

Remembering Leo Khachiyan

“They are like old soldiers,” said Leo and once again I marvelled at his knack for distilling the essence in just a few words. We were sitting high up in the stadium, Leo Khachiyan, my wife Markéta, and I. Three people with a university education and not one of us had the sense to bring along a hip flask. So now we were shivering in the cold October evening while down below Mick and Keith swaggered in their long coats tattered from Napoleon Bonaparte’s winter campaign of 1812.

And I was thinking how they preached the fierce defiance of authority that Leo practised. Belting out exhortations to flip the switch is one thing. Letting loose a string of choice Russian obscenities aimed at a clumsy KGB wiretapper on your telephone line is another. Which is what Leo had done back in the USSR at the cost of three-month service denial.

Growing up in a communist country affects different expatriates in different ways. Some strive to adapt stalinist methods to their new environment and others have a permanent aversion to such abuses of power. “You know, guys, I have been thinking, you know, how to punish people who, you know, come late to faculty meetings”, said a Rutgers administrator when we bumped into him in a parking lot. “Shoot them,” replied Leo calmly out of the corner of his mouth and in a flash I was in a juvenile delinquent’s downtown Moscow. *I said yeah, oh yeah, oh yeah, you’ll never make a saint of me.*

He was selfless. Ready to make himself available to you at the shortest notice and to give you his companionship without any guile. Open, patient, sympathetic, understanding, considerate. I miss him.

Once he told me how that routine question, that Pavlovian reflex of our trade, “What are you working on now?” made him uncomfortable. “I always feel like answering ‘I just came here to piss’”, he said and, faced with my uncomprehending stare, supplied the explanatory joke: Two dogs meet on a street corner. “I am an Afghan hound with a pedigree running to four generations,” says one, “and I won three prizes in international dog shows. Who are you?” And the other dog replies, . . .

At the eighth International Symposium on Mathematical Programming in 1973, yet another manuscript purporting to present a polynomial-time algorithm for linear programming was circulated. “Has anyone found the error yet?” asked the participants in eager anticipation of the happy event. And when someone finally had, smug smiles shone. Six years later, at the 10th ISMP, history seemed to repeat itself at first. However, the *déjà vu* was imperfect. Nobody could find the error. Someone had the audacity to succeed where the rest of us tried and failed. A few die-hards clutched at straws: the paper was suspect at best because it did not include proofs of its lemmas. (Never mind that *Doklady*, that most prestigious Soviet journal, imposed an upper bound on the length of its contributions, which Leo stretched even with the proofs missing.) But eventually even they had to face the bitter truth: progress had been made. And so Leo became a celebrity.

To him, the subsequent ballyhoo was unworthy of serious attention. He saw his own contribution to the breakthrough as a finishing touch appended to the work of Yudin, Nemirovskii, and their predecessors. This episode would not dominate his mathematical life. Other problems beckoned.

His arrival at Rutgers was not met with universal exuberance. Hiring a famous person is fine and dandy, some said, but what will he do for the department? We need people to teach Pascal! Later, when I sat in Leo’s class, I could not help thinking of these naysayers. His meticulous preparation of every detail must have surpassed all effort that they would be willing to invest. (And I bet he would outprogram them in Pascal, too.) Leo Khachiyan devoted staggering amounts

of time and energy to his students. Not out of fear of the three comrades appointed to evaluate our performance, but out of timeless dedication to his calling. *The dog barks and the caravan passes.*

I am privileged to have been his friend.

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