



The Teacher of Teachers

Nikša Pokrajac
(1929-2004)

When I walk into a seminar room to teach my students physiology, I have a feeling of mission and excitement, because I believe in what I do, cherish what I know, and want to pass it on to my young colleagues. It is great to have the opportunity to teach students the facts and simultaneously help them gain command of the subject and understand the beauty of interactions and automatic control of our bodily systems. I help them sense the wisdom of God's Secret: the functioning of biological systems governed by the laws of chemistry and physics. Nature has no plans and no goals, yet everything seems meaningful and sacred. Together we learn to love the subtleties of cell membrane potentials, simple but powerful mechanisms of concentration of the fluid in the renal medulla, fragile balance of hormone secretion, and the interdependence of body fluid volume and blood pressure. I give them my knowledge, my excitement, my voice and heart. I like the life I live.

Most of this I owe to my late professor Nikša Pokrajac.

He taught me physiology when I was a medical student, and even later on, when I started my teaching career at the Physiology Department of the Zagreb University School of Medicine.

Yet, I have always been far from the elegance he had, from his love for the subject, devotion to students, and contribution to Croatian physiology. He was the first medical school teacher to start seminar work in early fifties, first to introduce multiple-choice test exams in the sixties, and first to introduce problem-based learning (PBL) in the eighties. It was easy to understand and follow Nikša Pokrajac: as a young teacher, I quickly grasped the efficacy of seminar-type work with students (admittedly, others liked it, too), respected – and I still do – multiple-choice test examinations, and was the first who agreed to create a 30-h PBL course on transplantation disease for the first-year students.

"It is not important that students learn of transplantation disease", explained Professor Pokrajac, "what is important is that they see that even the first-year courses are directly linked to clinical work, and

that the knowledge gained in the first year of medical studies can be applied to a complicated clinical problem."

After these words, it was easy to show students why and how chemistry, physics, biology, statistics, and medical ethics directly relate to transplantation disease.

Everybody admired Nikša Pokrajac: teachers admired him for his knowledge and understanding of the importance of educational reforms, researchers for his fast grasp of any problem and talent to reach rational means of its analysis, deans for his tactful approach to the reforms, and students for the elegance and beauty of his lectures. Few knew how much and how nicely he stimulated the modernization of education at the Zagreb University School of Medicine, but all who had ever heard his lectures or seminars never forgot him nor could recall a better teacher. At the end of each course, medical students are surveyed on their opinion on the quality of teachers. Most of the Physiology teachers would receive 7-8 points on a 1-10 scale for the quality of teaching, two might receive only 5 to 6 points, but Pokrajac would always stand out scoring 9.85 or more. Nobody could even come close to him.

Most of us at the Physiology Department learned statistics from Nikša Pokrajac. Physicians have traditionally had poor knowledge of statistics, especially before the appearance of computers and other kinds of computing devices. Pokrajac gladly helped everybody who needed advanced expertise, and freely delivered lectures at all levels. I saw with my own eyes how he performed analysis of variance without any computing device, using just a piece of paper and a pencil! He smiled throughout the procedure, making sophisticated jokes to himself and his listeners.

When I started the *Croatian Medical Journal*, Nikša Pokrajac was one of my key reviewers. The reviews he wrote were not just good and insightful assessments of peer's work, but extensive and friendly letters to the authors on how to improve every aspect of the report. He sometimes even drew tables and performed statistical analysis anew from the data

available in the manuscript. Each time I received one of his reviews, I asked him to join the editorial board and become a special editor for the manuscript pre-review, a statistical editor, or a regular columnist with a freedom of choice of the topics from physiology, statistics, medical education, or anything else. Each time he would tactfully decline my offer, although there were occasions when he could not conceal his immense attraction to that idea.

The reason why he could not take up such an obligation was his illness, which I was not aware of at the time. When I realized how sick he was, I devised the only possible plan to win his cooperation. It worked, because it had to do with teaching physiology.

The story goes back to 1982, when, under the influence of Nikša Pokrajac's teaching methods, I published a book titled "1,000 Multiple-Choice Test Questions in Physiology". Pokrajac refused to co-author the book, because he was too nice to challenge the School's conservatives, who preferred oral examinations which gave them unlimited power over students and total control of the criteria. Still, he reviewed the book and encouraged me to publish it. A new edition of the book was published in 1990, but then the textbook for the course changed, the School had other interests, my own research interests shifted to other areas, younger teachers had other obligations, and the old edition was almost forgotten. How-

ever, in 2004, after we reverted to the old Physiology textbook, I decided to revise the book of questions, modernize it, and publish it again. In the meantime, I got turned down again by Pokrajac for an editorial for the *Croatian Medical Journal* on the revitalization of academic medicine, but the glow in his eye showed me that I had almost hit the right spot. So I played the last card: I made him an offer that we together make a new edition of the "1,000 Multiple-Choice Test Questions in Physiology". He accepted, immediately (my God, why did I not think of it earlier!). I arranged for the retyping of the old book and sent him the CD to work on it at home, which he was unable to leave any more.

Three days later he called me and said that he was in a very bad shape. I got scared for his health, but it turned out that it was a typical joke of his: he claimed to be in a bad shape because I gave him hard time with the material that required much revision. I was happy, and immediately got optimistic that we would finish the book, and that we would both live to see it published. This happened on Friday. The next day, Nikša Pokrajac died at his desk, revising our book.

Knights die on a battlefield.

Matko Marušić