My Six Encounters with Victor Marek — a Personal Account

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1 Introduction

Co-editing the volume dedicated to Victor Marek in honor of his 65th birthday turned into an occasion to reflect on the influence Victor has had on my life. Since 1985, we have worked together day in and day out, and over the years we have grown to be friends (I hope he sees it the same way). However, the story starts about 10 years earlier, and whenever I think about it, it invariably boils down to what I call *six encounters*.

In 1973, I entered the Warsaw University of Technology and had to attend lectures on the foundations of mathematics. While in high school, I had never heard about the subject but was soon under its spell. There was clarity and elegance in it and, to my (pleasant) surprise, also questions that went beyond mathematics into the realm of philosophy. To be sure, it was not easy, and for a while I feared I could fail to master the subject. Fortunately, I learned that there was an excellent problem book. Owing to the color of its cover, it was known as the ”black book” among my fellow students. It helped me a lot. In fact, for a while it was indispensable! The authors were Victor Marek and Janusz Onyszkiewicz [1]. Such was my first, albeit indirect, encounter with Victor. It quite possibly saved a young aspiring mathematician. (By the way, there is also an English edition of the book [2]. It was translated from Polish by Victor’s wife Ela).

During my junior year, I began to study under the mentorship of Professor Tadeusz Traczyk, my future Ph.D. advisor. Professor Traczyk encouraged me to attend classes and seminars at the Warsaw University. He was very much interested then in the topic of information systems, and told me about an exciting weekly seminar on the subject. I was delighted to find out that one of the two people who ran the seminar was Victor. I started attending and got my first chance to see Victor in action. It was quite an experience. Every meeting, Victor was an incarnation of passion and insatiable curiosity, and he would not leave the room until he was sure that he and everybody else in the audience understood ”what it is all about” (as he likes to say). I had never seen anything of that intensity before (and even later, unless Victor was present, of course). It was at one of those seminars that I heard him say: ”Logic and combinatorics — that’s what mathematics has to offer to computer science.” Being just a third-year student, I did not fully grasp the importance of what I just heard. But I remembered it! That seminar, which lasted for two or three years, was my second encounter with Victor. It gave me a glimpse into what is needed to to be scientist. (As an aside, I learned later that Professor Traczyk knew Victor quite well. In fact, I am sure he must have been attracted to the

topic of information systems by Victor, who has a knack for drawing people to his favorite subjects. Incidentally, Professor Traczyk was one of the very few people with courage enough to oppose the openly crude efforts of the Communist regime to slow down Victor's career in the mid 1970s.)

Most of us know Victor as a logician, and those who are slightly older, as a set theorist, too. But Victor is also a combinatorialist. His knowledge of the subject is impressive. Once I got to know him, I made every effort to attend his courses. I was lucky! In 1976 or 1977, Victor started to teach combinatorics. I took a two-semester course he developed. It turned out to the best course in my five years as a student. Integer and set partitions, Stirling numbers, Ramsey theory, generating functions — it was all there. In fact, whatever combinatorics Victor came across that struck him as elegant or deep was bound to find its way into a lecture. As I said, combinatorics was not a subject Victor had ever taught before. So, occasionally, there were difficulties. But then Victor would simply draw the whole group into the task of straightening things out. And what fun it was! I loved that. It was probably during these joint efforts to understand tricky aspects of a proof or a construction that I learned best. From that point on, I have always known that occasional confusion and mistakes in class are, if one can take advantage of them, just another teaching tool, and a powerful one, too.

Around 1979 or 1980, I found out that Victor decided to acquire a deeper understanding of combinatorics. He was especially interested in Ramsey theory and decided to have a weekly seminar on the subject. It was clear to me that I would attend! Well, that seminar was surely something. Several proofs of the Schur and van der Waerden theorems were presented, and the Hales-Jewett theorem was discussed and proved. I was very proud when I was charged with the task of presenting the proof of a general variant of the Ramsey Theorem, due to Nešetřil and Rödl [3], stating that for every finite graph G with the clique number m and for every integer r, there is a finite graph H, also with the clique number m, such that for every r-coloring of the edges of H, H has a monochromatic induced subgraph G' isomorphic to G. I am not sure I understood the proof entirely, before the talk. But once I finished, I did. As on so many other occasions, Victor would not leave any step out, and the whole group toiled until it was all "crystal clear" and we could explain it to "any person on a street" (to use two other of Victor's favorite expressions). That seminar was tough work. But we all enjoyed it so much. That was my fourth encounter with Victor. It helped me understand to what extent science is *not* a solitary occupation. As with the combinatorics lecture, the seminar was, I think, a one-time event. Fortunately (but unfortunately for those who don't understand Polish), there is a research monograph by Victor and Witold Lipski that remains as a beautiful record of Victor's combinatorial escapades [4].

Between 1978 and 1980 I was busy with my Ph.D. thesis. I was working under the direction of Professor Traczyk. Victor was a member of my committee. Even though the dissertation was dedicated to some combinatorial problems arising in database theory that dealt entirely with finite sets, Victor decided that my Ph.D. examination is the best opportunity to make sure I knew set theory. I still remember my apprehension when he outlined the scope of the exam. Roughly speaking, I was to master two monographs on the subject, by Kuratowski and Mostowski [5], and by Jech [6]. That felt to me then a bit too much for an exam. Now, though, I am nothing but grateful. The books

are classic texts on set theory. But they treat the subject quite differently, the authors being separated by two generations. Studying them side by side was a great experience. In fairness to Victor, I must also say that while the charge was tough, the exam itself was not. Whenever I found myself confounded, which happened a few times too many during the exam, Victor would always help steer me back in the right direction. And that is the encounter five. After that, I knew that the bar always has to be set high.

And then there is the last encounter. I am happy to say that this one is not over. Victor is not particularly taciturn. In fact, he can spin stories without end. But on some occasions he can be extremely concise. In the Winter of 1984, after not seeing or hearing from Victor for well over a year, I received a letter. It consisted of just one sentence: "If I were you, I would apply for a position at the University of Kentucky." I did, and in Fall 1984, my great scientific adventure of doing research with Victor started. Much of it has focused on nonmonotonic reasoning. Quite possibly, this focus is due to an incident that occurred during a joint trip to California in the Bay Area, when a hotel attendant offered us one room with a single bed. Realizing immediately that the attendant must have employed some form of non-classical reasoning that involved jumping to conclusions, Victor decided to investigate further. And so, close to sixty joint papers and a research monograph followed. There is one more thing that belongs to this sixth encounter that I must not leave out. For 14 years, I was chair of the department. During that time, I had Victor's unwavering support (even when we did not see quite eye-to-eye). Most importantly, though, it is thanks to Victor that I continued an active research life in the midst of administrative responsibilities. He made sure there were always problems around that were just too good to pass by, and he would not leave my office until he was sure I took the bait. I am very grateful for that.

So why do these six encounters stick in my mind so much? First, I think they tell much about Victor. Second, each made an imprint on my life. Most importantly, these interactions showed me clearly that science is best done in company! And that seems to be the distinguishing feature of Victor's scientific path. There were always others around him whom he managed to draw in, to infect with his boundless energy and passion and enthusiasm for science. In the process, he gave to so many of us so much. Many happy returns, Victor!

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