

## **Professor Hans Bühlmann**

“Mr. President, ladies and gentlemen, dear colleagues,

Of course I accept this medal with great pride and I feel also very happy to have received this sign of a great organization with which I have been tied for a long time of my life. Mr. President, you said Max and myself were not over the hill; maybe we're not but we are certainly actuaries of the past. So I think if you honor Max and me today you look backwards in our history into the twentieth century, which I think was a great century for the actuary.

Let me make some personal remarks on that century. As a mathematician, I should say that it was the century of probability theory. In the beginning of the century, probability theory was almost non-existent. It was just a tool to describe fair games and even in the actuarial profession it was not sure whether the symbols used by actuaries in their calculations had anything to do with probability. I remember some of my teachers, for example **Hans Ammeter** - one of the great contributors to risk theory – saying “The  $q_x$  in life insurance have nothing in common with probabilities; they are just rates”. And indeed you can think of life insurance in a deterministic way and it even works, if you do so.

Nevertheless in this twentieth century the concept of probability has been pushed by the best minds in the mathematical world. We have to give tribute above all to the Russian mathematicians Kolmogorov, Khinchin, Guedenko, but also to the French, the Italian and the Scandinavian schools. Maybe we Swiss and also the Germans were somewhat late jumping on this train. During the period of political turmoil in Europe, the center of gravity of research in probability shifted more and more to the United States. Some of the famous professors had to emigrate for personal reasons. Some others just didn't want to stay anymore in this old crummy Europe and wanted to work in a new country where they had new perspectives. Therefore my generation of Europeans has typically learned about probability at an American university. I am one of those cases who had the privilege of learning in the United States.

In the actuarial profession around the middle of the century there was a group who, in the beginning, almost met in secrecy. It is the group of founders of ASTIN. Names that come to mind are Franckx, Johansen, Ammeter, Cranier, Philipson, etc. They had to have kind of secret meetings, because they were regarded somewhat as revolutionaries. The revolutionary idea was to bring the modern concepts of probability theory into the actuarial profession. The struggle ended in the compromise that these should be applied on the non life side. With this trick, ASTIN got accepted and could stay inside the actuarial profession. Along the same diplomatic wisdom, AFIR could be brought in later. With this further step even more advanced probabilistic concepts (for example Stochastic Analysis) have entered into the actuarial world.

I should like to add a remark on the students. When I started teaching as a professor, it was extremely difficult to convince a student that actuarial science would be an

interesting subject. They looked at it as an antiquated subject which had nothing in common with modern mathematics. It is extremely gratifying to find now that this situation is completely reversed. We get now the best students to study in our field which at most universities has been enlarged to a common intellectual basis for both insurance and finance. This is very promising.

I dare, however, also add a question. It seems to me that while on one side the basic core of knowledge has raised to a very high popularity among students, the prestige of the actuary inside the industry has declined. So the question whether the twenty first century shall be as successful as the twentieth, comes immediately to one's mind. The answer, ladies and gentlemen, dear colleagues, is yours. Max and I we both wish you a lot of luck. Thank you."