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Laudatio

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LAUDATIO

Ivo Marek

Introduction

Let me welcome you at this session which is devoted to the opening ceremony of the Symposium On Mathematical and Computational Modeling in Sience and Engineering to honour the 80th anniversary of the birthday of Professor Karel Rektorys. Let me express my sincere thanks to all of you who gathered here. This approves

great popularity of our today's honoured man. We have gathered here not only to celebrate but to show our feelings of admiration and love to a great man on the occasion of his important anniversary. It is nothing accidental in the fact that this great personality is among his students known just as Rektorys and among the coworkers and friends shortly *Karel* and even the diminutive *Karlíček*. I am proud that Karlíček has let me call him *Slovutný Sire* and returns me by calling me the same. This nickname is hard to be translated into English, its verbal translation would sound as *Esteemed Sir* and this combination does not express the same as does the Czech version. I must also say that I am very honoured and pleased that I was chosen to

deliver this laudatio. In particular, I am glad indeed that Professor Rektorys has confirmed me as an official speaker of this festive meeting. Actually, I was already lecturing on similar occasions connected with the fiftieth, sixtieth, seventieth and seventy fifth anniversaries of his birth and Karel did not protest against my effort on any of the events; moreover, he was inviting me again and again to deliver a speech at such events and this concerns also today's ceremony. It makes me very happy on the one hand, but on the other hand, provokes a great responsibility and, believe me, I feel nervous. Turning back to my previous Karel Rektorys speeches I must say that thanks to them the list of my publications has increased substantially.

But now, let me be more serious. I have mentioned a few seconds ago that the purpose of this meeting is to celebrate the 80th anniversary of Karel Rektorys' birthday. It is not difficult to see that the mere celebration would not be the most appropriate. It is clear that there is a lot of people on our planet celebrating today the 80th anniversary of their birth. However, we do not just celebrate the 80th anniversary as such but we use this opportunity to express our admiration for Karel, for his extraordinary results and the way how he has obtained them, for his fair and gracious character.

Professor Rektorys is indeed an extraordinary personality. To demonstrate this claim let me mention several key words characterizing him:

- high professionality
- teaching mastership
- modesty
- working activity
- goodwill and fair approach to the people

A jocular "theorem" asserts that a person known to have all but one of these properties cannot possess the remaining one. However, unbelievable as it may seem, Karel Rektorys is a counterexample which evidently disproves the theorem.

Professor Rektorys is a laureate of many prizes, medals and orders. An explicit account would be rather long and I better avoid presenting it here also because my list of Karel's honours might be incomplete and that would be unpardonable. Summarizing, I can say that Professor Rektorys is an important person in the world of science and I am sure that the history will give out a similar evaluation.

As you may see I have without trouble collected arguments why our session should celebrate Professor Rektorys' eighties. It is our duty, i.e. a duty of those who did have an opportunity either to communicate with him or to live in his professional neighborhood. It is our duty to express our recognition of his merits and our gratitude.

Perhaps also our honoured man will accept with pleasure the fact that his colleagues and friends gathered in order to show him their feelings of admiration and pleasure.

Last but not least, one of the most important reasons of our wish to celebrate Rektorys' anniversary is that we want to present him as a paragon to our students and followers. A logical part of this action is a message to the young generation of the academic community to let them know that a scientist prior to becoming successful has to start with and encounter defeats and failures. Any scientist and teacher should recognize the earlier the better that their idols and examples had to work hard already since early age. The glory and admiration can hardly be achieved by working just closely before the retirement.

I am glad that among us there are representatives of our young academic community and wish them great success and similar honours as have been achieved by their paragon—Professor Rektorys.

Karel Rektorys and his family

If we look back and want to indentify the most important turning points in the life of Karel Rektorys we have to begin with his family. From my viewpoint Karel is a lucky person. His parents directed him very well towards the positive fixed values of human life and they succeeded. Rektorys had become an extremely composed man possessing a very rare ability—to make no enemies among the people who he was to encounter. This in a sense fantastic character enabled him to flow through the ocean of the life problems without any particular disturbancies smoothly and successfully. However, that does not mean that he did not experience some bitter sides of the life. He has loved his family very, very much. In the first place it was his wife Věra. Everybody who knows Professor Rektorys immediately recognized his deep sorrow when he had lost his beloved wife. At present, Rektorys has passed over his love to his children and grandchildren. I am sure Karel will not mind if I mention an episode I was taking part in. Once a small group of Karel's colleagues and friends tried to organize a common visit to some place of entertainment. There were some suggestions to go to a nightclub and some of the colleagues tried to convince Karel to join the group by saying that Mrs Rektorys would never know about that. Karel's reply was firmly negative. He said that may be Mrs Rektorys would not get any word of that happening but he himself would, and he refused. Rektorys has never been against any fun but there exist certain limits which he never allows himself to cross. And the family must be absolutely safe and untouchable. Karel Rektorys never jokes about this.

Karel Rektorys and his nonscientific activities

Since his early young age Rektorys has liked sports in general and tourism and table tennis in particular. He likes mountains as the most beautiful part of the nature. He likes hiking and has been and still is active. Since his job does not allow

him to live in mountains he tries to imitate their presence in his office just by hanging pictures of some of them on the walls. Nobody who had ever visited Rektorys in his office could overlook an extraordinary nice picture of Mont Blanc, the most beloved peak of his.

Table tennis is another activity of Rektorys in which he had found preference. He plays very well, in particular singles. Let me document this statement by telling you an episode from an international conference held in Oberwolfach, Germany. It is well known to the visitors of the Oberwolfach Mathematical Institute that this excellent scientific institution is equipped not only for scientific work but also for rest and entertainment. The latter includes numerous musical instruments such as piano, violines, violas, cello, flute etc. For physical entertainment a visitor can find a table tennis hall with two tables and a lot of racquets and balls.

Now, the story of Professor Rektorys. It concerns a symposium held in Oberwolfach chaired by Professor Collatz and devoted to Numerical Solution of Some Problems of Science and Technology. Among the attendants there had been on the one hand some important world leading scientists in the subject as well as, on the other hand, some representatives of the coming young generation. Needless to say that among this crowd there were quite many very good table tennis players. Rektorys was a very popular rival though he was very strong and I have never seen any match played by Karel which would end in a different result but a victory of his. During that meeting Rektorys had become the unofficial champion of the meeting. It is typical for Rektorys that when asking him for details of such a rather big success he replied that it was just a lucky chance. I strongly oppose. Karel is great also in activities considered by him secondary and thus unimportant. But that is him—Karel Rektorys.

Professor Rektorys—a teacher

There is at least one topic in which Professor Rektorys and myself share the same views. This topic is the process of teaching or, generally, education. Though I did not consult my next deductions with Karel I can be pretty sure that he fully approves my views. If it happens that a given product of engineering is of inferior quality then any unessential additions and changes cannot improve it dramatically. A similar fate can be expected when mathematics and its formalisms are used without essential needs. This means that unnecessary formulas and other mathematical "beauties" will not make the product better, more advantageous etc. Thus, mathematics related to a technical work is either essential or useless. Definitely, it is not a decoration! A view opposite to the one just mentioned is not isolated and is erroneously shared by relatively many students and, unfortunately, not only by them.

Professor Rektorys—a scientist

This section could be equivalently called Professor Rektorys a writer. Some of the colleagues of Professor Rektorys classify his books as both monographs and textbooks. I should also mention some envious persons who consider Rektorys a writer—businessman. But, most of the attendants in this hall are certainly aware of the fact that there exists no person in the Czech republic who would become rich just by writing scientific books. Anyhow, my opinion is that for Rektorys' monographs and textbooks, may they belong to any of these categories, the only decisive property is the highest quality.

Professor Rektorys as mathematician is certainly an attractive example. He never imposes his views on the others and always tries to bring them off gently but firmly. Mathematics in his conception is one of the most beautiful and simultaneously the most useful scientific disciplines. In addition, it is a branch of science which is relatively very cheap as concerns financial needs.

Some of our colleagues—mathematicians refuse to divide mathematics into any parts such as pure and applied and say that mathematics is unique. Despite such claims we are wittnessing the fact that many scientists including some mathematicians cannot find a common scientific language. This is perhaps caused by their characters and personal approaches to their colleagues. Rektorys is admired by both of the above mentioned groups of mathematicians, at the same time becoming a living proof of the unity of mathematics. Let me say that Professor Rektorys never feels dishonoured if somebody calls him an applied mathematician. He likes teaching and doing research in applied mathematics and he does both pure and applied mathematics on a very high level.

While the relationship to one or to the other part of specialists according to the above partitioning may sound artificial and unessential Rektorys as scientist can be proud for possessing the property which is considered to be the most important: His mathematics is highly actual and original. This fact can be traced already in his early papers as well as in those written by the already recognized author of many journal and by the monographic publications. Rektorys' mathematical ideas and models have found numerous reflections in the newest mathematical literature as can be documented by the works of many of his younger colleagues some of whom are present in this hall now. Rektorys' ideas and methods are subjet to extensions, broadening and improvements, which is natural and emphasizes Rektorys' influence on the contemporary developments.

Professor Rektorys belongs to the most outstanding experts in the field of finite difference methods and is famous for his contributions concerning the variational methods. His monograph Variational Methods in Problems of Science and Technology can serve as a persuasive document of this claim.

The most famous Rektorys' publications concerned with applications of mathematics are directed towards mathematical modeling and computation of dams. Rektorys' cooperation on the construction of the well known Czech dam Orlík in Southern Bohemia has become a legend. Professor Eduard Čech, one of the world experts in abstract mathematics such as topology and theory of structures, etc., was known as having extremely large demands on scientific work. The high quality of Rektorys' work could not be appreciated better than by Čech's positive evaluation.

Let us consider Rektorys' works in more detail. He has studied problems that are of high importance and relevance. His methodology is exemplary, the exposition attractive and, moreover, the reader may feel comfortable even in the most difficult parts of the works. His style is reader friendly and relatively easily readable. This is Rektorys' MASTERSHIP.

Rektorys' monographs form an immensely valuable part of national heirloom which can successfully compete on the foreign markets with even the top products. On the eve of our accession to the European Union, Rektorys' successes demonstrate that Czech scientists are able to play a significant role even on the international level. Our honoured man must feel the admiration on any of his steps abroad. Let me mention one of many episodes from Karel's rich life. This one happened at the Lingby University. Professor Rektorys was visiting this university when Professors O. Axelsson and V. A. Barker were completing their famous monograph *Finite Element Solution of Boundary Value Problems. Theory and Computation.* As is typical for Karel, he opened discussion with the authors and they offered him to read the manuscript asking him to comment on it. Perhaps even they were surprised by Rektorys' expertise. As a result of Rektorys' comments they decided to make some rather substantial changes in their monograph and Professor Rektorys thus helped to improve the book. They expressed their gratitude to Karel Rektorys nicely in the authors' Preface.

May be I am right if guessing Karel's feelings on such occasions. He may be as happy as the composer Tchaikovskij was during his visit to Prague in the end of the 19th century when reporting on the visit he wrote to his friends that he felt moments of absolute bliss. We all would be very happy if our Professor Rektorys could experience the same feelings of absolute bliss now again and we all of us together with him.

I am sure that our Czech mathematicians and the whole scientific community will see Professor Rektorys as a representative who would be celebrated everywhere worldwide and that any nation can envy the Czechs for having Karel Rektorys!

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