

Vignettes of my life

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Foreword

This book is my collection of short stories, assembled together based on their narration style rather than a common theme. These are improvised short scenes from the past that spring to mind, as well as sporadic reflections on events and our life, inspired, naturally, by current affairs. So the style of these essays is more typical of vignettes rather than ordinary short stories.

They relate to the distant past, our travels, my student years and even childhood, our emigration from Russia, and the psychology of different peoples and periods of our life. It is a complete “borscht” of events and reflections. And for dessert, at the end, I will tell you how a terrible, near-fatal accident can have most positive consequences.

Acknowledgements.

I am infinitely grateful

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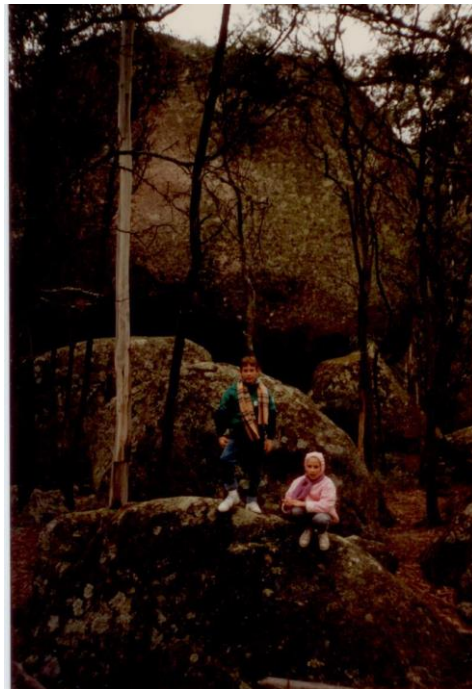
To Elena Vladimirskaia for her advices, support and permission to publish her short story “One Post-Stalinist Episode” about her father, a great personality and musician Boris Davidovich Vladimirskii,

and all my relative and friends who read these stories and expressed their opinion and support.

Geographic Vignettes

New Zealand

In 2002 we visited New Zealand. This country is incredibly beautiful. Despite its proximity to Australia, the two countries are nothing alike. They are actually moving toward each other rather than drifting apart. Australia is a different planet. It's unlike any other place. Just as an example, below are huge rocks — monoliths of Australia. They are found in many places.



On the other hand, New Zealand is quite consistent with our notion of nature, but at the same time it is very beautiful. This is our kind of beauty, the kind we understand, unlike Australia, where beauty is not “our kind” — it is from another world. We are amazed by Australia’s beauty, but I wouldn’t say that we relish it.

There is a lot I could tell you about New Zealand, but I only choose one episode for this story. We traveled by car to see the geysers. I believe this was about 400 kilometers from Wellington.

The first thing that amazes is the incredible cleanliness of all the roads. There are few cars on the roads, and the roads are clean as a whistle. At the slightest damage to the road, it is immediately repaired. We reached the place where we could visit and see a good geyser, and in the morning we went to see it. I think it was the Whakarewarewa Thermal Reserve in Rotorua.

After spending the night at the hotel, we went to this thermal reservoir. It turned out that this was a settlement of Maori — the aboriginal people of New Zealand. We paid the admission fee and went on a guided tour. This was an incredibly clean settlement — not a speck of dust on the asphalt streets! Each house had a small rectangular pit next to it, parallel to the street, covered with a metal grate. Those were actually ovens! Under the top grate there is another one below. They place food on it to cook. They have it written on there — for example, chicken is ready in 30 minutes. (I don't remember the exact times, but they were written on there.) As you have hopefully realized already, the heat coming from underground is sufficient for cooking. Further on, not on the street, we saw bubbling, boiling earth. There were other thermal miracles as well. But one of them made Luda and me shiver and had us break into cold sweat. We came to a smallish square of sorts, which should rather be called a small field. The guide stood in the center, and we stood around him. The guide said that there was heat everywhere underneath us. He jumped several times, and the earth started shaking and going in waves under him and us! We jumped away from this square in fright. There was emptiness under it. However, we could not see the geyser that had been visible from a distance. We attempted to approach it on our own. However, the road to the geyser was blocked with a fence and a locked gate. We could see the geyser but could not come near it. It took us some time to figure out that we needed to leave the site, walk about one kilometer outside the settlement, and go in through the other entrance. This was designed to charge us twice for admission. I

was very unhappy because they could have just collected the extra money near this gate. But apparently, they thought that we would not realize that the settlement was one and the same.

So, we exited and drove up to the second entrance by car. Coming close to the geyser was worth it. This was the first geyser I had ever seen. We subsequently visited Iceland and saw many geysers there. It turned out that we were very lucky that it had rained the day before. This geyser had a very shallow base. The rain filled the reservoir underground, and the geyser erupted every five to ten minutes. The jets it emitted were large, high, and powerful.



We stood near the geyser for a long time.



We also saw, once again, bubbling earth and other wonders of thermal activity around us.

Iceland

All Iceland is an island of solidified lava. Everything not yet handled by humans is lava. This is why everywhere you look, you see black lava of different types. However, there are places where it has already grown with green grass. Here are examples of Icelandic soil:



Iceland is crossed by the border of two diverging continents, American and Eurasian. The island of Iceland was created by the divergence of these two continents. They are diverging at a rate of one centimeter per year. Apparently, the volcanic island emerged first, was later torn into two parts, and the continents began to diverge.

This process started 20 million years ago, and the continents have diverged by 200 kilometers. We stood on the border of this rift near the American continent. Below are two photos, one taken next to the wall and the other from its top.



The wall is about 20 meters high, we are standing on a plateau next to the wall, and the plateau continues from the wall as far as the eye can see (naturally, 200 kilometers). It is believed that this plateau will sink, and the ocean will come in. And one big island will turn into two islands.

Incidentally, in Reykjavik, the capital of Iceland, hot water is supplied centrally through pipes from a distance of 80 kilometers. This is the distance to the station producing boiling water from a well. The water has a temperature close to 100 degrees and reaches Reykjavik at a temperature of 80 degrees. On our trip around Iceland, we passed a very large chunk of absolute desert. In the center of this territory there was a thermal research station. They explained to us those small heaps of piled up stones that we saw everywhere.



It turns out that they pierce the earth with thin wells to study the development of temperature and test for the presence of, say, water. These wells are many kilometers deep. Once the data is obtained, they cover the opening with a pile of stones like this to prevent steam, and possibly lots of other matter, from escaping. So, we were shown one of those piles (perhaps the one in the photo), and there was something unusual happening. They were unable to drill deeper than two kilometers. The auger would stop working. They put more augers nearby and the same thing happened. Only after some time did the researchers figure out the reason for this. Here, magma is found at this depth! If you think about it, in the ocean, magma starts somewhere between six and ten kilometers under the seabed. On land, it is found on average below the depth of 20 kilometers. And here, it is two kilometers! I even asked: “But couldn’t it erupt?” The answer was: “Yes, and we are ready for that”. They explained to us what “ready” meant, and we saw it while driving along the road. On both sides of the road, at a short distance of several meters, there was a low-rise embankment. I think it was no more than half a meter high. It can be seen at some distance from the bus in the photo. Do you get the idea? This is how roads are protected from river flooding. But water would wash away the earth embankment, whereas lava would reach it, and while it fills the huge space before the embankment, people from the station would have time to leave. This is the kind of protection they have.

Of course, the areas of thermal activity here are large and varied. Here are some examples.



And here is an individual geyser and bubbling earth.



I just want to describe one other unusual phenomenon in Iceland. In one rather flat place, in the area of Lake Mývatn, there are circular depressions scattered around. I estimate their diameter at about 30–50 meters. They look as if, say, a ball was pressed against plasticine clay, just slightly, not too deep. They rarely have water and are greenish on the inside. They have an interesting origin. A volcano eruption took place (a very long time ago) a few kilometers from this place. We barely even saw any lava from this eruption. But it erupted violently, and drops of magma flew in all directions. They created these circles. The

drops were large and very hot, as they melted the earth. I lost those photos, but perhaps the picture below is one of them:



The depressions I remember were absolutely perfect circles. There is only one other place in the world that has similar circles. I don't remember where that is.

Here is a note of acknowledgement. I was unable to find the photos from our visit to this entire area. However, as a stroke of fortune, while in Iceland, me ran into a very good friend of ours, a professor of mathematics from the Technion, Allan Pikus. I got in touch with him now, and he sent me his photos, which I posted above, and gave me permission to use them in my text. Thank you, Allan!! am adding a few more photos of the Lake Mývatn area found on the Internet (my thanks to the Internet).



What you see is not a crater, but a depression from a “drop” of magma. And here are two more, and below them the crater of the volcano that created this miracle.



And finally, this magnificent lake:



The Roads of Australia

I described our 1988 visit to Central Australia in the story about dingo in the book entitled *Short Stories*. We finished this journey earlier than the rest of the group, and in one completely deserted place we were intercepted by another bus, which took us back to Alice Springs. This happened on a local road surrounded by desert as far as the eye could see. To our surprise, the desert was dissected with straight lines. We asked the driver what they were and where they came from, and he invited us to take a closer look. We got out of the car and realized that it was a strip of sprouting small wild melons stretching into infinity, as far as the eye could see. “These are the paths of camels. They eat melons, and then walk and ‘plant’ them on the go. This is how people know where to go to the watering place”, the driver explained to us.

By the way, our daughter Anat wanted to have her picture taken and walked off the road. The driver just shouted, “get back!” I managed to take a picture but asked what the matter was. The driver explained that this place had burrows of all kinds of terribly poisonous creatures, and they were all hungry. Anat heard this, but still wanted to have her picture taken. We never walked off the road again when the car stopped.

I recall another story, also in Australia but in a completely different place, where Anat also showed some spirit. It was in the tropics across from the Great Barrier Reef. We drove into the forest, about a hundred kilometers from the ocean. The road through the forest was good and asphalted, but narrow. Between the road and the forest, there was a strip of grass about two or three meters wide. We were not driving fast at the time, and suddenly to the right of the road we saw a snake in the grass. It was curled up in a cone that rose high above the grass, and its head was sticking out above the top of this cone. Perhaps it was something like an anaconda, although I don’t think anacondas

inhabit the forests of Australia. It was about five to seven meters long. We drove about 10 meters past the snake and stopped our jeep to the left of the road. Let me remind you that Australia has left-hand traffic. We had two children with us, still young at the time — Emanuel, aged about 11, and Anat, aged about nine. Luda and Emanuel stayed inside the jeep, but Anat immediately jumped out and wanted to have her picture taken with the snake in the background. I took two pictures. Anat was standing in the middle of this narrow road, with the snake on one side and me on the other. To be honest, it was dangerous. But Anat wanted to get even closer to the snake. We quickly returned to the jeep, but we sat there waiting to see what the snake would do. Its head was following our movements the entire time. After waiting for a short while, it turned with dignity and self-respect and crawled into the forest. After all, in this forest, the snake was the master, not us. There is another amazing aspect of our encounter with the snake. I certainly thought that the two photos I took would be the pinnacle of our Australia photo collection. But it turned out that the snake was not visible in these photos. On one of the two photos, the head of the snake is barely visible (the snake is to the right of the post). I tried enlarging the photo, but you still cannot see anything.



The snake itself blends in completely with the background of the grass. I shot slightly from above, so the whole snake appeared

against the grass. But we could see the snake quite clearly, it was not the color of grass, and it was towering over a completely empty space. But it turned out that my camera (a good one for that time) did not distinguish the snake from the grass at all. So the animals that see like my camera don't see the snake at all. In many sources you can read that the snake hypnotizes its victims, so they do not run away from it. Or maybe they simply do not see the snake at all?

There was another remarkable adventure on this trip to the forest. We stopped the car in a glade where huge ostrich-like birds were strolling around, and went for a walk in the rainforest. I have to say that it was about 12 noon, but the photos we took in the rainforest look as if it was at night.



There isn't much light coming through inside this forest. The trees are all very tall, with no branches or foliage below the top. The crown of the tree is very high, as it's seeking the sun. I stayed behind with the children to examine something, while Luda walked off into the forest ahead. Suddenly we heard Luda's wild scream. We rushed to her and got there in time to see the scene of Luda standing with her hands clasped to her chest and a huge monitor lizard running vertically up a tree trunk. Naturally, the lizard also got scared and rushed up the tree. It effortlessly ran up to the very top of the tree, I think about 30 meters. At the

same time, perhaps out of fear, it was defecating down the tree. The lizard was about two meters long, and it ran up the tree by moving its legs but keeping the body at some distance from the trunk. Luda told us that the lizard was crossing the path in front of her, and when she screamed in fright, it rushed up the tree. I must say that I, too, would have been scared of such a monster. We later learned that it was Australia's largest monitor lizard.

At the entrance from the coastal road onto the road to this tropical forest, there was a huge poster that read, "Please survive this trip!" Luda did not yet understand English at the time, and I did not translate this poster (request) for her.

My strong desire to visit this place was driven by the fact that this glade where we stopped had a small river inhabited by platypuses (mammals that lay eggs). These are completely unusual, unique animals. But we didn't get to see them. They only swim at night and in the morning, and then sit in their burrows.

Machu Picchu

We visited this amazing place in January 2010. It was part of our travel itinerary around South America. I am focusing on this vignette here because it carries not only great historical significance but also a certain psychological aspect — the Incas' understanding of the events taking place.



Machu Picchu is translated as “old mountain”. It is an ancient Inca fortress located 80 kilometers from the city of Cusco in Peru at an altitude of about 2.4 kilometers. On the right we see the structures of the city, and on the left is a view from the city onto the mountain and the river. Here are two more views of the city.



This city was built around 1450, but it was abandoned about 100 years later during the Spanish conquest of the Americas. It functioned as the royal residence of the Incas and had approximately 750 people residing permanently. Archaeologists believe that this fortress city was built by the Inca Emperor [Pachacuti](#) (1438–1472). It has highly advanced astronomical structures.



For example, we see two circles in the photo on the right. They filled with water and reflected very clearly the stars in the sky. This way, priests did not have to stand with their heads lifted up but could instead sit quietly near these mirrors and watch the sky. And here is another astronomical structure and one farewell photo taken from below.



Today this city is referred to as the “lost city”. The legend we were told in Machu Picchu, which is not reproduced in Wikipedia, is as follows. The Incas considered this city a sacred land and did not want it to fall into the hands of the Spanish Conquistadors. However, the priests believed that the location of the city inhabited by people could not be kept secret. Therefore, everyone had to leave and move to another place, and no one could stay to live in this city. And they all left in an orderly fashion. It turned out that they were right: the Spaniards had heard about this city but never found it. Only in the beginning of the 20th century, the American explorer and traveler Hiram Bingham rediscovered it in 1911. Here is an interesting detail that you won’t find in Wikipedia either. Inside the city, they found a note from a local resident who disappeared some time back. He lost his way, found this city, left a note about it, and left, trying to return. As we know, he never returned. The city was well-hidden in the mountains.

The empty city had llamas walking around and exotic flowers blooming.



Everything in this city has been perfectly preserved. Only the wooden roofs have rotted and collapsed. They have been restored in several houses. It is an incredible gift from the past.

We came to this city by train from Cusco and returned at the end of the day, also by train. As you can see in the photo, the river running along the railroad and passing by the last station is bubbling with overabundance of water.



We took in the views of this stream but did not attach much significance to it. Basically, we went back and flew to our next destination. We were flying to Santiago to start a cruise around South America from there. I mention this here because we were incredibly lucky. Two days after our visit to Machu Picchu, the next round of rain swept through, and this river overflowed its banks and flooded the railroad bed, washing out the track. People were evacuated from there by helicopters. And many tourists ended up staying there for an additional two weeks or longer. If the rain had started earlier, we would have missed our cruise.

I continue my geographic vignettes, but these are about my trips in the Soviet Union.

Caucasus and the Source of the Kuban River

Back in my student years, I developed a passion for sports tourism. This included hiking in the mountains and plains, skiing in the winter, and kayaking in the summer. However, only hikes in a completely uninhabited area were credited as sports tourism. “Uninhabited area” meant two days of hiking to the nearest place where people live. In the next story, I will tell you about my hike through the Carpathian Mountains. But in this short vignette, I will describe one episode from our family trip in 1971. Our group comprised three families. Besides us, there were also the Rodins and the Ryabinkins, who each had one daughter, but Mrs. Ryabinkin was not accompanied by her husband, who, incidentally, was a great mountaineer. We wanted to show the Caucasus to the children and enjoy a vacation ourselves. Also, my family was preparing to submit documents for relocation to Israel, and we wanted to show the Caucasus to Lara. We traveled by train to Pyatigorsk, the city of

Lermontov's death, from there we hiked across the watershed of the Greater Caucasus, and we ended our journey in the city of Sukhumi. Three times we traversed mountain passes over three kilometers high. We also hiked in the snow.

Everything was wonderful and interesting, but I want to tell you only about our visit to the source of the Kuban River (by "our" I mean only Lyuda's and mine). We were camping for the night somewhere high in the mountains — I think, about two kilometers above sea level. We were a few kilometers from the source of the Kuban River, the largest river in the Caucasus. It was not on our way, so Lyuda and I went there when everyone was asleep, long before sunrise, perhaps around 4 a.m. We reached the place without any difficulty. It was already daylight, and the sun's rays were about to touch the glacier from which a tiny rivulet flowed.



It flowed out of a cave inside the glacier. Everything seemed fine, but we began to hear some strange sounds. We were looking around and could not figure out what they were, but somehow we were not concerned. One of us suddenly realized that those were frost-glued stones falling down from the glacier when the sun's rays touched them. The glacier was thawing from the night's sleep. The process was obviously accelerating, and we

realized that we might get trapped. We ran back. The rivulet was growing and breaking into many small streams. It suddenly dawned on us that we were on the opposite side of it from our camp. We needed to urgently cross all these numerous streams, which had by then spread very widely, to the other side. Soon they would all merge into one shallow but wide river. The water was ice cold, and we wouldn't have been able to walk across. One step, and the legs would cramp. We managed to jump over the numerous streams and ended up on the other side. The path to the camp was now open. Meanwhile, the rivulet had already become a river. Our camp was still asleep when we returned, trembling slightly with fear of what could have happened. Good thing that we went alone.

The Carpathians

I led (that is, I was in charge of) a group through the Carpathians in the summer of 1958. There were six of us, all students at the Kharkov State University. Three interesting incidents occurred during the several weeks of our hiking trip. Two of them involved tremendous luck, and the third had very interesting psychological underpinnings. These are the incidents I am going to tell you about.

Since the hiking trip was funded by the sports tourism program of the university, we were required to deliver proof of our visit to certain control sites. We were just on the approach to one of those sites. It was the highest mountain in the Soviet Carpathians. We set up our camp at the foot of this mountain and decided to climb it light.



The mountain, Hoverla, was not too high, not much more than two kilometers above sea level (2,061 meters). And we were already close to the two-kilometer level. So we had another couple of hundred meters remaining to climb. The foot of the mountain was flat and very convenient for a camp. We were already halfway up the climb when I saw that the clouds were closing in on us too quickly from below. Cloud movement toward the evening is common in the mountains. It dawned on me that we won't have time to climb and descend before the clouds cover everything, and in the fog, we may be unable to find our camp. To that end, I instructed four of our group to return to the camp and start a campfire, while I and another guy would go up.

The guy I picked knew how to draw. I have forgotten the names and will call him Slava. The ability to draw was potentially important, and so it proved. We ascended to the very top quickly and easily. The view from the top was spectacular, but the clouds were closing in quickly. We needed to find the box with a note from the previous group that was here and place ours inside. This note would have been proof of our presence here (and could also be sent by us upon our return to the indicated address). This would have been proof that the previous group passed through this site. And our note would have been sent to us by the next group. We found a small heap of stones piled into a cone and an open (tin) box inside. However, it was empty. We placed our note inside, but now Slava had to draw a sketch of this site to prove our presence here.

The time it took him to draw delayed our return, and the clouds engulfed us. The fog was very dense. But there was no point in waiting for it to dissipate — it could have stayed there all night. We remembered the direction we had come from and went straight back. After a while, we heard some voices. They were impossible to make out, but we were sure this was our camp. However, it was very difficult to determine the direction the voices were coming from. In a dense fog, voices move with the turn of the fog. They don't travel in a straight line. To us they seemed to be coming from the right, from the side. But the correct direction, as we perceived it, was different. We decided to walk a little further in the direction in which we were going, and then turn right toward the voices. And indeed, just as we wanted to make the turn, we popped out in front of the campfire. We were stunned by the surprise — whose campfire was this? And then we saw our guys! They, too, were amazed because they were responding to our calls and believed that we were somewhere far afield. Just like that, we got lucky. The direction of sounds in the fog cannot be trusted at all.

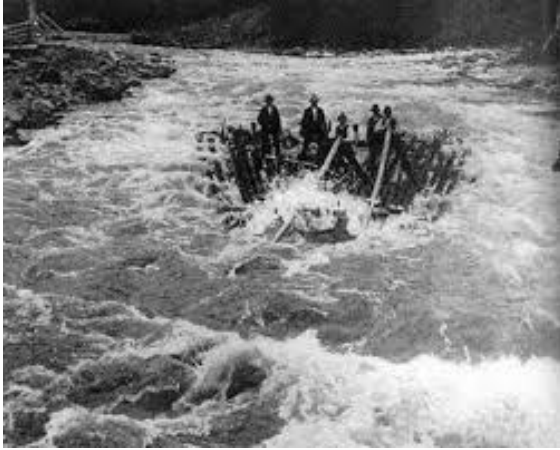
The second incident was more complex and involved greater luck. At some stage of our hiking trip, we encountered another group of backpackers, also from Kharkov, but they were from the Polytechnic Institute. This group was older than us, perhaps third- or fourth-year students, and apparently more experienced, although this did not play any role in the events that transpired. For a long stretch, our routes coincided, and we were happy to combine our groups for this period.

After hiking for a couple of days through completely uninhabited terrain, we came upon a river. Here on the riverbank, several men were building timber rafts. It turned out that this river was used for timber floating. Somewhere upstream there was a dam behind which a lake of water would accumulate, and the dam was opened to release the water twice a week. Of course, not all

of it at once, but in waves with an interval of 30–45 minutes. The trees joined together into rafts were moved by the men to the riverbank, to be picked up by the wave and carried to another lake 10-12 kilometers downstream. In fact, this was not one raft but three, tied to one another. Such rafts were assembled at different spots along this river.

Our route went there, to this second lake. And the guys assembling the raft offered us to throw all our backpacks onto the raft and get on it ourselves, but only the men. It was believed that women could bring bad luck. Women were not even allowed to cross the bridges over this river during the timber rafting. But there was a truck nearby, and the men and the driver promised to bring all our ladies by truck as soon as the rafting was over and they were allowed to drive across the bridges. They would have arrived at the lake downstream around the same time as us, only a little later. The offer was very tempting, and we all agreed. Do not think anything bad about these people. They all did their job exactly as promised.

However, when the water came up and the rafts began to move, we threw all our backpacks onto the first raft, but the guy dropped the last backpack and it fell into the water. There was nothing we could do — the rafts sailed, and we were on them. The backpack was also floating behind us, and then disappeared from sight. The timber raftsmen reassured us: “you will find it”, they said. Timber rafting was indeed an extremely dangerous activity. The floating raft had oars in the front, to turn it to the right or left, depending on the turns of the river. These two photos are from the Internet, and the one below is us. I am on the left.



If the raft is not steered with oars, it will hit the bank, the logs will disperse, and all the people will die. At one of the turns, the logs parted slightly, and my leg slipped between them. Because of the bone, I could not pull it back, and there was a turn in the other direction approaching. The logs would come together and crush my leg. Our whole group rushed to these two logs to move them apart at least a little. And I pulled out my leg at the last second. The raft hit the bank sideways, and the logs started pushing onto one another. Perhaps I did not explain that in order to save time and effort, the raft had its logs only tied in front. The logs were not connected tightly in the back. When we approached bridges, we had to squat down and tilt our heads. There was a bar indicating how low one had to squat to avoid

having their head smashed. In short, it was joy and happiness for young idiots.

At last, we arrived at the large lake where all the rafts were collected. There was a myriad of them — the whole lake was covered with rafts. We walked on the rafts to get over to the shore. The truck with the ladies arrived. The truck was headed in the direction we were traveling for a few more kilometers, perhaps five or seven. So we loaded all the backpacks onto this truck, and everyone but three guys, including me, traveled on. Perhaps I forgot to mention that the lost backpack was not from my group, but it was a very important backpack for the other group. It had their money and documents inside. The three of us walked along this river and practically through the river. The rafting had ended for the day, so it was not dangerous. We walked the entire 10 or 12 kilometers back, checking with sticks all the places where we thought the backpack might have sunk. We walked back through the river as well, checking everything again. We did not find anything, and there was talk between us that local people might have intercepted it from a bridge. We were even sure of this.

We returned to the big lake with the rafts and asked a local man where our backpack could have floated if it reached the lake. And the man showed us a sandbank at the entrance to the lake where various things often washed up. We simply sat down on the riverbank, mainly to have a rest rather than to wait for anything. The rafts were gradually disappearing, the dam was open, and they were floating into the next large river. The lake was starting to shallow. A stone appeared out of the water in the place where we were told to look. “We should check it out”, someone said in a hopeless tone, and we all got up to go. But the owner of this backpack already realized that it was his backpack and ran through the water. We only slightly dried the

documents and the money — things that could not wait — and rushed back to our group.

It gets dark very quickly in the mountains. It was already completely dark when we arrived at the place where they were supposed to wait for us. But only one of our guys came out of the darkness and said that the rest continued the ride for a few more kilometers. I forget, but perhaps it was five kilometers. I cannot even calculate how much we had walked that day. Up to that point, it was the enthusiasm of the find that kept us going. I remember how we all slumped a bit when it turned out that we had to walk again. The guy took this wet backpack, and we just staggered on rather than walking briskly.

This is almost the end of this amazing story of incredible luck, but I would like to add a little sequel. We spent a full day relaxing at this location. It turned out to be a backpacker site, and there were many groups there, even though it was a rather formidable forest. But our guys made a mark. One of them stumbled upon a tree under which they dug out gun cartridges, a huge stash of them. These were the lands of partisans [World War II guerilla fighters], as well as various anti-Soviet terrorist groups immediately after the war. So this may have been a hidden stockpile. However, the wires meant that it may have been rigged with explosives. I barely managed to get my people away from this tree. Later, at the campfire in the evening, they blew up these cartridges to produce fireworks. I will add here that when we hiked through the completely dense forest, in moments of rest, they arranged competitions — who would sit longer on the remains of a fallen tree trunk. These remains had various rotten stuff sticking out, and they would sit there. The problem was that those were favorite nesting places for snakes, which these forests were full of (while I was responsible for the lives of the people in my group). I should note that carelessness of this magnitude always arises when two different groups meet. Each

group wants to show that they are the tough guys. When on its own, the group always behaves responsibly.

It remains for me to tell you about the third incident of this hiking trip. This one is not related to wilderness backpacking per se.

The hiking trip was over, and we needed to return home. I believe we finished the trip in the city of Uzhgorod, the regional center of a large district. Under the agreement with the university, they were supposed to transfer money to Uzhgorod for the return train tickets. I don't remember the reason why they did not advance the funds upfront. Of the six members of our group, only I and one girl had the money for the return trip. The other four simply didn't have it. None of them came from wealthy families. We went to the central post office, but there were no transfers in our name. Someone at the university had forgotten! This was a real tragedy — we could not return, and we had to figure out a way to find money urgently. And I came up with a plan.

As I recall, we needed to have 200 rubles per person, and five of us were to receive the funds. One girl was not from the university. The leader of my first big hiking trip in the Caucasus asked me to bring his sister along. He was testing me on that trip, and he trusted me. For the sister, this was the first hiking trip, whereas he only went on very challenging ones. So we needed 1,000 rubles. It was a lot of money back then. Our only chance was to get it from the most senior official in the area. That is, we needed to get in touch with the first secretary of the district Communist Party. I had to go see him. But my Jewish appearance and last name would not have won me any favors with him. I needed to bring a girl with me who looked completely Ukrainian and had a Ukrainian name. We had just such a round-faced, pretty, and completely typical Ukrainian girl named Oksana. And the two of us went to meet with the first secretary of the Uzhgorod District.

He received us, as I was sure he would — after all, we were students from Kharkov, the first capital of Ukraine. This was an utterly novel situation for him, and curiosity always prevails in a big boss. We explained the situation, and, of course, promised to send the money back upon returning to Kharkov, once we figure out what happened. He had a huge office and was sitting opposite the door at the other end of the room. He instructed us to sit on the chairs by the door and wait while he was holding his meetings. He told us that the party had no money because all of it was held by the Soviet authorities. We needed to get the money from them, that is, from the District Council (I believe that was the name of the district authority). He was clearly enjoying demonstrating how to manage Soviet government affairs to students from the capital city.

I no longer remember all the cases that were dealt with in our presence. I remember one that was related to us. He summoned the head of the district administration (or perhaps he came uninvited?). He suddenly remembered that the district boss had asked him to do something for someone. Perhaps it was about an apartment, always a very difficult and thorny issue. “You know”, he said, “we may be able to resolve this issue. By the way, you see these guys sitting here — they are students from Kharkov who got stranded. We need to help them. Your assistance fund hasn’t yet been exhausted, has it?” How could it have been exhausted if the issue that the district head had attempted to resolve over several visits could be finally resolved. “We’ll get it done, everything will be all right”, the district head assured him. They were discussing not a loan, but a gift. We had to return the money to him personally, that is, to the district head of the Communist Party. He tinkered with us for a little while longer for his own enjoyment. He wrote down the exact address where to send the money. And we joyfully went on our way. Honestly, I was infinitely grateful to him. I personally made sure that each of the five sent back their 200 rubles.

Samarkand: A Mural of the 6th–7th Century

This brief vignette is related to art, and not so much to geography. Somewhere between 1965 and 1967, I was at a conference in Uzbekistan and visited Samarkand. Not long before that, only a year or two prior, an ancient mosaic had been discovered there. As is often the case, at some construction site, a tractor collapsed through the ground. Upon inspection of the cave into which it plunged, they discovered rooms and halls of constructions from before the 7th century, when the Arab invasion razed to the ground all the cities (and cultures) of the area. In reality, there was only one mosaic wall there at the time. I was there and I saw it. Thinking back, I believe it may have been a mural rather than a mosaic.

Several decades later, I saw the mosaics of Ravenna from the same period, 6th–7th century, and immediately remembered Samarkand. The similarity of the artwork was incredible. My memory just flashed back some 15–20 years, to this mural from Samarkand. Perhaps this is why I am not sure if it was a mosaic or a mural there. It had birds, animals, and ornaments, all crafted in great detail. And they filled the space like in Ravenna.

I don't know what archeology claims today. But at the time, in the mid-sixties, it was believed that there had been no culture in that area until the arrival of the Arab conquest in the 7th century. Even though after the total destruction, around the 7th century, of everything that was there, the local culture only began to return around the 14th century. And at the time, it was completely under the influence of the Arabic and Muslim culture.

Psychological Vignettes

The psychology of each nation is an amalgamation, or rather a suspension mixture, of a large number of very different psychologies. It includes the psychologies of a student, a doctor, a lawyer, a member of the military, etc. This is very important to remember.

Here in Israel, we love to offer some distinguished general a prominent post outside the army. According to our rules, they retire very early. They have no income issues because their pensions are rather substantial, but someone who is practically still a young man wants something to do. And this is where the problem begins. Let's say such a general becomes a school principal and begins to treat teachers and students like junior officers and soldiers. The good general then turns into a disaster for the school.

However, for some positions, the psychology of a general may be suitable. For example, I think that being the mayor of a city would feel familiar. Here in Israel, the most prominent generals, former Chiefs of the General Staff, want to become prime ministers right away. Well, perhaps they might start with some very important minister post but with a view of becoming the prime minister. They know practically nothing about the psychology of the majority of the country's population. They do not know what it's like to be a businessman, a lawyer, or a scientist, but they are already "prepared" to reign over everything. This is a great tragedy for our country. During the several years of interlude between the army and politics, they may have seen another example of the psychology of a certain group of the population. But this is completely insufficient to understand the processes of interaction and mutual understanding of completely disparate groups of our society, which is very rich in diversity of opinion.

By the way, after emigrating to Israel, I suddenly realized that a language is also a suspension mixture of many sublanguages. It includes the language of children, schoolkids, and university students, as well as the languages of medics, lawyers, writers, etc. We do not notice this in our native language. But then we arrived in Israel, and many years later we realized, when our grandchildren were born, that we do not understand the language of children at all. I communicate fluently with my colleagues in Hebrew when we use the language of mathematics. I think and solve problems easily in Hebrew. I also take in politics and news in Hebrew quite easily and fluently, but I don't understand conversations in Hebrew about biology, literature, or art. After 47 years in the country, I have only absorbed a small part of this suspension mixture of sublanguages.

Going forward, in my psychological vignettes of different situations with different peoples, it will always be just a light brush with some specific part of this suspension mixture.

The Psychology of a Doctor

The above asterisks indicates that I have written and removed stories on this topic, and I will explain why. Each of them turned out to be too delicate and controversial. On the one hand, the doctor helps with the treatment, and I was always forever grateful to him or her. But imagine now that the doctor really wants to help you, but for reasons unrelated to illness. And you, as luck would have it, are healthy and do not need the doctor's help. You are happy, but the doctor is upset. He so wanted to be useful! How does one present a description of the doctor in this case — in a good or bad light? That's right, think for yourself.

However, I will note at once that I was lucky to meet doctors who helped completely free of charge, with no prospect of potential compensation. So I believe that this is the typical case.

The situation I described is not the only problem with doctors. The competition between them can have a very different flavor than the competition between, say, us mathematicians. Of course, my competitor might envy the result I obtained, but that will not change anything. If they believe that they obtained it at the same time, we can discuss it and, as a last resort, write a joint paper. Sometimes this can damage the relationship, which is regrettable. But, as we will see, in comparison with doctors, this is a trifle.

Now imagine a doctor who knows how to treat something much better than others. And the life (or quality of life) of certain people depends on this doctor's skill. For each such doctor, we will find hundreds, if not more, of patients who need his help. But the doctor only has 24 hours in a day like the rest of us. So the doctor is physically unable to treat everyone who wants to be treated by him. He has to put up some kind of barrier. And this can only be money. Other possibilities are only worse. Only money would be an objective criterion. Unfortunately, this is the benchmark. Now competition has a price, depending on what people are willing to pay you. Now "you" want the doctor who knows how to do something better than you, or even just as well as "you", to be as far away from you as possible. You don't want to have a competitor for the same patients.

As a mathematician, I want to have next to me another mathematician who understands the same mathematics the same way I do or even better, whereas a doctor does not want to have another doctor like him nearby. I am by no means claiming that this situation is typical. In all likelihood, it is the opposite — this situation is exceptional. But at the very least it is possible, and I have come across this.

I suddenly wondered, if we mathematicians could sell our theorems for very good money, how would we behave?

One School Memory

In my first three years of primary school, I was one of the weakest students. I had no interest in learning, and there was a question of whether I would be allowed to advance to the fourth grade or would have to repeat the third. My mother paid for private tutors to somehow get me through into the fourth grade. Personally, I did not care about this at all, but I felt sorry for my mother, because for her it was very important.

And then comes the last day of school, and the teacher hands out our final grade reports. I got mine, and it had all 3s in it (the lowest passing grade). I had advanced to the fourth grade. I was absolutely ecstatic, so much so that I ran home all the way with my hand holding the grade report stretched out, for everyone on my way to see. I remember this well.

Perhaps it was important for me too, and this was a tipping point for me, because in the fourth grade, I was already one of the best. Then again, maybe in the first three years we were dealing with such nonsense that the studies did not arouse any interest. And in the fourth grade, I already remember solving math problems better than our teacher. Those were already non-trivial problems. For example, how long it takes to fill the tank with water if it is flowing in through two inlet valves and flowing out through two holes, and all the flow rates are different.

So I am a witness to how important motivation is in children's learning and how important the psychological aspect is. In my early years, my main driver was the desire to learn something new — curiosity, rather than formal schooling. And I read all sorts of tiny books about nature, space, and every science. I had a huge collection of them, about everything.

China

(Psychological Vignettes)

I have already written about my 1993 visit to China. I will add two incidents here that carry psychological undertones. Perhaps I have mentioned that we had somewhat of a VIP status on that trip. The university professor in Wuhan who invited us turned out to be the wife of the minister of education of the entire Hubei Province (a province with a population of 60 million people). So her social status was perhaps the highest among all mathematicians in China. And as her guests, we felt it. Everywhere we went, we were provided with a car and a bodyguard (we did pay for the car, but it was pocket change hardly worth a mention). Both episodes involve these bodyguards.

The first incident was trivial. We were brought to the Great Wall of China, about 25 kilometers from Beijing. It was a tourist destination, and hawkers walked among visitors offering various very beautiful Chinese goods. There was some very beautiful and very cheap item that we liked. And Luda bought it without bargaining. All the vendors who saw this came running to us with their goods. We had a hard time getting away. When we finally got back to the car, our escort said: "Never buy for the price that was quoted to you". "And how much should we pay?" I asked. "Half the quoted price", was the recommendation. This was our first purchase, and this advice helped us a lot. We would immediately counter with half of the offered price, and after a little haggling we always bought for half the price. I even wondered why, in dispensing his advice, the man did not look after the interests of the Chinese vendors and did not suggest a higher price for their benefit.

It was only when we returned to Beijing after a big tour of China and went to their official tourist store (where bargaining was no

longer an option) that we realized that he was indeed looking after the interests of these vendors. What we should have asked for was a third of the quoted price. He only suggested half so that we would not get torn apart by other vendors who would want to sell everything they had for the price we were willing to pay. So he was saving our lives while letting these people make a living.

Of course, you didn't believe that he really was saving our lives. So here's the second story.

This happened in Wuhan. Luda and I were taken on a one-day tour to see some temple. In addition to the car with a driver, we had a bodyguard-interpreter guarding us. It was all trivial. The Buddhist temple was interesting but nothing remarkable. There was a crowd of beggars in front of the temple entrance. Our escort warned us and asked us not to give them any money. And the beggars hardly asked us for any. They knew that we would not give them anything. But on the way back, I gave in. There was a woman standing there, still a girl but with two small children. My heart completely broke down at this sight. And I put my hand in my pocket and gave her everything that was in my pocket. I think that it would have been enough for her for a whole year. Here's what happened next. She grabbed me with both hands and demanded more. I could not tear off her hands. All the other beggars around recognized her signal and rushed at us. The bodyguard, of course, knew what I had done, even though he did not see it. He shouted to the driver, signaling for him to back up. He ruthlessly pushed people away from us. The car drove in reverse, possibly striking people. I think they were jumping out of the way. He shoved us into the car, jumped in, and the car dashed forward. He was pale. We truly had been on the brink of doom. We were saved by the reaction of the bodyguard, which was precise and immediate. He only said, "I did warn you".

Much later, we visited India. Taught by the Chinese experience, I paid no attention at all to people begging or selling things. I was afraid to give them my attention. In India, we were alone, without bodyguards. But in one place, where our driver parked the car in front of the entrance to the temple, Luda's attention was somehow caught by some item being sold by one of the people swarming around us. It was some kind of trinket. That was it, he wouldn't let us go from that point on. I didn't want to buy anything, and Luda didn't want this trinket either, but he lowered the price to zero. "Take it without the money", he shouted. Somehow, he managed to slip this thing through the slightly open window and threw it inside. This was about to turn violent, but it didn't get that far. I ended up paying him something. After all, I couldn't leave without paying for something that was already in the car. And the other vendors did not interfere. I think that if I had "given up" quickly and bought this thing, the other vendors would have also swooped in. On the other hand, they probably didn't think that replaying the same scene would make sense.

I will return to the China trip to give an example of what it meant to be a VIP there in 1993. After our conference in Wuhan, we were taken on a tour along the Yangtze, the longest river in China. We drove 500 kilometers on roads and then passed through the construction site of a huge dam — the Three Gorges Dam. At the time, it was just being built, but later it was referred to as a man-made disaster. We then went for a sail on some small rental boat. My story here is about our overnight stay.

It was late when we stopped for the night, it was cold, and we had walked in the rain. The hotel was small and brand new. Perhaps our group was the first to stay there. Apparently, not everything was ready, and there was no hot water. However, soaking wet and freezing, I absolutely needed a hot bath. There was also no large towel in the room, just a small hand towel. I complained. Our group was relatively large, and we were

accompanied not by a mathematician but by someone who constantly bustled around us in Wuhan and performed the tasks assigned by the lady professor who received us (the minister's wife). This guy said that everything was going to be okay, and we went to our room.

The proprietors began to bring us bucket after bucket of hot water. So the bath was hot, and then they brought us a very long bath towel. The funny incident was the following: when we were already in bed, the proprietors quietly opened the door (without knocking) to see if everything was okay with us. They were obviously terribly afraid that something might be wrong. However, there was an amazing story involving the towel. Luda found on it an unremoved tag from a well-known major retail chain. In the morning, we saw that there was a store of this chain adjacent to the hotel. This meant that at night, around midnight, they had this store specially opened to pick up a towel for us(!). I couldn't even imagine that this was possible in principle.

Psychological Vignettes from the Stalin Era

I will offer just a few examples. And I will add one post-Stalinist episode at the end.

After Khrushchev's speech at the 20th party congress, there was a substantial reassessment of people's culpability and a mass amnesty, often posthumous. The people being released often had 25 years of prison behind them. They all knew about their innocence, and few were ready to forgive and not consider communism and Stalin culpable and their personal cases just accidental mistakes. However, this did happen, and, almost exclusively, among convicted Jews who, even after 25 years in prison, continued to believe in Stalin and the system. These are not just our personal observations, but also those of all my

friends. I have a friend who could not leave for Israel when I was leaving in 1973 because his mother, who returned after 25 years in prison, continued to be a communist and could not even imagine leaving the Soviet Union for Israel. Her son could not leave her behind after everything she had gone through. He emigrated only in the nineties. These examples astound me. What is it about us Jews that makes us so stubborn, and why is it so difficult for us to change our ideology and “faith” — I mean, the belief that evil was not evil but only a mistake, just because that was something you believed sometime in the past.

My second story about the behavior of Soviet people during the Stalin era is more complex. I will tell the story of the family of Alexei Alekseevich Milyutin (1925–2002), a mathematician. Milyutin was a remarkable mathematician with many outstanding achievements. But I am interested in the story of his family: his uncle Vladimir Pavlovich Milyutin (1884–1937), the People’s Commissar (that is, minister) of Agriculture in the first Soviet government (1917), and his father Alexei Pavlovich Milyutin, also an active Bolshevik during the revolution.

The mathematician Milyutin and I worked in the same department, although this department had two branches — one in Moscow, where Milyutin worked, and the second in Chernogolovka, where I worked. We had occasional seminars together, but I did not know him well. However, many department employees from Moscow regularly visited us in Chernogolovka, at least once a week, and I knew them very well. The story of his family was the subject of our evening conversations at dinner. I imagine many people would start criticizing me at this point. After all, I am about to recount unverified rumors. True, but this story will explain the structure of people’s behavior during the Stalin era better than any other that I have heard. And we will analyze it.

So, as you can tell from the birth and death years of the minister Vladimir Pavlovich, he died in 1937, and, as you can easily guess, he was executed by shooting. I don't know when Milyutin's father, Alexei Pavlovich, died, but I know that he went through the entire war with his son, still a young man at the time and a future mathematician. That is, he was not executed. Those familiar with this era should be surprised already. A full brother of an enemy of the people (especially a Bolshevik during the revolution) was classified as an enemy of the people, and according to the rules of those years, he was to be executed by shooting. The legend claims that after the death of Stalin and the rehabilitation of the Milyutins, someone told Alexei Pavlovich that once Stalin, having received from Beria for approval another list of people to be executed, asked, "And the Milyutin brothers?", and received the answer, "Liquidated". Beria was mistaken — only one brother had been executed. But the second was no longer touched. And they lived in a huge house along with all of the elites of those years. People saw his brother, but no one reported him (they "avoided" seeing him). Now guess why. Because the one to report him would have been liquidated first. After all, this would have meant that Beria had lied to Stalin.

Understanding the psychology of people during those horrific times saved the lives of the smartest, those who understood how the system worked. I was told about the following incident (another "rumor", as some might note). A man was expecting his arrest — this is where things were going. He had a suitcase prepared, but not to bring to prison with him but to bring along when he escapes. One night he heard the sound of a car driving up to his building. He looked out the window and realized that they had come for someone, which meant that it could have been for him. He took his suitcase and went out the service entrance (most buildings had this back door). The people who came to arrest him did not find him at home. After a couple of months, he returned to his home and continued to live in peace.

How was this possible, you ask? Understanding the system. Those who had come for him had long been executed by the system. Or, in the best case for them, they had been transferred to a completely different location, perhaps to perform the same job. And the new people in this job did not know who their predecessors were supposed to have arrested.

Now I'd like to talk a little about the assassination of Kirov (1886–1934). There are many versions of this story. I am not going to choose between them. By the way, all current versions agree that the official version of the event was fake. However, one of the versions has an interesting part that I would like to discuss. I am talking about Khrushchev's version that it was Stalin who had Kirov assassinated. In Khrushchev's report at the 20th party congress, where he spoke about Stalin's crimes, he also talked about how Kirov was murdered. Apparently, this was just a version (his version).

Kirov was the head of the party in Leningrad, and he was well-liked. At the 17th party congress in January–February 1934, Kirov's candidacy to replace Stalin was even discussed on the sidelines. They asked him and he declined. "Let us wait", was his reaction. (The offer itself was the death sentence for Kirov.) At the congress's secret ballot in the elections of members of the Central Committee, Stalin received the fewest votes compared to other elected members of the Central Committee. More than 100 people voted against him (125, according to the 1960 recollection of a surviving member of the election commission). Of course, the official figures were different. According to them, only three people voted against Stalin. Kirov was assassinated on December 1, 1934, and by 1938, 90% of this congress's delegates had been killed.

According to Khrushchev, they picked a man, Leonid Nikolaev, and possibly Kirov had an affair with his wife. They aroused Nikolaev's jealousy to a critical point and isolated him for 24

hours. During these 24 hours, a law was passed on the expeditious, immediate investigation of the attempt on the life of the highest-ranking leaders of the state, sentencing of the guilty to death by shooting, and immediate execution of the sentence. And that's what happened. Nikolaev was executed three weeks later. During this short time, he was accused of having ties to a large number of other revolutionaries, especially those from the Zinoviev group, and he confessed. All of them were also executed later, as was his wife — in March. There are no accurate documents, because those who dealt with Nikolaev were also executed. So there were no witnesses, nothing remaining. What interests me in this story is the adoption of a special law before the start of the operation. Think about it — why would a dictator need a law? Couldn't he just order Nikolaev's execution? Here begins an interesting attribute of the Stalin regime and what followed.

It will sound incredible, impossible to most who are reading this now. Stalin observed the laws — his laws, which he himself wrote. And subsequently the Soviet government enforced the laws it wrote. It's just that the laws were barbaric. For example, I myself read in the statutes of the 1940s that children of enemies of the people were enemies of the people. This also applied to brothers and sisters. I don't remember everything that was written there, but already by the late 1960s, this Stalin Constitution looked completely ridiculous. It was amended. Still, it was full of ridiculous snippets. For example, the desire to commit a crime was equivalent to the crime itself.

On the cusp of our departure from the Soviet Union, on the cusp of our application to leave, I bought all the books on legislation (there were only three or four of them) and looked through them to understand their spirit. I even wrote an article for a Jewish samizdat publication, and it was published in Israel and also translated into English. I know an expert on the laws of Eastern

European countries who has read it. In this article, I give an example of how it is possible (theoretically) to sentence to death a man who, walking down the street, smiled at a female stranger passing by. This smile could be construed as indecent (just the woman's statement is enough) and thus indicative of a desire to commit rape. But this, according to the law, is equivalent to rape, and rape is punishable by death penalty. Ridiculous laws together with their ridiculous application.

Recently, the whole of Israel was faced with such a case — a young lady who was carrying several grams of marijuana in her luggage through some Russian airport. She could only pick up her luggage in Israel. But she was sentenced to seven years for drug trafficking and was only released by pardon of the President.

Of course, the laws have changed again since the 1970s, when I knew them. In the process of our emigration refusal, there was an interesting incident to confirm that I was right. A Decree of the Presidium of the Supreme Soviet was issued on the payment for education by emigrants leaving the country. This was an anti-constitutional decree, since it was written in the Constitution that our right to free education was absolute and could not be infringed in any way. I wrote a complaint about this to the Prosecutor General of the Soviet Union. I doubt that anyone here understands the level and capabilities of this person. But I was not annihilated — I received an answer from him (from his deputy). It stated that they would review my complaint. My letter was legally correct, and it specified the exact procedure required for such a decree to be adopted. I described in the story entitled *My Jewish Identity* how Brezhnev suspended the enforcement of this Decree. So I no longer needed a response. Another example of how understanding this fact helped us to obtain the permission to emigrate is described in my essay entitled *Emigration*. We lived in a closed city and had a high-level

security clearance. But we left within less than a year, with one brief refusal.

In connection with the phrase that slipped out above, “smiled at a female stranger passing by”, I remembered one remarkable story. A certain physicist my age worked at the Landau Institute in Chernogolovka. Sorry, I forgot his name. He was permitted to go on a research trip to Paris. Naturally, the question I asked him upon his return was what made the greatest impression on him. Today, after more than 40 years in the West, his answer is hard for me to believe. He said: “You know, Vitali, you walk down the street, you see women walking toward you, and they smile at you”. And my reaction was, “Come on, this cannot be true”. Such was the life we lived.

One Post-Stalinist Episode, 1953

The following episode exudes the air of the Stalin era, but it ended well because it started after Stalin’s death. I will simply recount its description in its entirety, as prepared especially for me, for this book, by the daughter of the protagonist of these events, a close friend of our family, professor of medicine Elena Vladimirskaia (Lena, as we call her). I have referenced her in many parts of my stories. She has been my main consultant on all medical issues that I have written about and write about in this book as well.

Now then, here is what Lena has to say:

My father, Boris Davydovich Vladimirsky, a musicologist, pianist, and public music figure, got caught under the bulldozer of anti-Semitism twice. In 1940–1943, he was the head of the Main Directorate of Educational Institutions of the State Committee for the Arts. In the book of documents entitled *State Anti-Semitism in the USSR, 1938–1953*, compiled by the famous historian of anti-Semitism G.V. Kostyrchenko, edition 2005, on page 27, there is a

memorandum from the head of the Department of Propaganda of the Central Committee of the Communist Party G. Alexandrov, submitted to the secretaries of the Central Committee Andreev, Malenkov, and Shcherbakov on August 17, 1942, entitled “On the Selection and Promotion of Personnel in Art”. It states that many institutions of Russian art ended up with non-Russian people (mostly Jews) at the helm.

This list of names includes Vladimirsky (Jew) — an atypical last name, hence the ethnicity is indicated in parentheses. Dad was immediately asked to step down from this post, but since he was a prominent figure in the music world, he was immediately offered the position of deputy head of the Music Broadcasting Directorate of the All-Soviet Radio. In 1946–1953, he was the director and arts administrator of the House of Sound Recording (which marked the beginning of the history of the development of phonograph recording in the USSR). This set the stage for this second, absolutely comical story.

In the wake of the “anti-cosmopolitan campaign”, as dad’s luck would have it, in the spring of 1953, a criminal case was brought against dad, alleging large-scale misappropriation of state funds. At the time, cases against such people often started as criminal matters, with political charges later materializing based on their “confessions” and witness testimony. Dad was accused of overpaying the performers’ fees. For example, let’s say an orchestra records a symphony. The recording lasts 40 minutes, and all the orchestra members get paid for 40 minutes of recording. But this is a criminal mistake! The violinist actually does play for 40 minutes, but the cellist only plays for 20 minutes, the trombonist only 4 minutes, and so forth across all instruments — while they all get paid for 40 minutes. The result was a huge, criminal waste of public funds. And someone actually did the math!

Dad was summoned to the investigator 2–3 times a week. But the “mustached man” had already kicked the bucket by that time, and the killer-doctors had been rehabilitated. The case continued by inertia. The investigator, a man named Dvorkin, understood all this, of course. He screamed, mouthed profanities, demanded an admission of guilt, but would write “do not sign anything” on a piece of paper and then burn the piece of paper. In August, the case was

dropped, and dad's black Volga sedan with the driver Vasily Ivanovich again started to come for him. Dad later found the investigator and thanked him".

– Lena Vladimirskaia

One Episode from the Yom Kippur War

We arrived in Israel two months before the start of the Yom Kippur War. At the time, we lived at the Beit Brodetsky in Ramat Aviv. At some point in the war, when Russia established an air bridge to Syria for urgent delivery of weapons, the United States balanced this with its own air bridge with weapons. Syria needed urgent supplies of weapons. It had lost almost everything in the first few days of the war. There were conversations about the fact that Israel also needed additional urgent supplies of weapons and ammunition. The air bridge with ammunition from the U.S. was very encouraging and uplifting for Israel. The U.S. was thereby showing that it would not abandon Israel in trouble. Huge Hercules planes were flying into Israel one after another. Where we lived, one could hear from the south the heavy roar of the arriving planes. I do not remember how frequently they passed by, but my current sense and recollection is that it was every 20–30 minutes. I realize that it couldn't have been that frequent.

And now, here's the truth about what really happened. This is what Yuval Ne'eman (1925–2006) told me some 15 or 20 years later. I think he wrote about it somewhere.

At the time, Yuval was very close to government circles — Dayan, for example. In the late sixties, he was Israel's military attaché in England. He knew many of the top U.S. officers personally and very well (before Yuval became a physics professor, he was an intelligence general). When Russia opened

the air bridge to Syria, he personally phoned some people in the U.S. and explained that America should launch a similar bridge. Because if it didn't, the Soviet Union would escalate its intervention in the conflict. Also, moral support was very important for Israel. Actually, there was no need to send weapons and ammunition by air. What was needed went by ships, and they were already on the approach to Israel (this is another story and a very touching one — how the Israeli owners of the merchant ships ordered their ships to dump all their cargo into the ocean and go to the U.S. to pick up the weapons — and I do not know the details of this story).

So, it was agreed to establish this air bridge. Further events developed as follows. A huge all-star cast of journalists was waiting at the airport for the first Hercules plane with weapons. The plane landed, then a tank crawled out of it and rushed “straight to the front line”. The journalists blissfully took pictures and dispersed. When there was no one left, the tank returned from around the corner and climbed back into the plane. It had been “borrowed” from an American base in Germany (so as not to fly far) and returned the same day. I remember that Yuval himself made the arrangements with them. Going forward, Hercules planes carried various ancillary items, sometimes unrelated to the war. Yuval explained that the very idea of transporting artillery shells by Hercules planes was ridiculous. The quantity of shells that could be loaded into such plane would have been enough for only one hour of operation of one artillery battery.

I will supplement this episode from the Yom Kippur War with some of my observations from the times of the 1982 Lebanon War. After the Yom Kippur War of 1973, we often discussed the destiny of Israel. We talked a lot about this with my friend of that time, our professor Boris Moishezon (1937–1993). He was very concerned that we, Israel, could only lose a war once. We would

all be destroyed if we failed even once. “But we can’t always win”, he said, “it’s not realistic”. This question arose in connection with how the Yom Kippur War unfolded. He eventually left Israel because of this. I understood why we always win only when I went through the war myself as a soldier in 1982. I realized that there was no mystery to it. I want to share this observation.

The fact of the matter is that, on the one hand, I went through the war as a simple soldier, and on the other hand, I was already a university professor — that is, not a kid but an adult, a thinking individual. A sabra my age, if still in the army, would be a colonel or a general. They don’t get to see the army “from below”. From the minute I was drafted on the second day of the war, and for 40 days inside the war, I looked around and observed.

For example, our company leaves the base and sets off for Lebanon. As I recall, we had 26 vehicles. Although they were very well maintained, three of them “did not want” to go. But they were not abandoned — they were repaired, and all the vehicles were dispatched. I asked the commander, what would have happened in the Arab army? And he replied that they would have been abandoned; and moreover, a far greater number of them would have been unfit for the mission. (And this wasn’t only because they didn’t work as hard. They simply had more money and a lot more machinery, hence no need for such thorough maintenance). Here’s another example. My vehicle was on fire in Lebanon. I thought I should abandon it. But it was repaired overnight and eventually returned to Israel.

Now for a very important example. A tank breaks down on average five times a week during the war. It was my company that was tasked with fixing them, sometimes even during the battle. I asked the commander, what do they do in such cases in the Arab armies? And I got the answer that they abandon them. The examples went on and on. And I calculated how many times

more the Arabs need to spend in order to have the same quantity of weapons as the Israeli Army after one week of war.

The conclusion was astonishing. They need to spend 75 times as much! It's just that there's a great number of parameters, a lot of very small items, and these numbers are multiplied. Even if I was mistaken, and they "only" need to spend 50 times as much, the entire Arab world does not have that kind of money. Therefore, after the first week, Israel will simply have more of everything by an order of magnitude, and the Arabs cannot win the war. At least, that was the feeling I had when I returned from Lebanon, and I have been calm ever since.

Vignettes of Events in the Soviet Union

Meeting with Dvoretzky in Moscow, 1966

The 1966 International Congress of Mathematicians in Moscow played a huge role in the development of not only mathematics in Russia, but also our psychology, our understanding of another world, the Western world, with which we had never come into contact before. It is absolutely impossible to overestimate the enormous impact of this event on what happened afterwards. Emigration to Israel became possible thanks to the psychological changes that had taken place inside us. We lost our fear. And notice how many mathematicians were among the refuseniks and dissidents. For example, Sharansky was a mathematician. To get a rough idea of how our interaction proceeded, I will tell you about my meeting with Dvoretzky.

The famous Dvoretzky's theorem was already well-known in Russia thanks to its Russian translation by Boris Mityagin. And I just happened to use it in a rather original fashion. But I wrote about this in articles that are slightly more mathematical. But

here, in Moscow, it was I.M. Gelfand who walked me up to Dvoretzky and introduced me to him. I was already very familiar with the work of another Israeli mathematician and student of Dvoretzky, Joram Lindenstrauss. Dvoretzky explained to me that he was not allowed into Russia under the incredible pretext that there were no rooms available in the hotels.

In order to talk a little in private, not because of secrets (which did not exist at the time), but simply to get away from the noise, we walked out of the building into a small inner garden. We sat down on a bench surrounded by bushes and talked quietly and calmly. I forgot to mention that Dvoretzky spoke Russian very well. Undoubtedly, Dvoretzky was being watched (he was an Israeli after all). These people who were watching him, pretending to be drunk, walked not far from our bench, even though it was very difficult to get through there, and cursed in a somewhat threatening manner (not at us but into the air), hoping that I would get scared and take Dvoretzky away from there. Child's play. It was obvious but understandable — they were in charge of monitoring Dvoretzky.

The Process of Leaving Russia

As we were leaving Russia, we sent one ton of books by mail, packed our LP records (more than 300 of them), very few personal belongings, and disassembled Czech bookshelves (they are still with us). That was our rather limited and casual luggage, and we joined our efforts with other departing emigrants, the family of Joseph and Lily Dorfman. Joseph was a pianist and composer. He was slightly younger than me. And Lily was (and is) a wonderful piano teacher.

So there we were checking in our limited luggage together. Only the family checking in the luggage was allowed to go inside,

where the luggage was inspected. Joseph's wife Lily was ill. She had a leg injury. My wife Luda played the role of Lily, and together they went inside to have the luggage inspected and checked in. In order for the process to flow smoothly and without significant delays, and also to avoid a baggage item being rejected, the check-in process needed to be continually "greased". I was standing at the gate beyond which I was not allowed. Joseph and Luda were inside, the belongings were being inspected and, upon approval, immediately placed into huge containers, which, after being filled, were nailed shut and stacked by the loaders into the railcar already standing by. So, there was one team of customs officers and another team of loaders (the significance of this will soon be clear).

Joseph brought a couple of bottles of vodka and cognac with him for "greasing". However, not before long, Luda ran up to the gate and said: "Two more bottles of vodka and one more bottle of cognac". The two teams were being "greased" independently. We had previously taken note of a liquor store across the street. I ran over there, made the purchase, and came back to Luda. Of course, the guard at the gate watched the entire procedure. Later he would receive his share. This happened many times. It was not for nothing that Dorfman surpassed me as an Odessite (he had lived in Odessa most of his life) — the greasing was proceeding perfectly, and the progress was relatively fast. We still ended up spending three or four hours there. Then suddenly something extraordinary happened. This happened inside, and I only learned about it later, when Luda and Joseph were finished and came out of there.

A friend of Joseph, who was not a pianist but a violinist, let's call him Zorik, asked Joseph to bring his violin to Israel with him. He was preparing to leave and wanted to have his violin in Israel. It was a good violin that required an export permit. This does not mean that it was special. All nice things required an export

permit. He went to get the permit, and it was denied. He then asked Joseph to put it in our luggage. Its turn came when the last container was already being filled. The customs officer asked what it was, and Joseph replied that it was his ordinary violin. However, when the customs officer opened the violin case, he saw inside, along with the violin, the document prohibiting its export! Pardon this irresponsible person — he gave the violin and forgot to remove this document. There was a scandal. The customs officer wanted to bring back all the luggage, open all the containers, inspect the luggage again, and possibly call the police. Joseph was up to the task. What to do — there was a mistake. But he reminded the customs officers that their office at the moment looked like a liquor store (on the subject of the police). And the loaders said that they were not going to take the containers out of the railcar, and quietly added to Joseph that only they could take these containers out. The railcar was already their turf. He could go home in peace — everything was going to be okay. (The greasing was good.) Perhaps the customs officers were “greased” a little more, the last container was nailed shut (although without the violin), and everyone went home.

On the subject of our departure, I want to tell you about one more story that happened to the family that was supposed to leave with us but stayed behind. I do not want to reveal their real family name and will call them Shoni and Lyalya Dor. In short, Lyalya, Shoni’s wife, was in the hospital when we were leaving the country. This story is so horrifying that even now I will only talk about it very briefly. The Dor family kept it a secret even from us for about 40 years. Only a few years ago Lyalya told us what happened.

I think many people remember the stories about how Soviet intelligence agencies eliminated their targets outside the Soviet Union. Those were injections with an umbrella with a tip loaded

with deadly poison. Death did not come immediately, but after a certain number of days. The victim suffered greatly, became ill, and died. There was an antidote for this poison, but one had to know what it was and have it on hand.

Lyalya was “grazed” (not pricked) with such an umbrella. Perhaps they were testing this method. It was not yet known in 1973. Or maybe they wanted to scare her family. She had applied for emigration to Israel, while her father held an extremely important secret position. In the beginning, she did not understand what was happening, and only in the evening, when she started feeling ill, she called her mother. She was taken to the hospital. The doctors had absolutely no idea what exactly was happening with her leg, which was swelling further upward with each passing day. They were even getting ready to amputate Lyalya’s leg.

More than a month had passed when this hospital’s surgeon returned from vacation. He made his across-the-board patient rounds, and Lyalya caught his attention. He immediately had her transferred to the surgery department and, even after the initial detailed assessment, said that it was not an infection. He didn’t say the word “poison”, but it was somehow implied.

Once the surgeon was alone with her in the patient room, he asked her to take her time to calmly recall everything that happened the day before she was admitted to the hospital. It took a long time, and it took some random conversation about rain and umbrellas for Lyalya to suddenly remember the deliberate rubbing of an umbrella against her leg. Two well-mannered men were sitting near her on the bus. One was sitting opposite Lyalya, and the other next to her. She was reading and they were talking. The one who was sitting next to her was playing with his umbrella and inadvertently (it appeared accidental) poked the tip of the umbrella between her boot and her leg. She felt the umbrella rub against her leg. He apologized

and continued playing with the umbrella. When this happened the second time, she moved away from them.

The boots had very thick woolen socks underneath, plus stockings. Apparently, this reduced the amount of poison that reached the leg and ultimately saved Lyalya's life. (We also do not know if he wanted to prick; perhaps he repeated the move because he did want to prick). Otherwise, the poisoning would not have spread so slowly, and the surgeon would not have returned from vacation in time to see Lyalya still alive. But the doctor understood and knew what to do. He used medicinal herbs of some kind and, of course, performed a massive blood transfusion. Approximately 10 days after his intervention, she was discharged and was able to walk, albeit still with difficulty and limping. The doctor warned her to never tell anyone about this story! He clearly understood everything. I think that most likely he was assigned to bring her out of this near-death condition. (Since they couldn't get it done at once, at least there would be no prolonging it). But Lyalya is sure of his innocence.

This happened in 1973, but the story doesn't end there. The Dors came to Israel and made a good life for themselves. In 1979 they were in the U.S. There was some reception in New York in memory of Shostakovich. Russian was spoken at the event, but there was some American man there who spoke excellent Russian, and it was said that he had come specially to practice his Russian. He was going to go to Moscow soon. Someone at the venue opened the New York Times with a large portrait of Shostakovich and an article about him. While he was at it, he read a short column about how a certain man was murdered — he was a prominent critic of the Soviet Union and, apparently, he was being hunted.

Lyalya does not remember the details here, except that he was believed to have died of a heart attack, whereas after the tests it turned out that he was poisoned with an umbrella injection. This

is what the article said. But Lyalya noticed that this American guest who spoke good Russian started hanging around her and offered her a drink of champagne. When there was no one around them, he quietly said: “Great job keeping quiet about that story, Lyalya. Keep it that way. You still have your parents there, after all”. And he walked away. Lyalya called Shoni over, and they left the reception. He did not know anything about that incident in Russia — Lyalya was afraid to tell even him. But he gathered that something had happened at the reception, and she told him everything.

If you think that the story is now over, you are mistaken — not just yet. Around the same time, the Dors were expecting a baby. Several months into pregnancy, the doctors had to terminate it. The doctors were surprised to find some inexplicable abnormalities in the baby’s bones, related, as they thought, to some kind of poisoning that Lyalya had endured. They understood little, but what they did understand was that she could not, and should not, give birth.

So there you go, now it’s finished.

Humorous Vignettes

I’d like to take a break from the preceding hard story with some not-so-serious short vignettes.

TUVA

Once, at a conference, I crossed paths with a certain physicist. We had a very good conversation, but he didn’t quite look like the people I usually meet. I asked him about his ethnicity. Perhaps not a very polite question to ask in Russia, but it was befitting in our conversation. And he told me he was Tuvan. I had never heard of such a people and was surprised —

I asked what it was and where. He explained that there was even the Tuva Republic out there (with the capital Kyzyl), on the Russian border with China and Kazakhstan. He then asked me about my ethnicity. And I answered that I was a Jew. He was surprised and told me quite seriously that he had never heard of such a people. Of course, I was even more surprised in response. And I remember feeling incredibly happy — there was still a place out there where they did not know about us yet. And that meant that somewhere there was no anti-Semitism at all! (Although it's possible that he was making fun of me in response to me not knowing about Tuva.)

By the way, in Russia you can meet people of many different ethnicities, as well as remnants of the most ancient peoples. For example, I was acquainted with two good mathematicians, husband and wife, who were Assyrians. I have heard that in Kiev, the shoeshine profession was almost exclusively filled with Assyrians. They offered their services at all the railway terminals. Only much later, already living in Israel, I learned that a lot of Assyrians still live in Iraq. But back then, in Russia, I did not even know that this ethnic group had not disappeared completely.

A Joke from Uzbekistan

Many languages of the peoples of Russia did not have their own alphabet and used the Russian alphabet. They may have had their own alphabet, but this was a form of Russification. I am not a linguist and do not know. However, this made for some very funny stories.

Sometime around May 9 [Victory Day in the USSR], I was at a conference in Uzbekistan, possibly in Tashkent. One of my colleagues and acquaintances living there took me and someone else for a ride in the car. We drove into the mountains.

The mountains were covered with clouds, but they were moving past us, revealing one mountain or another. And suddenly, a passing cloud revealed a huge inscription on one of the mountains. It read, “Yasha son [of] May 9”. Of course, we all laughed. Some guy Yasha was a joker. However, soon another cloud revealed another inscription for us. This one was, “Yasha son [of the] CPSU”. This was a bit much for one Yasha. Upon return, we asked who this Yasha was. They did not understand us for a while, and then we all had a laugh together. It turns out that “yashasyn” [“Yasha son” in Russian] means “long live” in Uzbek. It is one word, pronounced with the stress on “syn”, which is pronounced rather like “sin”. Since then, “yashasyn” became part of our lexicon, instead of “long live”.

It’s a good thing that the Chinese language has not adopted the Russian alphabet. This idea was discussed, and on the cusp of the Cultural Revolution, the initiative was already at a highly advanced stage. A person who speaks Russian will understand why. The writing would be filled with the dirtiest Russian words.

The Chinese Restaurant in Vancouver

In 2002, we spent the summer semester in Vancouver. Nicole Tomczak-Jaegermann was the main organizer and “hostess”, as she is from Edmonton, “only” 1,000 kilometers from Vancouver, while everyone else came from places ten times further away. Vancouver is famous for its Chinese restaurants. The majority of Vancouver’s population is Chinese. And Nicole decided to invite a group of her colleague friends to the best Chinese restaurant. She got its address from a secretary at the institute where we were to spend the next two months. I think there were seven or eight of us.

The location of the restaurant was fantastic. It was also really nice inside. We opened the menus, starting, of course, with the soups. Everyone fell silent — I would even say, dumbfounded.

After a while, Nicole broke the silence and said: “Yes, I asked for a very good restaurant, but not this good”. Time to explain: the prices of the soups we saw were in the hundreds of dollars. For example, one turtle soup was \$800, but it had to be ordered in advance. Other soups for \$400 could be ordered on the spot. We continued in a state of shock, when my wife, Luda, said: “Look at the other pages. The prices are perfectly normal there”. Even the soups had normal prices. The restaurant presented itself starting with something very unusual, followed by regular (and good) food.

All proceeded well and in a regular fashion. By the way, the turtle for the \$800 soup had to be brought specially from China, and the soup was served to be shared by a large group.

I should note that, apparently, Luda and I have tried this soup, but that was in China. At a conference in Wuhan in 1993, Dr. Xu, a French mathematician of Chinese descent who graduated from a university in Wuhan, invited us and his former teachers to a restaurant. There were about 10–15 people in total. The main first course was the soup, which was served in a huge soup pot from which we each served ourselves. Inside the pot, there was a boiled whole turtle. Its head was sticking out. The soup was delicious, slightly reminiscent of chicken soup. Of course, the prices for the same dishes in China and Canada differed by a factor of 10, if not 50. This is what we discovered later.

Incidentally, this was our regular practice with Luda — to eat food (exotic for us) served to us in different places we visited, as long as it looked edible to us. For example, once in Korea, we ate some extremely delicious noodles. Only the color was a little on the yellowish side. Once we were full, we asked those who invited us, what kind of interesting noodles were these? The answer was: “These are jellyfish. Aren’t they delicious?” I decided to take a little more so that I could say that I have consciously eaten jellyfish. But I was only able to eat a little bit.

The Pleasure of Paying

Have you ever enjoyed paying a fine? I have, on one occasion. This happened in Australia in 2006. My friend from the Kharkov days, Volodya Gurari, suggested that we go for a drive on an incredibly scenic road along the ocean from Melbourne to the north. At the time, he was living in Melbourne, and I was there to give a lecture at his university. I rented a car and off we went. The road truly was a scenic miracle. Having driven about 100–150 kilometers, we turned back but, to avoid repeating the route, drove along a parallel road. This road was not as scenic, and I was driving at the maximum speed allowed. There were large signs stating that driving over 107 km/h was subject to a fine. I had no intention of going faster than that, but there wasn't a single car, either in front of us or behind us, as far as the eye could see. This made it difficult to monitor the speed. As a result, it turned out that I went over the speed limit, and they sent me a citation for going over the speed limit by 1 km/h(!). There was some place where I drove at a speed of 108 km/h.

The René Thom Lecture

In the late eighties, I made frequent visits to IHES, possibly the best mathematics institute in Europe at the time. My friends and co-authors Gromov and Bourgain were permanent members of this institute.

René Thom was also a permanent member of this institute, although he was already retired. One day, there was an announcement that he would give a lecture in English. I have tremendous respect for this man and was simply delighted to attend his lecture. In France, most lectures are given in French, which I don't understand. And this one was in English. I came. In the beginning, Thom was just talking to different people — in

French, of course. I didn't even catch when the lecture started, but it continued in French. I was sitting in the front and decided not to leave. After the lecture, I asked Thom why he gave the lecture in French, when it had been promised in English. "But Vitali, I asked before the lecture if everyone could understand French, and you did not object!" He asked this before the lecture, also in French. And whoever understood this question could understand the lecture as well. He was very upset. So was I, but inside I was laughing.

The Present Day

I feel like I've had enough of a break with humorous vignettes to move on to serious and even controversial ones.

A Little About Politics

Political vignettes are always about the present day. The slightly revised past is recalled only to confirm one's own opinion about the present. I'll start with Trump, President Trump.

Trump

Trump is presented as a highly controversial figure, and he looks the part. And so it seemed to me until I paused to think. His speeches are abrasive and undiplomatic. He is not Obama in terms of his speaking skills. But you elect a president, not a spokesman. It is his ability to do things, not to speak, that is important to you. It's true that, without thinking, he might say something silly, be undiplomatic and unceremonious, contrary to

the etiquette. But what's important to you is that the things he does increase the strength and prosperity of your country. After all, you are not electing the Queen of England.

But when it comes to real situations, he knows exactly how to resolve them. For example, he understands that Gordian knots should be cut, not unraveled. Everywhere we look, diplomats and inept politicians who only see today have tied Gordian knots. And no one dares to cut them, whereas Trump does just that, all the time. And it works everywhere, whether it concerns economic relations with China, with Europe, or within the American Continent.

But for us, for Israel, it is especially important how he has cut these knots in the issue of Jerusalem and the Golan. And he has already set the stage for cutting them in the territorial issues important for Israel. Those who criticize him would be well advised to consider how we, the Israelis, could even start negotiations with the Palestinians without the resolution of the Jerusalem issue. He has cut this Gordian knot, and nothing earth-shattering followed. Most Arab countries are only happy that this issue is no longer on the agenda. And the Europeans, who are afraid of everything, will soon get used to it, too (or perhaps they are not afraid but dislike us traditionally — they will get used to it anyway).

It is the same story with the so-called territories where more than 7% of the population of Israel reside. How can you resettle this many people? This was done only during massive wars, or by a dictator like Stalin. But the Palestinian Arabs also cannot agree to just let us keep them. So this is again a Gordian knot. And only Trump will be able to cut it. It is strange that those who talk about peace day and night, and consider it their main slogan, do not understand this. Sometimes I think that the word “peace” is just a catchword for them rather than a sincere wish.

Thus, Trump is the best president for the U.S. and, for that matter, for us.

October 2020

Afterword

Dostoevsky wrote back in the 19th century that incomplete education is the main problem of society. It gives birth to revolutionaries and revolutions. People want to appear educated and try to guess how they should behave. And those who behave differently are classified as uneducated and unintellectual. Too many people are semi-educated today.

Trump has lost the election. The Gordian knots will remain uncut.

November 2020

Demonstrations as a Symbol (but a symbol of what?)

We have had the coronavirus pandemic raging for many months now. The disease is incredibly contagious. And the main reason for this is that 80% of those infected look perfectly healthy and do not even know that they are sick and infect others. But for a certain percentage, this is a fatal disease with a very difficult death. Here in Israel, this percentage is small but still close to one percent. But one percent means 90,000 people. This is why we cannot allow this disease to spread freely: public gatherings are not recommended and are prohibited by law, and we try to stay in isolation.

However, an exception is made for demonstrations (those against Prime Minister Netanyahu, one might add, since there are almost no others). And people, who for the most part aren't working now because of that very coronavirus, and who are allowed to drive around only to attend such demonstrations, attend them with pleasure. They gather in huge crowds, dancing,

shouting, and enjoying life. And all this is allowed in the name of the right to protest. This is proclaimed to be the main principle of democracy.

To be honest, it looks like a mental illness to me. This prime minister has been elected three times, in the most democratic elections, over the past year. And he would be elected again if the elections were to be held now. Perhaps if Netanyahu could threaten to announce elections tomorrow, then all the demonstrations would stop out of fear. But under the agreements of the current coalition, he cannot do it.

How can a partying and slightly raging crowd demand the replacement of the democratically elected prime minister? In such cases, I say that the head is given to us to explain what the stomach wants (which in practice often means, what the stomach wants to hide). For this reason, explanations of events are not objective but have an a priori purpose. This approach can lead to completely absurd statements (even from intelligent people, not to mention less intelligent ones). Demonstrations are proclaimed to be a symbol of democracy, even during a pandemic like the coronavirus (Demonstrations of any kind? Even the fascist pogrom riots in the 1930s in Germany?), and the judges support this absurd point of view.

After all, they are protesting against the person whom they want to remove against the will of the people. For me, this is a symbol of anti-democracy. And how can such rallies be justified during an epidemic when other gatherings are prohibited? And then they came up with the notion that people do not get infected during demonstrations! God does not save religious people, and they contract devastating infections during joint prayers and weddings. And who protects the demonstrators, the devil? Suddenly, non-religious people began to believe in miracles — that they do not spread infection during demonstrations (against

Netanyahu, we might add). This is the level of absurdity they have reached in explaining why demonstrations are acceptable.

I will add a quick note about the flags used at these demonstrations. They include, of course, our Israeli flag. But most of the flags you see there are black and red flags. I have inadvertently learned that the origin of the red flag symbolism is not widely known in Israel. At the end of the 19th century, there was a workers' demonstration in the U.S. where demonstrators were gunned down (I believe that eight people were killed). The blood of these people is reflected in the red flags. But with their origin forgotten, red flags have been featured in the Soviet Union under Lenin and Stalin, in Germany under Hitler, in Italy under Mussolini, in China under Mao Zedong, in North Korea, etc. Good company. As for the Black Flag, it once represented pirates, and in our time, ISIS (the extremely brutal Muslim caliphate that beheaded its prisoners), and now also our brave demonstrators. Also good company. The flags reflect your souls, "dear" demonstrators. Remember this. A bright soul cannot stand and live under black flags.

Fandom

The pointless demonstrations and especially the black flags I described above make me very sad. People have lost their sense of taste, their sense of moderation. Of course, you can joke that these black pieces of cloth are the mourning, the funeral of their ideology. Our country is young: 70-something years of age is, by any measure, youth for a country. And people have a very hard time parting with the childhood ideology (I mean the childhood of the country). But all the same, it is sad to see intelligent, not-so-young people discussing with such fervor issues that they have invented themselves. And I recalled an episode from my childhood and saw a way to explain all this in a simpler manner — at least one that does not require a psychiatrist.

I think I was eight or nine years old. It was summer, and we were living at the dacha of our grandfather Emanuel. During this time of utter poverty, we did not have a radio at our dacha. They had one at the neighboring retreat center, where we children also came to play. Once, I was there with a few friends, and there was some broadcast on the radio. It turned out that it was soccer, which I myself did not realize. My friends asked me who I was rooting for. I didn't even know what that meant, but I couldn't show it. "Who's playing?" I asked. "CSKA against Dynamo", was the answer. I wasn't familiar with either team, but CSKA sounded rather exotic, so I said: "For CSKA". THAT WAS IT!! I became a CSKA fan for the rest of my life, even though I have never seriously followed or supported anything in sports. (This only changed a little in Israel. I was a fan in all sports where Israel won — for example, I rooted for Maccabi Tel Aviv in basketball.) All my life, whenever I accidentally stumbled upon a sports page, I immediately checked out CSKA.

Just like that, with one casual remark, you are on the bandwagon for life, you become a "fan". Logic disappears at this moment — something shuts down inside you. You only feel good when the "object" you support wins. This is your adrenaline, and for some people it is life itself. And the fights between opposing camps turn into real wars. Already here in Israel, where I am not rooting for any team, I observe these wars between, for example, Maccabi and Hapoel. Or, even to a greater degree, between Beitar and Hapoel. Isn't it funny how people rally day and night demanding the resignation of the prime minister, that is, a national revolution, and are ready to infect the whole of Israel with coronavirus, when in fact they are just "fans" of the team that has left the political scene of Israel. Since they have no one else to root for, they root against those who threw them off the stage.

Come to your senses, turn on your logic! But can a fan of Beitar turn on his logic if Hapoel is playing better and winning? It is the same in politics: nothing can help the Likud or its leader, Netanyahu. Neither the fantastic economic condition of Israel (before the start of the coronavirus pandemic; it was so strong that after nearly a year of the pandemic, it still keeps us very stable and with a sufficient margin), nor the fantastic political status (when both of the top world leaders, Trump and Putin, are on friendly terms with our leader, Netanyahu, and he is the only one in this position), nor the unexpected peaceful breakthrough into the Arab world, which these very same anti-Netanyahu fans have talked about and dreamed of the entire 70 years of Israel's existence — nothing can help. Being a fan is more powerful than logic. It is stronger than our brains.

The Pandemic of 2020

Coronavirus (COVID-19)

I will start with a trivial explanation of the virus size. This will help you get a feel for the situation.

The size of a virus relative to the size of a human is much like the size of tiny ants relative to the size of the Earth. This is good to remember. So how can a virus harm us? The same way that ants harm us — because (and when) there are so many of them. If only a couple of hundred million viruses get into your body, you will not be seriously ill, although you may transmit them to people close to you. It takes billions and trillions of them to make you ill. A few ants do not bother you and appear to be acting chaotically, while a large ant hill acts in a coordinated and purposeful manner. For example, they close the entrances into the hill from the rain, and they even know when the rain is coming. They close these entrances the day before. They collect food and

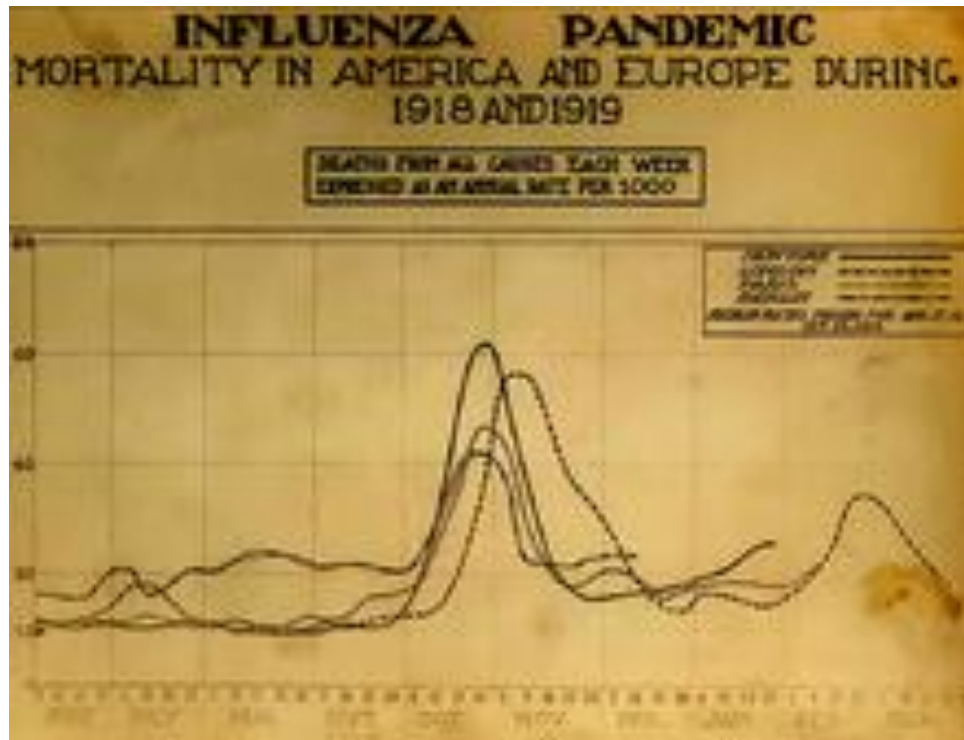
wage war against other colonies and other ants. I have observed such wars between different species of ants. They are very intelligent in many ways. The virus is the same way. It is nothing when alone or in small numbers but turns into a powerful and intelligent force when there are a lot of them. Why? I do not know and do not understand this (along with everybody else). But we also do not know and do not understand this in the case of an ant hill.

I realize how primitive I am in articulating this issue. But I want us to see this problem as a global one — the viral genome as a macro creature against the genome of mankind, also as a macro creature. And then we will suddenly recognize certain patterns. It is not the micro creature (an ant) that exhibits patterns important for our understanding, but the macroorganism, the entire pandemic — that is, in a sense, all the viruses participating in the pandemic. Let us engage in medical “archeology” and look back on the deadly pandemics of the past. We are well familiar with one such event — the so-called Spanish flu pandemic that broke out in May 1918 and persisted for much of 1919.

Below I provide information on the development and movement of the Spanish flu. The chart shows mortality from this flu by week in four central cities — London, New York, Paris, and Berlin. This document is very old and poorly printed, but then again, it is not important for us to see which line graph corresponds to which city. The pandemic started in May, but the first wave corresponds to mid-June and July. This is followed by a lull over the entire month of August, and only in the middle of September the breakout of the second wave begins, which only tapers off toward the end of November. The second wave was 10 times stronger than the first.

What I find very interesting and important is the comparison of these charts with what we observe in the development of the modern coronavirus. In our case, eight or nine months have

already passed since the breakout started. The comparison of the pictures of the two pandemics' development is amazing.



They are nearly identical: in terms of the comparative strength of the waves (first and second), the time lapse between the waves, and their duration. (Incidentally, 100 years ago, the humanity did not yet understand the difference between influenza viruses and corona-type viruses. There was speculation that the strain originated in China, so it is possible that the so-called Spanish flu was actually a corona-type virus). Based on this, we can predict the beginning of the third wave in about two months and its duration of about two months. It will significantly surpass the first wave in strength but will be two to three times weaker than the second. After that, the pandemic will begin to subside and will disappear about six months after the end of the third wave (this is not on the chart, but this is what I read about the Spanish flu). I must tell you that I found this chart on the Internet at the beginning of the second wave and accurately predicted its end for us. However, even now, experts are not declaring the end of

the second wave and only attribute the downswing of the disease to quarantine measures. Of course, quarantine measures were and remain very important, but the natural processes within the development of this enormous mass of coronaviruses also play an important role.

The coronavirus has weakened by now — it has weakened quite a bit. This is why it is more difficult for it to reproduce (and thereby infect other people), and our bodies fight it more easily. Two or three months will pass, and the virus will gain strength again. This means that in the enormous mass of the weakened viruses of today, a certain quantity of strong viruses will emerge, and they will again begin to actively infect us and actively operate inside our bodies. This is how the third wave will begin. But the human genome will already know how to deal with it, and the third wave will be much weaker than the second, although it will have the same duration of a month and a half to two months. Presumably, that will be the last wave of this pandemic. It will take another six months or so for the virus to disappear completely. Small, localized outbreaks will occur during this period in different locations.

When Does a Bacterium Die?

I asked myself this rhetorical question back in 1966. When a bacterium divides, can we say that it dies? And if it doesn't die then, when does it die? At the time, I came up with a certain explanation for the rhythm of its life. The physicists and mathematicians around me liked this explanation. I even wrote an article on this topic, but the medical world did not understand it, and it was not published. I hardly remember all the details now, and I forgot many very interesting examples, but I remember some things. I will briefly outline the central model, as it is directly related to our war on the coronavirus. This will help to understand what exactly is happening. I will talk about a bacterial infection, but the same reasoning can be applied to a

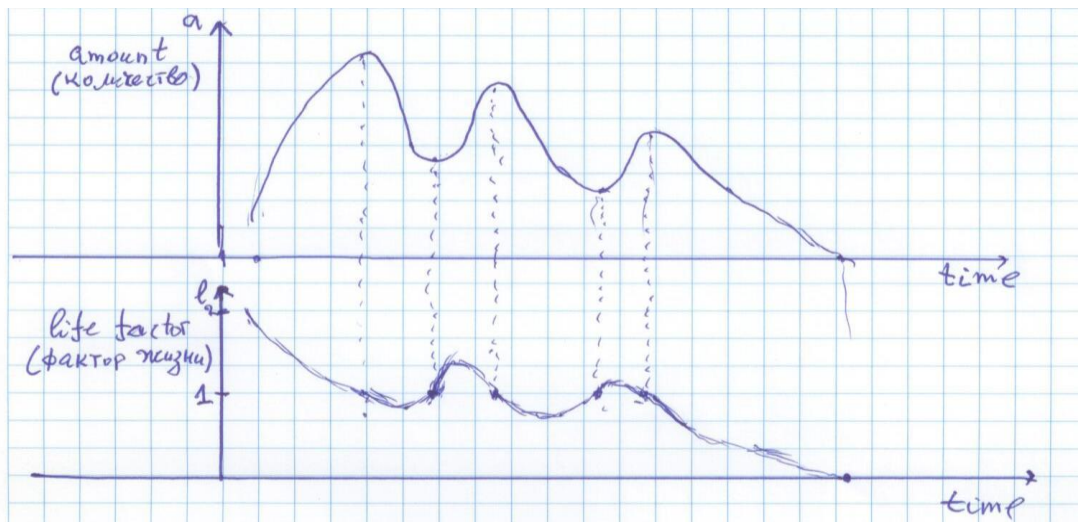
viral infection. I will add a few words about this at the end. Do not be afraid that I will break into scientific jargon — this won't happen. It will be just a story.

So, once in our body, the bacterium divides (approximately every 20–30 minutes). This means that if this process continues without interference, then in 10 hours, we will have more than a million of them. Something impedes their ability to divide. The reasons may vary. Our body can kill them, but also the internal mechanisms in the bacterium itself can halt its ability to divide, and it will die.

I should remind you here that the size of bacteria relative to the size of a human is much like the size of a human relative to the size of the Earth. So it is natural that we should talk not about one bacterium but millions of them. They enter the body by the millions at the same time. A “lone traveler” will be destroyed instantly, or ignored if our body knows that it is absolutely harmless. The discussion should start with millions. I have already discussed this in my previous article on coronavirus. We are dealing with an “ant hill” of bacteria, and it's the macroparameters of this ant hill that are of interest to us.

To that end, we will introduce macroparameters applicable to the entire population of bacteria in the body. One of them will be the total number of bacteria in the body — let's call it A (for Amount), and the other L (for Life Factor). The meaning of the first parameter is obvious, and I will now explain the meaning of the second one. L represents the number of times the number of bacteria in the body has changed within a unit of time, which will always be the time between two divisions (on average, of course). Thus, if nothing prevents all cells from dividing, and they all divide, then L is equal to two, and the population doubles. But they are “hindered”, their ability to divide deteriorates, they “age”, their energy supply drops, etc. I am just listing the possibilities without attaching any particular significance to them. We are

only interested in the fact that the parameters change. Below I drew two graphs of hypothetical changes in these parameters for the entire population of bacteria in the body (which I call the “ant hill” of bacteria to emphasize that this population may have goals and something of a consciousness — attributes that an individual bacterium does not have).



Simply note that the bacterial population of the “ant hill” increases when L is greater than 1 and decreases when L is less than 1. This means that we do not need to deal with each individual bacterium, but rather need to reduce L and make sure that it’s less than 1 — the smaller, the better. We have transitioned from fighting an individual bacterium to fighting the entire “ant hill” (using the jargon I defined above). And our body seeks out the weak points of this “ant hill”, that is, the entire population, and “strikes” at them.

One “hump” of the first graph can be viewed as the life of an “ant hill” of bacteria. When it starts to tail off, the bacterial population is “tired” in some way — perhaps, the energy supply has dropped. For us, L is less than one, and this is the right time to strike at the ant colony. If we manage to do this, then, perhaps, there will be no second hump. We have conquered the disease.

There may still be a hump, but a much smaller one. Our “ant hill” gave birth to another, second ant hill, and we will have to wait for the end of the second cycle, hopefully a weaker one (although identical in duration and other parameters), and strike at it then.

Now I would like to provide a few examples of the behavior of various bacterial diseases. The use of antibiotics has disrupted the standard behavior of diseases, altering and undermining their standard cycles. So, my examples are based on data prior to the use of antibiotics. In my 1966 paper, there was a lot of this data. I only remember two examples now. Consider scarlet fever, for example. This illness lasted exactly 21 days. Note that the patient profile could vary in terms of age, health condition, physique, strength/weakness, etc., but regardless of all these factors, the illness lasted exactly 21 days, although its form could be severe or mild. But its duration was the parameter of the “ant hill”, in this case, the population of scarlet fever bacteria.

I expect that at this point, some medical expert will say that this period is simply the time of activation and development of the immune system. Well, here’s another example — relapsing fever. The initial period of this disease lasts 4 days. If the disease passes this period, it may end on the 8th day (the second period is also 4 days). If the disease is not eradicated by the 8th day (and the patient does not die), it continues until the 12th day (again, it is guaranteed to continue unless the person dies). If it passes the 12th day, then either the person will die, or it will last until the 16th day and end then — the episode will not be repeated.

Thus, the same person could have one illness that lasts 21 days, and another illness that lasts 4 days or a multiple of 4 days. Obviously, this is a characteristic of the bacterium, although not of the individual bacterium, but of its “ant hill”. This is a macroparameter of the disease. Our body “finishes off” the

disease at its weak point, when the life factor L of its population in the body is at a minimum.

Back to the issue at hand, coronavirus, I will add a few general facts. In order to reproduce, the virus must enter a cell. If it succeeds, the cell begins to produce copies of this virus. The cell is destroyed within 24 hours or so, and about 10,000 new viruses enter the bloodstream. During the course of the disease, there are many millions of viruses in every milliliter of blood. In total, there are tens of billions of viruses in the body during an illness. The antibodies produced by our immune system are 1,000 times smaller than the virus. Cells that produce antibodies produce up to 2,000 antibodies per second (I am not sure about this; I was unable to confirm). However, they do not destroy the virus but mark the cell in which it is located. Based on this mark (at least two marks), special cells find these infected cells and inject them with a special protein that causes cell apoptosis (that is, its death) and thereby destroy the virus. After about 4 to 7 days after the onset of the disease, antibodies can be detected in the blood.

Life with the Coronavirus Pandemic

Everyone lives the same way with the coronavirus pandemic, so there is nothing to describe here. Well, perhaps for our grandchildren. We have been living with it for nine months already, counting from February. But we returned from our last trip at the end of December, so we have been staying at home without travel for ten months already. I don't think this had ever happened before in my life since my high school graduation in the 1950s. The only (potentially positive) result for me is that I started writing stories. After all, I needed something to do. Never before, during 80 years of my life, have I done this. It was strange to observe how the day changes throughout the year. One day I wake up when it is already quite light outside, yet it's still so early

that there's not even news on TV. It feels like only a few days have passed, when I wake up in complete darkness, and the first and even the second editions of morning news have already aired. Naively, half-awake, you ask yourself why, and then realize that summer is long over, and it is almost winter. How could I have devoured so many months without noticing? It turns out that a monotonous life goes by even faster than one filled with happenings.

Generally speaking, each of us, people of very advanced age, has noticed that with age, time flows faster — that is, our sense of the passage of time changes. I think there have even been articles written about this. My explanation for this, and it might be the generally accepted one, is that our perception is conditioned by the duration of today's interval of time relative to the whole life that we have lived.

But relatively recently, “only” 30 years ago, I learned that our brain does not keep track of time. We do not keep track of the sequence of events. Our memory does not mark the time of an event, and we do not know which event occurred earlier and which occurred later. Of course, if you didn't know this before, you don't believe me now. We think that we remember these things. In actuality, we assign certain years to events, and we are able to compare numbers — if this year is less than the other year, then the event occurred earlier. Many milestone events help us compare time points. For instance, we remember which child is older than the other, and which of the children had already been born when a particular event occurred.

I was first informed about this by an old acquaintance of mine, the remarkable mathematician Semyon Gindikin, during one of our nearly accidental meetings. If not for the tremendous respect I had for him, perhaps I would have laughed it off inside, since it seemed impossible. But when he said it, I paused to think. And indeed, I saw that I was completely unable to determine which

of two events happened earlier unless there was a milestone event between them with a year attached. So live and learn! How could I have not noticed this until my 50s? And now the coronavirus pandemic has contributed something to my understanding of time. I had never lived a monotonous life before and never thought about how quickly it flows.

Culture Versus Knowledge. A Little About Teaching

How is culture different from knowledge? All my students, as well as those who have taken my courses since around the late 1980s, are familiar with the following aphorism, which I apparently came up with myself:

Culture is what remains of knowledge when we have forgotten.

But I will add that one must have the knowledge at some point in order to have something to forget. You can often hear students say that after the exam they completely forgot everything they had learned. And they complain, wondering why they needed to learn it. I then explain that, although the goal in my lectures is to provide the students with culture, I am strict with exams, so that they have something to forget. Years pass, and they suddenly realize the importance of the culture that they acquired. It's so easy to open a book and read whatever you need at the moment when your culture allows you to read such a book — when, having opened the book, you see inside not gibberish, but intelligible text that you are able to comprehend.

In general, teaching is a rather non-trivial process. Different conditions and different students require the material to be presented in completely different ways. Here, in Israel, as well as in Russia, and once upon a time in Europe, a professor should come across almost as a God. The higher the level of respect for the instructor, the easier it is to learn the material.

However, everything changes immediately when a student transitions to research work and becomes a doctoral candidate. Here it is important that the student stops being afraid to make discoveries. At first, he is afraid that he will never reach your level, the level of his professor. You need to show him that you are a human being like him. You can no longer come across as a God. I have sometimes assigned problems to which I fully knew the answers but pretended not to know, so that the student would find the solution and conclude that he could surpass me. Sometimes I made deliberate mistakes, so that the student would realize that we are all human. I must add here that I also had a stake in this. I wanted the students to read my work critically and find errors in the manuscripts. I needed to explain to them that mistakes happen.

Back to the subject of teaching simple courses, education in the U.S. is structured completely differently. There, when teaching the most trivial course, you have to bring along the textbook you use in the course and even pretend to be peeking into the textbook, so that the students feel more confident. If a student misses something, they can read it in the textbook. The a priori level of prerequisite knowledge of the majority is very low. Because of that, most of them are unable to understand everything you say. And you need to give them confidence that there is a place where they can find it. Of course, I was talking about undergraduate courses. Students pursuing a PhD are an immediate leap to another level.

I would like to give an example of such a completely different caliber already at the level of undergraduate studies. This happened in Columbus, Ohio. The course I was teaching was designed for the third year of study. That is, the students already knew something. The course had four or five sections. In the first three weeks, students had the option to move from one section to another, where they liked it better. I took advantage of this,

trying to teach in such a way as to select the best students from this cohort. In order to weed out the weak ones, a couple of days before the end of this period, I gave an interim short exam, not too easy, and whoever could not handle it naturally wanted to leave.

And one day, the day before this exam, a young man approached me and asked me to sign him up for the course. “What’s the hurry?” I asked. “There’s an exam tomorrow. Maybe you will not want to be in my section?” The student replied: “You mean, I might fail tomorrow’s exam. So what? So I won’t pass your exam at the end of the semester. But for the first time in my life, I am listening to lectures that I want to listen to, and in which I am learning something. I don’t care if I pass the exam. Please sign me up”. Of course, it touched me, but I don’t know how he did on the exam.

This incident also provides an answer to a certain question that we, university professors in the U.S., have often discussed. Why pay us salaries so far above high school teachers’ level, when everyone who can teach mathematics in high school could teach an undergraduate mathematics course, at least in the first two years. The answer was given by this student: so that students could see an intellectual level that they haven’t seen before, so that they know what they can reach for. I am happy that I played a small part in this.

The Accident

(a near-fatal accident and its very positive aftermath)

At the beginning of 2002, I was getting ready to travel to New Zealand for my Shabbaton. However, a most devastating car accident nearly put a stop to the whole trip. I will briefly describe

this accident, but my goal is to tell you about the unexpected positive aftermath of this near-fatal accident.

I was driving to the university and was just one kilometer down the freeway from my town. This was the place where the freeway forked, with one arm going to the military base. Remarkably, I was not even going over the speed limit. The large vehicle driving in front of me was blocking the view, and suddenly, without braking, it veered into the next lane to the left (I was driving in the far right lane), and in front of me, 20 or 30 meters ahead, I saw a blue car standing. It stopped to drop off the soldier who hitched a tremp (ride) in it. It did not even pull over to the side of the road (I would have been able to go around it on the left) but was standing diagonally. I had no time to look to the left to see if there was a car in the left lane. What I could do was hit the car in front of me while braking. I would have been fine, but I would have killed the soldier getting out of the car.

I did the only thing that endangered only me. I swerved to the right, off the road, and, braking on the sand, was flying at a speed of 90 km/h toward a pillar about 20 or 30 meters ahead of me. This pillar was a support of a pedestrian bridge. Soldiers used this bridge to cross to the other side of the freeway, where the bus headed in the opposite direction stopped. For a split second, the car was flying toward this pillar. Several thoughts managed to race through my mind. The first was that I was about to die, and the second was that I “had done enough” (this was about my life). Curiously, there was neither horror nor fear — there was no time for that. The feeling was that the pillar was approaching very slowly somehow. I could see it in great detail (and I remember those details now), even though it lasted only a split second.

I had never noticed before how these concrete pillars were constructed. It was an acute triangle with its sharp vertex

pointing toward me. This saved my life. I crashed into this edge, and it hacked my car in half like an axe. That is, it hacked the engine, which acted as a shock absorber. The base of the passenger compartment was not damaged, and the people who ran up were able to open the doors. Of course, without a seatbelt, I would have crushed through the windshield, head forward. But in this case, I hit the steering wheel (there were no airbags), which broke at the base (this was also envisioned by the design), and broke a bone of my trachea (no big deal — it healed).

Several cars stopped, and people ran up to me. There were also several soldiers standing at the bus stop ahead, and they also came over. This idiot, the driver of the blue car, could have driven another 10 meters and pulled over at the bus stop. Incidentally, he did not run up to me — he drove off immediately. There was no blue car of any shade among the vehicles standing there. The people who ran up opened the door, and I asked to call my wife. These fine people made the call and put the phone to my ear, so that my wife could hear my voice, not someone else's.

It was early morning, and my son had not yet left for the army (right around the place where I crashed). They arrived immediately, simultaneously with the ambulance. This was lucky. Luda demanded that they take me to the hospital of our university in the center of Tel Aviv. They wanted to take me some place completely different. The ambulance crew consisted of a nurse and a volunteer, complete amateurs. I thought that I was about to die anyway — that's how horribly I felt inside. I could hardly breathe. But I was nauseous, and what I really didn't want was to suffocate if I vomit. I could not turn my head.

Luda was great — she called my friend Dan Amir, the former rector of the university. At the hospital where I was being taken, all the professors either knew me or had heard about me. And

when the ambulance arrived at the hospital, many of them already knew what had happened and were waiting for the vehicle in the street. I think the hospital director was there too. (Might as well go out with a bang, right? Well, I wasn't thinking about that.)

I will spare you the details of the subsequent humdrum. It was very hard. But before I talk about the miracles that followed, I will mention two pieces of evidence showing how dire this incident was. Immediately after the formidable blow, while I was still in the car, Miriam, my main assistant in the publication of the GAFA journal, drove on the freeway past the crash site. Of course, she didn't know that it was me inside the car. Having arrived at the office, she said that she saw a fatal accident on the road. Seeing the car split in half, one wouldn't believe that the driver inside had survived.

And here's another illustration. A few weeks later, leaning on Luda for support, I hobbled to the university to go to my office. I took out the keys from the right pocket of the jacket I was wearing in the car at the time of the accident. Both keys on the bunch were bent in half at a right angle! In the pocket, they were touching the metal buckle of the seatbelt. If it hadn't been for these keys, the buckle would have shattered my bone. The force of the impact bent the two keys in half.

Of course, the recovery proceeded with terrible pains and took a very long time, although I was already able to work after a month. However, this period (still a very short one) aside, the aftermath of this accident was very positive for me!

For one thing, I grew smarter — abruptly and significantly! I suddenly saw that I could solve problems that had been at a standstill for a long time, while I didn't know how to tackle them. Perhaps I reverted to the years of my youth, or maybe even surpassed that level. I shared this with Gromov, and he told me

that this effect is well-known in medicine. The explanation is that our brain begins to work extra hard to heal all the internal impairments that resulted from the accident. (I had no external bleeding, but internal hemorrhage was widespread). This heightened brain activity continues after healing. Indeed, I was feeling this new breath in science for over 10 years.

But that was not all, although that alone would have been worth having to survive this dreadful incident. All my adult life, I suffered from extreme motion sickness on ships and boats, as well as when traveling by car. The condition was so extreme that I was afraid to sail on ships, and it was simply impossible for me to get into a boat. Amazingly, it went away completely. I noticed this by chance while taking a boat tour in New Zealand to see albatrosses. These are huge, amazing birds that fly from their nests into the ocean for periods of up to five years, staying airborne the entire time. I was with my wife, and she rarely gets seasick. She was holding up well, but I wasn't feeling anything at all. I then decided to test myself again and again and realized that I no longer get motion sickness. As a result, we started going on cruises, and they turned into a standard vacation fare for us.

But even that is not all. For decades, I suffered from terrible heartburn. In some places, I couldn't even sleep after dinner. But after this accident, I never felt heartburn again, for almost 20 years now. Many different minor things inside me got "fixed" as a result of this event. These days, when I complain about being stuck with a mathematical problem, my wife wonders in jest if she should hit me on the head with a wooden mallet to make me grow smarter again.

