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MSC 01A70EACH OF US IS
RESPONSIBLE FOR EVERYTHING

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ABSTRACT. This is a tribute to Alexandr A. Alexandrov on the occasion of the centenary of his birth.

The first time I saw A.D. was during the award ceremony for the winners of the Novosibirsk Mathematics Olympiad. A.D. was giving a keynote talk at this ceremony, and this talk was wonderful, original, and absolutely non-standard. He said:

“When a mathematician tries to prove a theorem, he feels the same feelings as a young man in love. Just like a young man always thinks about the girl he loves, similarly, a mathematician always thinks about his theorem, he dreams about this theorem as a young man dreams about his beloved.”

Not only his talk was unusual, his appearance was very unusual too. He had a sizable beard, and while he was talking, he was stroking his own beard.

He told us how he understood what is a world-wide fame. In the 1930s, when he was a young professor in Leningrad, he could not get into an overcrowded tram, so he was hanging outside, trying not to fall off. A policeman noticed him, ordered him off the tram, and asked for his ID. When A.D. showed his professor ID, the policeman, instead of fining him (the usual punishment at that time), saluted him and said: “Please continue your experiment, comrade professor.” Many years later, when A.D. was visiting Calcutta, India, one of the local professors asked him: “Is it true that the following story happened to you in 1930s?” and repeating the tram story. “This was,” said A.D., “when I realized what people mean by a world-wide fame.”

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After that, I attended many of his talks: his class lectures, his presentations at the seminar on space-time geometry, his lectures on history of science. I even interviewed him for the University newspaper. He invited me into his house. The door was opened by Tanya who A.D. half-jokingly called his “housekeeper” — after a character from Astrid Lindgren’s story “Karlsson-on-the-roof” that was very popular in Russia. What impressed me the most was the luxury of a separate house, the luxury that seemed unbelievable after the overcrowdedness of the communal apartments and dorms where I and most of my friends lived all our lives. There was a fireplace in the room, a bear skin on the floor. During the entire interview, Tanya sat in the corner playing solitaire. I prepared my questions beforehand, but instead, A.D. talked himself. He told me many interesting things—about science, about women in mathematics. In his attitude towards women, A.D. was very old-fashioned: “Sometimes, it is possible for a woman to succeed in mathematics, but God created women for a different purpose. Of course, there are exceptions; one of them is Olga Ladyzhenskaya, she is a beauty, she is full of charm but at the same time she has a very strong will.” A.D. described how he became interested in science. For him, this interest started when he was six years old. He was excited about Native Americans, wanted to become a geographer, but then somehow started doing physics and mathematics instead—and then realized it was too late to change to a different science. It may sound strange but already at the age of six, he decided that he would be a scientist, and he told everyone “When I will be a professor ...”

During the interview, he was in a very good mood, he was all charm, he even served us a very good dinner. But when later I started going to his seminar, I noticed that he could often be very abrupt. After one such seminar, I wrote down in my diary what he said: “Everybody is a scoundrel, everybody is rotten. There may have been only one good person—Jesus Christ. Even Einstein was a scoundrel, he should have left the United States after they A-bombed Japan against his will.”

Overall, his attitude towards religion was unusual. I remember that in December 1974, he gave a talk at the joint meeting of Departments of Mathematics and Philosophy where his book *Religious Faith and Scientific Search for Truth* was being discussed.

A.D. said that during this discussion, he felt “like a clown in a circus who has to entertain the audience every time when others are not ready.”

“A book is published under Alexandrov’s name but it is only half mine—the censors deleted a half of what I wrote and replaced this half with a text that I did not write.”

“Why is this topic important? Because, in the eyes of most people, science has become a Big Bad Beast, a Tyrannosaurus Rex who can do a lot of bad things to them. It is a wild, mysterious, unpredictable dinosaur that overcomes people with information.”

“In his 1910s article in the classical Russian Brockhaus and Efron Encyclopedia, Vladimir Soloviev, a prominent Russian philosopher, defines faith as something that cannot be acquired or changed by neither observing facts nor listening arguments.”

“The often repeated statement that faith is necessary for people to behave morally is a shame. Morality should itself be the basis of a human behavior; if a good behavior is not based on the inherent moral feelings, only on faith, then under different circumstances, the same faith can—and often does—justify amoral behavior.”

“In ancient India, people noticed that everything falls, but the Earth does not fall. Their sages explained that the Earth rests on the backs of four huge elephants. The elephants do not fall because they are standing on the shell of an even larger turtle, the turtle is floating in an ocean, etc. We can continue forever and never come to a final answer. And later on, scientists discovered that the Earth does not rest on anything, it is there all by itself. The same is with morality.”

“In human society, we often have to work together. Two religious believers who hold different sets of beliefs can never convince each other, because their faiths do not come from facts or logic and cannot be changed by facts or logic. So, the only way these two believers can work together is when one forces the other by physical force. Thus, faith leads to violence.”

“At first, faith was not inconsistent with the search for scientific truth. A pure faith, without prejudice, with readiness to believe in anything—such a faith is, in some sense, equivalent to the scientific search for truth.”

“Science is different from religious faith. With scientists, you can talk objectively and calmly about everything. Why? Because when a scientist encounters facts that contradict his previous beliefs, he does not stubbornly stick to his beliefs, he can change them.”

He ended his lecture with a citation from his book:

“According to modern science, all the events in the world are—directly or indirectly—connected to each other. As a result, each individual is—to a smaller or larger extent—connected to everything that is happening in the world. So, the actions of every individual can influence (and does influence)—to a smaller or larger extent—all the events in the world. And if each of us can influence each of these events, this means that each of us is responsible for each of these events.”

To me, this became the definition of a place of a human being in this world: each of us is individually responsible for everything that is happening in the world. Each of us is responsible for everything.

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