



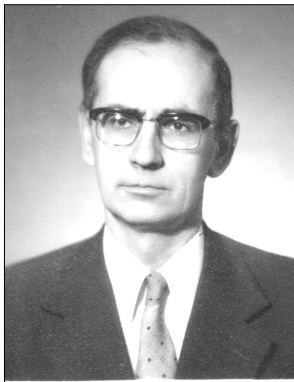
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REMINISCENCES ON THE DAYS OF COLLABORATION WITH PROFESSOR DJORDJE MUŠICKI

(Address at the meeting of the Section of Mechanics in the Mathematical Institute of the Serbian Academy of Sciences and Arts, held on 24th September 1997 and dedicated to Prof. Mušicki's 75th anniversary)

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I feel both very pleased and very honoured by the invitation to say a few words to the audience present here today about Professor Djordje Mušicki, my very dear and revered teacher, later a colleague in teaching at the Faculty of Physics in Belgrade. With this address I wish, in the first place, to express once more, but never too many times, my deepest appreciation not only for all that Professor Mušicki has done for me and my evolution into a physicist, but also for his immense contribution to the vigorous growth of physics in Belgrade and in Serbia, as well as to the general development of the Belgrade University. I also wish to pay my tribute to his exceptional and varied qualities and abilities, scientific, professional, pedagogic and

humane, still so vivid and conspicuous after a decade of retirement.

Professor Mušicki has had a reputation of exquisite theoretical physicist over a considerable period of time. Many among the people present here today might be unaware of the fact that it has been Prof. Mušicki's desire, ever since he made his first steps in science, to dedicate himself to Theoretical Physics only, never feeling a shred of vocation to try his skills in experiment. He was lucky to see this wish of his granted, although it went all very slowly and gradually at the outset, as the Theoretical Physics had no tradition in Belgrade in the fifties. At that time, Djordje Mušicki was the only teaching assistant with such "strange inclinations" within the then-existing Department of Physics at the Faculty of Science and Mathematics in Belgrade (the Department evolved into Faculty of Physics nowadays); everybody else were experimentalists. On one hand, it was the epoch when one could publish bare experimental results without bothering to

give any physical explanation to the curves and tables presented, let alone the comparison with the theory. On the other hand, the Head of the Department, Professor D.K. Jovanović (retired in 1961), was generally known to believe, nay maintain, that Physics rests solely and exclusively on good experimentalists, and that Physics without theoreticians is like fish without bicycle. Even the thought of the impending interview with this "terrible" Professor about the prospective Ph.D. thesis in theoretical disciplines must have been a nightmare for Djordje Mušicki, and he probably saw it as the end of his career at the Department. However, all went amazingly well eventually, and Djordje Mušicki received the consent to work on a thesis in Rational Mechanics, which was the nearest substitute to Theoretical Physics available in Belgrade at that time (doctoral studies abroad were a phenomenon as rare as Siamese twins). Professor Mušicki has constantly cherished and maintained at a high level the successful collaboration and cordial personal relations, established in these early days, with many colleagues from the then-existing Department of Mechanics at the Faculty of Science and Mathematics (this Department is a part of the Faculty of Mathematics nowadays). We can see today how wholeheartedly these colleagues pay it back to Prof. Mušicki with this ceremony dedicated to his 75th anniversary.

Regardless of the fact that his first steps in science were in the domain of Mechanics, one cannot say that Professor Mušicki's work pertains to Mechanics in the usual sense of the term. Indeed, his interests were, and to some extent are even these days (as judged by papers in significant international journals he keeps on publishing), focused on the problems of degenerate systems, both discrete and continuous, and systems with Lagrangians depending on higher-order time derivatives of the generalized coordinates. Strictly speaking, such systems are not encountered in Mechanics, but can be run into in other parts of Physics: for example, one comes across the degenerate systems in the theory of electromagnetic field. In other words, Prof. Mušicki actually focused his attention on the attempts of implementation of the analytical and canonical formalisms, developed in Mechanics, to other fields of Physics, deeply convinced that these formalisms constitute an important unifying factor of the entire Physics. It is no wonder, therefore, that Prof. Mušicki's scientific efforts aroused considerable interest with the colleagues mechanists, and that his lectures in their seminars were always received with attention, which eventually resulted in this celebration today. But, it is also no wonder that Prof. Mušicki often had conflicts and clashes with people who looked at Mechanics differently, i.e. who viewed it merely as a part of Applied Mathematics or Engineering. Of course, Mechanics can be regarded from such a standpoint; moreover, many significant results were arrived at with this approach. But, Prof. Mušicki pleaded for the right of Mechanics to be also treated as a branch of Physics; among other things, he insisted that the lecture course in Theoretical Mechanics to students of Physics should be held by a physicist. Although this opinion was received benevolently by Professor A. Bilimović, the founder of Mechanics in Belgrade and first Head of the Department of Mechanics (retired in the late fifties), it was later vehemently contested by some younger mechanists. The outcome of the conflicts is well-known: the lecture course in Theoretical Mechanics to students of Physics has been held by physicists for over 40 years now.

There are many details showing the sterling qualities of Prof. Mušicki as a university teacher. He was very dedicated to his teaching duties, always preparing his lectures very thoroughly and diligently. His exposés were always brilliant and clear, very orderly and neat. This was an obvious reflection of his being brought up in Vojvodina (northern part

of the present Serbia, north of the rivers Sava and Danube, formerly part of the Austro-Ungarian Empire), all this clarity of thought and methods, all this tranquility and stubborn steadiness, all this neatness and orderliness, which are so often jeered at by the people south of Sava and Danube. He was always prepared and always available for consultations when needed by the students. One still remembers, as a jocular illustration of Prof. Mušicki's pedagogical conscience and responsibility, that he often chased in the corridors the students who "owed" him a colloquium and dragged them into his study for the interview. Even running into the lavatory would not protect them, as Prof. Mušicki would wait for them outside as long as it took. Also, Prof. Mušicki is the author of "Introduction to Theoretical Physics", a textbook for the lecture courses in Theoretical Mechanics, Statistical Physics and Electrodynamics, a three-volume work which has lived for several editions (becoming a four-volume one in the last edition). He became, thereby, the founder of the school of Theoretical Physics here, and in the course of the years he turned into its pith, its incarnation. Again, this is another reflection of his Vojvodinian background: only in the Middle Europe, the cultural influence of which is clearly felt in Vojvodina, one can encounter authors of three-volume "Introductions". Being one of the referees of later editions of this massive text, I still remember the long hours, sometimes all days, spent with Prof. Mušicki over a single sentence, attempting to make it sound as precisely and as adequately as possible. This outline of Prof. Mušicki's activities in the capacity of a university teacher would not be complete without mentioning his numerous professional activities, such as seminars and publishing methodological papers, or long years of heading the Commission for examination of professional abilities of high-school physics teachers.

I have many reminiscences on my collaboration with Prof. Mušicki first as his teaching assistant (1961-1969), and later as a younger colleague-teacher (1970-1987). I would like to evoke here two details which, in my opinion, speak much of Prof. Mušicki's extreme conscience when it comes to students and teaching, and show his refined feeling for correctness, lawfulness and order.

Once, when I was still a very young teaching assistant with some 2 or 3 years of working experience only, it happened that Prof. Mušicki broke his leg (or, maybe, it was his arm: I am not quite sure of this detail now, as accidents of this kind, sometimes with the leg and sometimes with the arm, happened to Prof. Mušicki every now and then). It was quite near the end of the fall semester, and only some 3 or 4 lectures were left to finish the programme. Incidentally, these lectures were to be about the Mechanics of continuous media (Theoretical Mechanics was a part of a course named Theoretical Physics I, and covered the whole fall semester). Prof. Mušicki asked me to replace him in these lectures, so that the students would have all the materials from Theoretical Mechanics completed, as a colloquium was awaiting them right in the beginning of the spring semester. Of course, I immediately started digging through the textbooks and making preparatory notes. But, the day before my first lecture was due, Prof. Mušicki rang me up to say that the whole arrangement would not be proper, as the law strictly forbids teaching assistants to read lectures, and that, therefore, the lectures must be called off until the beginning of the next semester when the plaster would be off his leg (or was it arm). I was left to ponder over Prof. Mušicki's extreme conscience and all his concern to avoid only negative consequences for the students. I often ponder over this detail even now, seeing how easily some university teachers pass both teaching and exams over to their assistants, with reasons much less serious than the plaster on the leg (or, maybe,

arm).

Another event worth mentioning here took place some 10 years later, when I was already holding the position of Assistant Professor. Both Prof. Mušicki and I happened to be engaged, on a part-time basis, at the Faculty of Science and Mathematics in Novi Sad (the capital of Vojvodina, some 80 kilometers north of Belgrade), and I happened to be the teacher of Theoretical Mechanics (1971-1973). A student of the Faculty finished writing his final composition, required for the diploma, under my supervision, and Prof. Mušicki was appointed as the second Member of the Commission for its formal defense. Awaiting the administrative procedures to be ended (it could take a few weeks), the student went home to Bosnia (present Republic of Srpska). When the time came, he returned and came underway to Belgrade first, where he contacted both me and Prof. Mušicki. Considering the situation, along with the fact that it was a rainy November day outside, it occurred to me to suggest that the defense be arranged in Belgrade, as both the Commission and the candidate were there. But, Prof. Mušicki strongly objected, as it was illegal to arrange the defense procedure outside the site of the University in question. So we all headed for Novi Sad, got there in the late afternoon, found an empty classroom at the Faculty there, finished the defense procedure, and nicely returned to Belgrade in the evening. Although the whole idea of going to Novi Sad for a half-an-hour procedure to which no one else assisted seemed so "impractical" and "silly", this was actually the only strictly lawful course of action, and it excluded the possibility that some malevolent person, learning by chance of this all, might do any damage to the career of that student by contesting the validity of his diploma. I often remember this event, learning about the circumstances in which these defenses are carried out nowadays in many Faculties. And the whole story tells much about Prof. Mušicki as an extremely lawful and just person.

At the end, I would like to thank once more to the organizers of this formal occasion for giving me the opportunity to say these few words about my and our dear and respected Prof. Mušicki. I am particularly glad that Prof. Mušicki is present here, and wish him many years of successful work in the future, reminding him of Ugo Ojetti's words: "Old is only the one who does not have any more desire to learn new things". And for us all, the following words of great Dositej Obradović, our first Minister of Education, seem appropriate to me: "Trivial are those who think that teacher's work is trivial".