

Editorial

Reflections on a Professional Career Blessed With Teachers, Mentors, and Role Models

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How often have you heard on radio or television a promotional ad inviting the public to volunteer time to help mentor a student or another person? While such volunteerism is definitely worthwhile, true mentorship entails far more than a couple of hours shoehorned into a busy week. Anyone lucky enough to have had a real mentor knows how important that person becomes to his or her personal and professional successes.

To help encourage mentoring by showing the lifelong impact individuals can have, this article presents my experience with several of my role models who, taken as a whole, represent my idealized mentor.

But first, I'd like to introduce a major figure in education: the first mentor—who was actually *named* Mentor. He was a scholar, teacher, and major influence in the life and development of leaders in Greece. His most famous relationship was with his close friend Ulysses (Odysseus), King of Ithaca. Before Ulysses set off to fight the Trojan War, he had to find a very special person who would take a close personal interest in the growth, development, nurturing, and education of his young son Telemachus. Ulysses turned to Mentor, and for 20 years Mentor fulfilled the commitment he had made to his friend by giving Telemachus paternal love, wisdom, educational tutoring, and experiences in place of the absent Ulysses. New Orleans has a legacy of this relationship: Telemachus Street in Mid-City runs perpendicular to one of the major streets of our city, Canal Street.

During each phase of my life, I received Mentor's gifts from caring individuals who taught and trained me, guided me, and framed my thinking and behavior.

EDUCATION

To select just 1 person to represent the many teachers, friends, and colleagues is most difficult. My educators were the role models who were most important to my growth and development, hopeful

maturity, and professional contributions. Two very special professors, Doctors Clarence D. Dieter and Homer Porter at Washington and Jefferson College, guided me throughout my premedical education and into medical school. At that time (not too different from the present), students had doubts about whether they would be admitted to medical school. Drs Dieter and Porter were my favorite undergraduate teachers and obviously quite aware of the problem; they guided many students through these years of quandary. Then, 2 outstanding professors at the University of Maryland School of Medicine, John C. Krantz, Chairman of the Department of Pharmacology, and Theodore E. Woodward, Chairman of the Department of Internal Medicine, stimulated me during my medical school years. Both opened my thinking towards the academic career I have enjoyed over the years by suggesting that I spend my elective time with Doctor Robert P. Grant, then staff member and later director of the National Heart Institute. Long afternoon hours each day with Bob Grant provided me with first-hand personal instruction in electrocardiography, introducing me to the possibility of further cardiovascular training and research.

HYPERTENSION

My first investigative role model was Doctor Edward D. Freis who conceived and led the first multicenter cardiovascular trial of the Veterans Administration Cooperative Studies in hypertension. This important landmark opened the door for me into the future of the then very new field of hypertension. I followed Ed Freis' example by assuming the responsibility for successive hypertension programs at the Northwestern University and the University of Oklahoma Cooperative Study Centers. Further, it was my initial investigative studies in Freis' laboratory that permitted publication of my first manuscripts in the *New England Journal of Medicine* and the *Journal of Clinical Investigation*. These were the first clinical studies that described the mechanisms of the thiazide diuretics. Without the patience and guidance of Ed

Freis, I most certainly would not have proceeded further. However, Hugh H. Hussey, Professor and Chairman of the Department of Medicine and Dean of Georgetown University Medical School and later Editor-in-Chief of the *Journal of the American Medical Association* (JAMA), also gently, subtly, but most effectively encouraged my academic medical pursuits. Subsequently, during my military service at the Army Medical Research Laboratory, Dr Hussey extended his friendship to me by inviting me to his apartment in Chicago and introducing me to life in Chicago and its environs.

One series of experiences that vividly captures my personal thoughts about mentors occurred during the first week of my internship. Hugh Hussey asked me to serve as acting resident in internal medicine because the person who was to be that first-year resident suddenly developed polio. Unsure of my willingness to respond positively, Dr Hussey reassured me, stating that I would have the best senior students working with me as my interns. (Indeed they were excellent; three subsequently became chairmen of departments of medicine in their own right at other institutions.) That same week, I admitted to my medical service a patient with a perplexing problem: he presented with intermittent episodes of cardiac awareness associated with sleep apnea while standing or sitting at work or among other situations. His most recent episode prompting his hospitalization was associated with deep negative QRS electrocardiographic complexes across his precordium. When I had completed my responsibilities for that day, I drove to the National Institutes of Health in Bethesda to show Bob Grant the patient's electrocardiogram. Dr Grant asked me if the patient had a high hematocrit; and when I responded affirmatively, he told me that the man had what had been only recently described in the literature as the Pickwickian syndrome. The author of the article was a friend of Dr Grant who had described his findings to Bob. When Dr Hussey heard my presentation of the case the next morning, he asked me to present the patient at the next Departmental Grand Rounds. When I replied that I had never presented to a conference before, he immediately encouraged me by responding that he was certain that I would present many talks in the future and I should start now to prepare for that brief presentation. Not only did I follow through, but Hussey (who was then editor of another journal) asked me to write my first paper on that patient's problem for his journal, thereby providing my first academic experience. Two years later, when I was at the U.S. Army Medical Research Laboratory at Fort Knox, the laboratory research abstract that I submitted to the Midwest Chapter of the American Federation for Clinical

Research was accepted for presentation in Chicago. Shortly thereafter, I called Dr Hussey, then Editor-in-Chief of *JAMA*, and asked him if I might visit with him at his office when I presented my paper. Instead, he invited me to his apartment and to Chicago. This is only one of the warm recollections of this remarkable medical leader that I remember vividly to this day.

MENTORS

Then came Drs Irvine H. Page and Harriet P. Dustan with whom I worked very closely at the outset of my investigative career in the Research Division at the Cleveland Clinic. They were more than teachers and counselors. They became my very dear friends, not only while I worked with them in my first full-time academic research position but until their deaths many years later. These 2 colleagues were very special and clearly captured the spirit of my concept of mentorship. Each (in his own special way) embraced what I believe is a vital quality of teaching and mentoring: the necessity to communicate clearly. This is true not only with one's students but also in medical writing. It is important to think critically and to appreciate the importance of fundamental research and clinical investigation in academic medicine as well as in medical practice and in training research fellows. These 2 remarkable people (and Ed Freis) were without any doubt my major role models and dearest friends in my academic career and in my personal life.

Most students of medical history think of Dr Irvine H. Page as the person who introduced his simple and straightforward mosaic theory of hypertension. In reality, he conceived the mosaic theory as an expression of the multifactorial nature of any medical (or other) problem from his earlier studies in physical chemistry. Indeed, I have honored the memory of this giant in medical history by applying his thinking to many other complex problems that beset us, whether medical, other scientific, economic, social, or other multifactorial issues. Not only should Page be remembered for his mosaic concept but also for his major discoveries of angiotensin II and serotonin and also for his repeated writings that resulted in the establishment of the Institute of Medicine of the National Academy of Sciences. I am continuously grateful to him for so many of his lessons—in speaking and writing and in relationships with associates and students—in communication.

I am also enormously grateful to Dr Harriet P. Dustan who was my best scientific critic for many years. Additionally, Dusty was a close friend of our family for over 30 years. She characterized these years as “our halcyon days.” Together we discussed and studied for many long hours our thoughts about hypertension, the “hyperdynamic beta adrenergic

circulatory state” which I described, and the relationships between hemodynamics, intravascular volume, and the renin-angiotensin system. In her long career of service to the American Heart Association, she served numerous roles as its president; leader of its Ethics, Established Investigator, and Research committees; and the first Editor-in-Chief of the premier journal on hypertension and hypertensive diseases, *Hypertension*, which I also edited later.

Each of these experiences in my career represents the *mosaic* of qualities of the classic mentor. I equate mentorship with the composite of a major lifetime relationship as a teacher and role model as well as a close friend. Each of my mentors was a committed teacher, an important role model, and a major contributor to my thinking, growth, and communication skills. They embodied the characteristics that are truly memorable in the mentor.

Other people have certainly been very important to me. This group includes more than 130 highly esteemed fellows who taught me much and who are

now dedicated physicians and investigators. They spent long hours working in the laboratory, in discussions, and writing and reviewing data and manuscripts. Many are current leaders in medicine in their respective countries, in academic institutions, and in the societies they serve. They are recognized for their own contributions and enjoy the esteem of their own students, colleagues, and friends in our large world academic community. They serve in institutions that profit from their talents and wisdom, and these groups are enormously grateful to them. In addition, they share with me their exciting experiences in a life of satisfaction and commitment to research in the worldwide enterprise of medical academia.

Finally, I am grateful for the personal love and encouragement of my wife, children, and parents. Each has given willingly and endlessly to me without question over the years that we have shared. Each, together with my teachers, colleagues, and associates, is one of my personal heroes for which I am eternally grateful for their mentorship.