surface of rats with one end of the implant protruding above the skin. Four specimens in each group were available for examination 1, 3, 5 and 10 days after implantation. Histologic and histometric analyses of both the root and pulpal surfaces of the implants included counts of adhering cells, evaluation of connective tissue fiber relationships, and assessment of epithelial migration. Analyses within each group comparing root and pulpal surfaces showed no differences between any of the parameters. Comparisons between experimental and control groups showed that demineralized surfaces had a greater number of cells attached at each time point. An apparent fiber attachment also occurred to demineralized surfaces by 10 days. This fiber attachment was characterized by discrete, individual fiber insertions rather than the thick fiber bundles of the normal periodontal ligament. In addition, significantly less epithelial migration occurred adjacent to demineralized surfaces over the 10-day experimental period. It was concluded that there were marked differences in the connective tissue and epithelial responses between the groups. Surface demineralization of dentin predisposed toward a connective tissue cell and fiber attachment which inhibited the migration of epithelium along these surfaces. In addition, this cell and fiber attachment system occurred in an environment devoid of periodontal progenitor cell populations.

IADR Presentations

Many EDC researchers presented papers and posters at the IADR meeting in Las Vegas in March 1985. If you would like further information on any of the work, please write to the author at EDC.

Steven M. Adair	Generalized joint hypermobility and TMJ signs and symptoms in children
Richard F. Amato	Interproximal gingival inflam- mation related to the conversion of a bleeding to a non-bleeding state
Joseph M. Behrman	Effect of salivary pellicle on enamel demineralization in vitro
David P. Durr	Dimensional stability of alginate impressions immersed in sterilizing solutions
Arthur D. Eisenberg	Antimicrobial activity of sanguinarine and zinc
Leslie G. Ellies	Surface morphology and crysallagraphic structure of

			plasma-spray	ed	and	sintered
			apatites			
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Mark A. Espeland Cariogenicity of foods: statistical methods

John D.B. Featherstone Enhancement of remineralization by fluoride and strontium

Gerald N. Graser Preliminary clinical evaluation of cast ceramic fixed partial dentures

Stanley L. Handelman Retention of sealants over carious and sound tooth sur-

Philip J. Hanes Hyaluronidase-enhanced connective tissue attachment to demineralized dentin

M. Carole McKnight Fluoride content of milk-based and soy-based infant formulas

Sheila A. Mundorff

Michael L. Myers

Bond strength and microleakage of porcelain repair materials

Dennis G.A. Nelson Artificial lesion formation after low energy infrared laser irradia-

tion

Michael J. Novak Tetracycline therapy in patients with early juvenile periodontitis

Mairead M. O'Reilly

De- and remineralization around orthodontic appliances:

an in vivo study

Christopher A. Roberts Mandibular range of motion and arthrographic findings in TMJ patients

Mansour Shariati Inhibitory effect of fluoride and MHDP on enamel demineraliza-

MHDP on enamel demineraliza tion

Carol P. Shields Studies of apatites prepared under controlled pH and temperature

Patricia M. Stege Dentists communication leads during geriatric patient interview

Urs Zappa Effect of metronidazole on development of subgingival plaque and experimental

periodontitis

John A. Zdanowicz

Inhibitory effect of barium on early caries formation in vitro

Development

The J. Daniel Subtelny Endowment Fund

Dr. Robert W. Baker, senior clinician in the Department of Orthodontics, met Dr. J. Daniel Subtelny, chairman of the department, when they were students in the Master's program at the University of Illinois at Chicago.

Dr. Baker says, "I was a bachelor then and Dan and his

wife, Joanne, adopted me. I subsequently met my wife, Natalie, at the University of Illinois and we've all been close friends as well as professional colleagues since."

Robert Baker did his undergraduate work at Cornell and went on to the University of Pennsylvania for his dental degree. He is a trustee of Ithaca College and has acted as a fundraiser for Penn and Cornell.

Dr. Subtelny, who came to EDC in 1955, invited Dr. Baker to lecture here the following year. Dr. Baker has been on staff for over 25 years.

He talked about what compelled him and two orthodontic



J. Daniel Subtelny

alumni, Robert J. Bray and Albert H. Guay, to establish the J. Daniel Subtelny Endowment Fund.

"Dan Subtelny is one of the best known and most respected orthodontic educators around today. He's not only been chairman of our department for years, but has been president of three prestigious professional organizations—the American Board of Orthodontics, the American Cleft Palate Association, and the International Society of Craniofacial Biology. He has received many, many special kinds of recognition, including the American Association of Orthodontics research award twice."



Robert W. Baker

Dr. Baker himself received that research award in 1954 and Dr. Donald Baxter, senior clinical associate in the Department of Orthodontics, received it the following year.

Dr. Baker continued, "Dan is on the frontier of not only basic research, but also practical, clinical research. And he and Joanne received the honors of the American Cleft Palate Association. They were the first husband and wife team to be so honored for their lifelong contribution to research, teaching, and clinical treatment."

Robert Baker added, "Dan is internationally known. I can well remember a Cleft Palate meeting in Copenhagen, when Dan was selected from leaders in the field who came from all over the world to summarize the meeting. Another extremely important point is that his students are deeply dedicated to him."

Orthodontic alumni are a cohesive group with an infectious esprit de corps. The alumni association meets biannually, and has decided to hold every second meeting at the Center.

Dr. Bray, Ortho '75, M.S., '76, who now practices in Brigantine, New Jersey, in a telephone conversation, said, "Dan Subtelny provides his students with excitement. He shows his dedication to the field by the excellence of his program. He is so good at sharing his knowledge, at giving so much, that he turns out graduates who do the same thing. This is why students come out of the orthodontic program with a commitment to excellence. I was asked to speak at a career day at the University of Maryland Dental School recently. I had no hesitance in saying yes."

Dr. Guay, Ortho '66, has an office in Wakefield, Massachusetts. He exemplifies what superb training can mean to a talented dentist. He was recently awarded the American Cleft Palate Association Distinguished Service Award. Dr. Baker pointed out, "Only twelve such awards have been made since the association's inception in 1943."



Albert H. Guay



Robert J. Bray

Dr. Guay is treasurer of the American Cleft Palate Association and the American Cleft Palate Educational Foundation. He is assistant professor of orthodontics at Tufts, staff orthodontist on a cleft palate team and craniofacial treatment center at New England Medical Center in Boston, and adjunct professor in the Department of Communication Disorders at Emerson College in Boston.

Dr. Guay wrote, "I'm a supporter of the J. Daniel Subtelny Fund for a couple of reasons: first, as a way of say-

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ing thanks for his leadership in orthodontics and for the things that he has done for me, and more important, since Dr. Subtelny is still at the cutting edge of orthodontic thought, to insure that he has the resources to continue at the forefront of orthodontic science."

Dr. Baker's idea for the Subtelny Endowment Fund evolved after he conducted a study of graduate departments of orthodontics in the United States. He commented, "The Center came up in the top group. However, the one area we're weak in is publications. Dan turns out a lot of research and publishes, but we don't have the volume of research we should, because we just don't have the people to work with our students.'

Dr. Baker anticipates that income from the fund will permit the department to hire a person whose fundamental interest is orthodontic research and who will guide orthodontic students through research projects. This follows one of the major recommendations of the Center's strategic planning committee, approved by the Board of Trustees in 1983, that the Department of Orthodontics strengthen its research aspect.

The efforts of Bob Baker, Bob Bray, and Al Guay on behalf of the J. Daniel Subtelny Endowment Fund are impressive. The fund has raised over \$100,000 in less than a

The Eastman Dental Center is grateful to orthodontic alumni and friends who have made so tangible a commitment to the future of orthodontic research.

Below is a list of contributors to the fund. There are also several donors who choose to remain anonymous.

Contributors to the J. Daniel Subtelny Endowment Fund as of April 30, 1985

Dr. Joannis P. Adamidis Dr. Howard Aduss Dr. Robert W. Baker Dr. C. Jeffrey Bowman

Dr. Robert J. Bray Dr. Robert Buck Dr. Adan Casasa

Dr. Martin Chin

Dr. Carl K. Christian

Dr. Stanley S. Conner

Dr. Richard A. Coulson

Dr. Jaime DeJesus, Sr. Dr. Jaime DeJesus, Jr.

Dr. Marshall Deeney

Dr. Thomas Dietrich

Dr. Robert Donaldson Eastman Orthodontic

Alumni Association

Dr. Achilles Filios

Dr. Leonard Fishman

Dr. Charles Fulks

Dr. Henry N. Gellert

Dr. J. Edward Gilda

Dr. Russell O. Glauser

Dr. Alfred C. Griffin, Jr.

Dr. Paul Gualtieri

Dr. Albert H. Guay

Dr. Girard A. Gugino

Dr. Bruce W. Haislip

Dr. Frederick N. Haring

Dr. Lawrence Harte

Dr. Bruce Haskell

Dr. Richard B. Janney

Dr. Philip Joseph

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Dr. Cheslea MacNeil

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Dr. Michael Nugent

Dr. Charles Oakes

Dr. Richard Offerman

Dr. William Parry Dr. Harold Perry

Dr. Howard Peterson, Jr.

Dr. Anne Parade-Polson

Dr. Jack M. Posen

Dr. J. Anthony Quinn

Dr. Ronald Ramsay

Dr. Ernest A. Rider

Dr. Salvatore J. Rivoli

Dr. Richard T. Rohrer

Dr. Robert E. Rosenblum

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Dr. Louis J. Russo, Jr.

Dr. Robert Ryder

Dr. Joanne Sasse

Dr. Casey Sayre

Dr. Victor Schacher

Dr. Walker Shivar

Dr. Edward Sommers

Dr. Howard Starnbach

Dr. Myron Sternstein

Dr. Ross Tallents

Dr. Damon Thanik

Dr. William Todd

Dr. Ronald Toothman

Dr. John M. Traul

Dr. Stanley E. Turet

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Dr. Alexander Waitkus

Dr. Franklyn B. Washburn

Mr. Chone Wasilewsky

Dr. George Wedell

Dr. Richard L. Wells

Dr. Richard Nalchajian

From the Director's Chair

Highlights from the 1984 Annual Report to the Board of Trustees

Most of George Orwell's predictions for 1984 did not come to pass, but the majority of the Center's plans for the year were met or surpassed. The Board's Long-Range Planning Committee set ambitious financial goals for income from patient care, development activities, and extramural research support, and these have all been achieved. We also have made good progress towards meeting many of the goals established in our strategic plan. It was a year in which several important additions were made to our faculty and staff, patient care continued at a high level, and research prospered and attracted substantial external support.

Patient Care

There were about 48,000 patient visits to the Center and to the Smilemobile during the year. This total does not include visits to other institutions or agencies which the Center staffs under contract. As there was no change in total staffing, the five percent increase in patient visits represents a real productivity gain resulting, we believe, from a number of incentive programs. In 1982 the Center's Strategic Plan and the Board's Long-Range Planning Committee set ambitious goals for patient care income in 1984 and these were

New clinical programs include a Temporomandibular Joint Pain Clinic and a Salivary Function Clinic, both as shared enterprises with colleagues in Strong Memorial Hospital. Plans are also under way for a Dental Fears Clinic. The Department of Pediatric Dentistry expanded its program for dentistry for the handicapped at Monroe Developmental Center, and for general anesthesia at Strong Memorial Hospital.

Research

Research productivity was good. Forty publications appeared in journals or as chapters in books. A significant number of new grants and contracts were funded. In 1985 the Center will have, by a substantial margin, more extramural research support than ever before.

Most notable among new grants is that for the Caries Research Center, a joint activity between the Center and the



William D. McHugh

University of Rochester. It is one of three such centers in the country and is funded by the National Institute for Dental Research for five years, with the possibility of competitive renewal thereafter. Dr. William H. Bowen, chairman of the University's departments of Dental Research and Microbiology, is director, and Dr. John D.B. Featherstone. chairman of EDC's Department of Oral Biology, is deputy director. The program is important, not only for the funding it brings, but also as tangible evidence of the effective and increasing collaboration between the Dental Center and the University.

Among the projects supported by industry are studies of subgingival plaque bacteria and of gingival bleeding as indicators of active periodontal disease; ceramic and titanium as materials for dental implants; anti-plaque agents; and remineralization of early caries lesions.

Other research foci include studies of the relationship between caries and the trace elements strontium, lithium, barium, and fluorine; various components of diet; and reductions in the amount of saliva associated with aging and radiation therapy. There are, additionally, new studies dealing with fluorosis; identification of caries-susceptible subjects; increasing utilization of fissure sealants; methods to improve regeneration of periodontal tissues; and the identification and correction of physical disturbances of the temporomandibular joint.

Educational Programs

There were no changes in numbers of students, although we have increasing numbers of excellent applicants. A second-year general dentistry program, focusing on dentistry for the elderly and handicapped was started and will be developed further.

EDC sponsored six continuing education courses and a very successful symposium in honor of Dr. Basil G. Bibby on the subject of food and caries attracted a large international audience.

The Atrium Gallery held nine professional shows during the year and, along with efforts to obtain wider coverage by the media, helps improve local knowledge of the Center and its programs.

The Center's second annual giving campaign surpassed its goal of \$50,000 and it is encouraging to note that charitable giving to the Center amounted to over \$200,000 in 1984. The annual giving campaign funded five student research fellowships.

The Basil G. Bibby Library continued to develop its holdings and services and computerized its library catalog in preparation for integration with the University of Rochester's catalog within the next two years. It has become the regional dental library and is another example of our efforts to collaborate with and complement the University.

As a private institution without direct support from any federal, state, or local government, we can take pride in our ability to expand our programs while balancing our budget. This is due primarily to the high level of talent and effort of our faculty and staff.

Alumni News

Xia Zhu, Intern '47 of Shanghai, was delighted to see his old friend, Basil G. Bibby, senior scientist, when he visited EDC in the fall. He said, "I was at the ADA meeting in October. While there, I was quite fortunate to meet Dr. McHugh (EDC's director) and Dr. Springer (EDC trustee) who advised me to visit Rochester. I was already at the Eastman Dental Dispensary when Dr. Bibby first came as director." Dr. Zhu has been a clinician all his professional life. He retains a youthful zest for learning and says, "I would now like to do research." He specializes in orthodontics and comments that "there is lots of malocclusion in adults and children in China." He lectured on clinical dentistry and some current research on the incidence of caries in China, before he left to visit San Francisco, Sacramento, and Seattle. Dr. Zhu is a regent of the International College of Dentists. He was pleased to mention that his government is planning to sponsor its first international dental symposium in September 1986 to be held in either Beijing or Shanghai.

John P. Brown, Pedo '67, M.S. '68, has moved from the University of Brisbane, Australia, to San Antonio, where he is now chairman of the Department of Community Dentistry at the University of Texas Health Science Center.

Richard R. Ranney, Perio '68, M.S. '69, was recipient of the 1985 Research in Periodontal Disease Award of the International Association for Dental Research. He is professor of periodontics and director of the Center for Clinical

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Xia Zhu

Research for Periodontal Disease, Virginia Commonwealth University.

Victor P. Terranova, Perio '77, is now chief, Laboratory of Tumor Biology and Connective Tissue Research, Division of Cell Biology, at Revlon Biotechnology Research Center, in Rockville, Maryland. He says, "My laboratory is interested in the factors that modulate metastases. In addi-

tion, we are engaged in research that deals with healing of the hard-soft tissue interface."

Duro Oguntebi, GenDen '78, writes from Saudi Arabia, "I am sorry I haven't kept in close contact. This is because I have moved around a bit in the past few years and even as I write this I'm preparing to move back to Kansas City to continue in my previous position. It has been a lot different here, but overall I consider the experience positive and enriching... A piece of good news—our family was blessed with another baby girl last August—so we now have 3 children, one boy and 2 girls. We'll stop at this number lest we contribute to the world's overpopulation!"

Els Glatz, GenDen '80, Ortho '83, writes, "I am working as assistant professor of orthodontics at the University of Homburg, a little town in southwest Germany, very close to the French border, near Metz, Nancy, and Strasbourg. I love working here because I treat all the cleft lip and palate patients—something I always wanted to do... Tomorrow I will fly to Athens to visit another old EDC student, Joannis Adamidis, Ortho '76, who is now professor of orthodontics. I also visited Hannes Greger, GenDen '82, some weeks ago. He is no longer working at the university, but he is very happy sharing a private practice. I hope to see a lot of EDC people at the ORCA meeting in July in Sweden, particularly Bernadette Drummond, Pedo '81, M.S. '82, Martin Curzon (formerly chairman of the Department of Oral Biology) and John Featherstone. I look forward to that. That will tell you that it is impossible that EDC disappears from one's life!"

Steve Miller. GenDen '81, hailed a patient of his one sunny Saturday in March on a street in Pittsburgh. Said patient had in tow his visiting parents, one of whom is pleased to edit these pages. Steve looks marvelous, is refurbishing his office, promises to visit EDC soon, and passed along the news that Rick Gottlieb, GenDen '77, is also doing well.

Roy Gonzalez, Ortho '83, M.S. '84, has been appointed assistant clinical professor in the Department of Orthodontics at the University of Texas Health Science Center at San Antonio.

Deadline for Alumni News Notes: July 1!

Name	Dept	Year
New Home Address		
New Business Address		
Other News		
What features would you be interested in seeing in M	IOMENTUM?	
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Staff News

Dr. William D. McHugh, EDC's director, has been appointed to the board of overseers of the University of Penn-

sylvania School of Dental Medicine, and an associate trustee of the university.

Dr. Ralph Hamlin Saunders, clinical associate in the Department of General Dentistry and GenDen '80, has been elected to the board of the American Society for Geriatric Dentistry.

Board of Trustees

New officers of the Eastman Dental Center Board of Trustees assumed their positions in January.

Max M. Farash, president and chairman of the Board of the Farash Corporation, was elected president. G. Robert Witmer, Jr., a partner in the legal firm of Nixon, Hargrave, Devans & Doyle, and Mrs. Richard Upton (Elaine P.) Wilson, civic leader, were elected vice presidents; James C. Henderson, chairman of the board of Rochester Telephone Corporation, secretary; and Louis A. Langie, Jr., president and chief executive officer of Chase Lincoln First Bank, N.A., Rochester Division, treasurer.

Mr. Farash, a member of the Board since 1974, has been prominent in the construction industry for over 40 years. He has a wide civic commitment and sits on many boards including the Manufacturers Hanover Trust Company, the Rochester Downtown Development Corporation, and the Rochester Area Chamber of Commerce. He is also a trustee



Max M. Farash

of the University of Rochester. Mr. Farash, an avid and knowledgeable art collector, is a sponsor of the Suburban Rochester Art Group.

Mr. Witmer, a Phi Beta Kappa graduate of the University of Rochester, received his LL.B. from Harvard Law School. An EDC trustee since 1977, he is a vice president of the New York State Bar Association and a member of both the Monroe County and American Bar associations. He is a trustee of the University of Rochester, a member of the New York State Republican Committee, chairman of the Monroe County Republican Judicial Screening Committee, the Rotary Club, and the Masons.

Mrs. Wilson is on the boards of the Memorial Art Gallery, St. John Fisher and Keuka colleges, the Harley School, and the Downstairs Cabaret. She has long been active in the Guild for Handicapped Children and the Rochester General Hospital Foundation, Inc. She recently funded the 30,000 square foot Elaine P. Wilson Hall to be built at the Rochester Museum and Science Center. She has been on the Center's Board since 1977.

Mr. Langie, who joined the Board in 1978, is on the executive committee of the Community Chest and the senior advisory committee of the Boy Scouts of America. He is a member of the Rochester Ad Club and is on the boards of the Rochester Convention and Publicity Bureau, the Gleason Memorial Fund, and McCurdy & Company. He is a graduate of Princeton.

Mr. Henderson, who graduated from Syracuse University, was elected to the Board in 1981. He is a director of Rochester Telephone Corporation, Marine Midland Bank, Ontario Telephone Company, Trumansburg Home Telephone Company, and Genesee Brewing Company. He is a trustee of the Industrial Management Council, the Rochester Philharmonic Orchestra Fund, the Rochester Convention and Publicity Bureau, and a director of United Way of Greater Rochester.

Thomas Gosnell, chairman of the board and chief executive officer of The Lawyers Co-operative Publishing Company, Inc., has recently been elected to the Center's Board.

Mr. Gosnell, a graduate of Yale, served as a lieutenant commander in the U.S. Navy from 1941 to 1946 and received both the Bronze Star and Purple Heart.

He is active in many professional and civic organizations and sits on the boards of the United Way of Greater Rochester, the continued on page 8



Thomas Gosnell

Rochester Institute of Technology, The Gleason Works, The Research Institute of America, Inc., the Industrial Management Council, The Center for Governmental Research, Baker-Voorhis & Company, and Bancroft-Whitney Company. He serves as a treasurer of the Monroe County Republican Committee, chairman of the Republican Finance Committee, and as a Republican committeeman from Webster, the Rochester suburb in which he lives.



