

**SCIENCE, RELIGION, ETHNICITY**

*The question “Who are you?”, Sergey Petrovich Kapitsa answered,*

*“I am a Russian Orthodox atheist”.*

*Then I answer to myself like that,*

*“I am a Tatar, a Russian, a non-religious Muslim”.*

I'll explain why I answered that way. I was born into a Tatar family. My father Iskander Nigmatulovich Nigmatulin (1908–1980) came from the noble Tatar family of the Teregulovs and the Enikeevs<sup>1</sup>, who lived in the village of Kargaly in Bashkortostan. There he graduated from the Tatar school, studied in Moscow from his age of 18 and became a professor at Bauman Moscow State Technical University. My mother Galiya Lutfullovna (1914–2005) also comes from the Tatar family of Lutfulla Abdulgazizov (1965–1913), a well-known teacher of the Russian language in Bashkortostan, in Troitsk (at that time in the Orenburg province, and now in the Chelyabinsk region). She became a doctor in Ufa, and, having got married to my father, became a resident of Moscow. And we, three brothers, grew up in the center of Moscow, near the Kremlin, brought up by Russian literature and culture.

**1. About religions and atheism.**

My father was an atheist, and everyone of us in our family and school were raised on atheism. For the last ten years, while remaining non-religious, I stopped being an atheist and realized that science is not omnipotent, cannot explain everything and understand the mystery of existence, namely: the mystery of the

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<sup>1</sup> The Teregulovs and the Enikeevs professed Islam and served the Russian state since the time of Ivan III Vasilyevich. During the reign of Peter the Great, they refused to be baptized and were stripped of their titles and property. Catherine returned their titles to them, but the property had already been lost, after which they moved from Temnikovsky District of present-day Mordovia to Bashkiria. In those years, they called their ethnicity not as Tatars, but as the people of Temen (Tyumen).

existing stunning diversity of living beings on our planet and the mystery of the human soul. People who think this way are called agnostics.

We know that in our galaxy, after the Big Bang, hydrogen and carbon atoms were formed at some stage. What (and I would like to say who) attributed to them, these simple atoms (according to the current knowledge), such properties that led to consequences to be astounding by their complexity. After all, from these seemingly simple atoms, organic molecules were formed. And they formed amino acids, and then very complex protein molecules, which formed many thousands of plant species and interacting living creatures of various sizes from fractions of a micron<sup>2</sup> (viruses and bacteria) to several meters and even tens of meters (whales). Many thousands of species of strikingly diverse fish, birds, and mammals – herbivores and herbivore-eating predators – have formed. Many thousands of small insect species that lead complexly organized life, even though their brains are tenths of a millimeter in size, are especially striking. And all based on carbon and hydrogen atoms, calcium and small additions of other atoms. And finally, a thinking person, who wants to understand in detail, with his hydrocarbon brain, how (s)he (the hydrocarbon one) and the world work. Moreover, using the power of own inventive mind, the person transforms many things in the world around and has learned to fly at hypersonic speeds. But where did the laws of nature and the world come from, which led to this state. Who (or what) attributed far-reaching (over billions of years) consequences to the atoms of hydrogen and carbon and such laws of quantum mechanics and electrodynamics? Who prescribed Newton Laws, in particular the law of universal gravitation? One begins fantasizing about the Superior Mind guiding all the processes.

Religions say that these laws were prescribed and created by God or many gods. According to the major religions (Jewish, Catholic, Orthodox, and Muslim),

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<sup>2</sup> A micron is a thousandth of a millimeter.

it was God who gave us the opportunity for cognizing these laws. And it's impossible to prove it, one can only believe it. Agnostics, who I belong to, say that the mystery of "the beginning of all beginnings" is incognizable. Agnostics at least think about it. And atheists don't think about it.

Where is the beginning of all beginnings from? And various people – atheists, agnostics, and believers in God – think about this in different ways, or rather, believe in different ways. No science can answer these questions. Atheism, agnosticism, and religiosity are different types of faith. And science cannot exclude faith.

Although faith is not needed in the most scientific, economic and other types of activities, it can even be excessive, distracting from business. Moreover, faith can lead to dogmatism. Science learns all the laws necessary for human life, but it will never help us understand "the beginning of all beginnings" and who or what the laws of nature are prescribed by.

The vast majority of scientific activity leads to atheism, because scientists do not need faith in God in their work, in particular, in measuring the world's parameters. Therefore, most scientists are atheists, but not all.

For example, the great mathematician and physicist Nikolay Nikolaevich Bogolyubov (1909–1992), who headed for several years the Joint Institute for Nuclear Research in Dubna and the Department of Mathematics of the USSR Academy of Sciences, was a truly Orthodox Christian.

Baku residents told me an amazing story about Bogolyubov, the case to happen during his visit to Baku. When he was shown the mosque, he entered it, took off his shoes and went to a corner. There he prayed in the Orthodox Cristian way.

The Nobel Prize-winning Pakistani and British theoretical physicist Abdus Salam (1926–1996) was a devout Muslim. He, who was married to an Englishwoman and had his children were English, nevertheless performed prayer (namaz) five times a day.

And in our communist past, everyone was taught that religion was the opium for the people and a relic of the dark past. And that's what atheists think. But that the great Bogolyubov, the great Abdus Salam and many other great scientists who believed in God had a relic of the past and were under opium, I will never agree with this.

Therefore, not being religious, I believe that religion is needed by a significant part of humanity as the fundamental basis of existence in their reflections. And for a significant part of humanity, religion helps to harmonize life and educate people and offers ceremonies for the most important events in life, for example, birth, marriage, funeral services.

## **2. About ethnicity.**

Reflections on the diversity of people are also accompanied by reflections on the role of ethnicity (or nationality, as it is understood in our country) in the life of society.

Growing up in the Soviet system, we have always stated that all nations are equal not only in the field of law, but also in their quality, although each nation implied the presence of good and bad, kind and evil people. Moreover, we used to think that the culture and education of humanity will develop and strengthen their influence, and with the development of culture and education, the people's quality will improve. And in Russia, European culture, science, and European-type universities were considered the source of education. Our first scientist, M. V. Lomonosov, studied in Germany.

In connection with the 80th anniversary of the Victory of our fathers and grandfathers in the Great Patriotic War, documentaries of those years are now shown, in particular those about German's mass atrocities in the territory of Russia. Many thousands of sons of the educated German people, who gave the world great poets, scientists, and composers, committed mass atrocities against the civilian population. By the way, having entered Germany, despite their seemingly legitimate sense of revenge, our soldiers committed no atrocities

against the civilian population. My father recounted a scene in May 1945, how in the street of defeated Berlin, a Soviet soldier brought a barrel of soup and poured it out to the Germans lined up holding their bowls. Moreover, none of the Germans tried to break the line. Everyone waited very carefully.

After the defeat, the German people, in particular the children of those who brought Hitler to power in democratic elections, the children of those who not only fought against us, but also committed atrocities, condemned fascism and the atrocities committed by their fellow countrymen – German fascists.

Today, Germany is ruled by the grandchildren of the Germans who committed atrocities on our land. Among them, the share of those who have received university diplomas, as well as the share of those who are engaged in creative work, has significantly increased. And after the Russian occupation forces' withdrawal from Germany, the leaders from these grandchildren did everything to weaken Russia's safety, including through Ukraine, by involving the former countries of the socialist camp in NATO. Given the historical memory of the Russian people, who was repeatedly subjected to aggression from the West, the Russian leadership decided starting the Special Military Operation (SVO) in Ukraine.

I'm not going to judge the SVO right now, but Europe is responsible for it too. And Olaf Scholz, the current chancellor, a social democrat, the grandson of an SS general, allots weapons for fighting against us. Friedrich Merz, a Christian democrat and the grandson of an active member of the Nazi Party, will soon become the chancellor. He is going to give rockets to Ukraine for bombing our people. Foreign Minister Annalena Berбок, a young woman, the leader of the Green Party, states that an atomic bomb should be dropped on Russia. Everyone of them, unlike Hitler and his inner circle, have university diplomas.

And instead of doing everything possible to organize negotiations between the feuding parties in the war in Ukraine, for the purpose of stop the hostilities

and negotiating peace, the aforementioned leaders of the German people, together with other European leaders, foment the war.

And only Donald Trump, the president of the country, along with which our country defeated German fascism, began trying to stop the war, but not the leaders of European countries, most of which helped Germany in the war against us. The only exceptions are the leaders of Hungary and Slovakia.

And the most amazing thing is that the sentiments against the people of Russia, against whom they committed atrocities 80 years ago, are again supported by the majority of Germans, the grandchildren of those who tried to destroy us. How to assess it? Are Germans vicious? That even their religion could not limit their aggressiveness.

### **3. What to do?**

My explanation is different. The fact is that when people reach a standard of living typical of Europe and North America, their respect for knowledge and science reduces, and their motivation for high-quality education, including humanities, decreases. Studying is hard. Considerations arise: why do we need science, why torment children? Why study mathematics, sinuses, why write essays on literature, why learn prose and poetry by heart, why learn a foreign language? Why do all this if a person is going to be a taxi driver or work in a hotel? Studying is hard, as it requires nervous efforts. It may be better to play or watch football. After all, for most professions, serious natural sciences and humanities education is not necessary. Why know historical dates, why study the capitals of various countries? Why learn languages, especially the languages of small nations who know the language of a large nation anyway? What for? As the result, education becomes reduced, and the majority of the people lack deep knowledge and beliefs. It is easily suggestible and amenable to primitive propaganda. The scientific and cultural minority breaks away from the people, losing its influence. The quality of the people deteriorates. This is a threat to all

peoples that have reached the acceptable standard of living. Europe and North America are slipping into this state. We are in the same trouble in Russia.

It must be understood that training and education are needed not only for mastering a profession. Training is necessary for people to have intellectual strength and trained brains. Therefore, the people and its youth should be forced to study. And in schools, the volume of training and its depth should be significant and bigger than it is now. This means that studying at school should require considerable effort, i.e. it should be hard. So that everyone (I emphasize, everyone) learns mathematics and sinuses, so that everyone studies physics, chemistry and biology, learns several languages, and writes essays on literature and history. So that the school does not reduce “unnecessary” subjects under the flag of specialization. For specializing, one can only strengthen “necessary” subjects.

In this regard, I would like to discuss the role of ethnicity. Ethnic groups, their cultures, and in particular their languages must be protected. I believe that current scientific knowledge underestimates the importance of preserving all ethnic groups. Although there is a theorem in ethnography:

An ethnic group does not last forever. The ethnic process is eternal.

Small ethnic groups are especially not eternal in our time of rapid mixing. Many people say why bother with them, they will disappear in any case. But every human being is mortal, and yet we try to delay each human being’s departure. It’s part of humanism.

Ivan Akhmetovich and Akhmet Ivanovich will meet more and more often. Speaking about the preservation of ethnicity, one should realize that isolating ethnic groups “by blood”, for preserving its “purity”, is impossible. Efforts should be focused on preserving the ethnic groups’ languages and their cultures. And for this, it is necessary to create programs (including federal ones), which will motivate learning the languages of the peoples of Russia. In national republics, at schools, the languages of so-called indigenous ethnic groups should be learned,

encouraging the development of schools with advanced study of both Russian and the language of the indigenous people. And so that they do not lose the Unified State Exam in the Russian language, the combined Unified State Exam in Russian and Bashkir, in Russian and Tatar, in Russian and Chechen, etc., should be provided for the graduates of the schools.

The experience shows that even the Russian language of the persons, who have two native languages by the age of 25–30, is richer than that of monolingual Russians. I can judge this by the example of my father, whom I mentioned above, and by the example of several of my friends from Bashkortostan and Tatarstan, who studied in Bashkir and Tatar schools, and then became professors there and in Moscow.

My teacher, academician Khalil Akhmedovich Rakhmatulin (1909–1988) studied in Tokmak, Kyrgyzstan, and in Uzbekistan. For his mathematical talent, he could enter Moscow University though his Russian was underdeveloped, and there he became a professor and the founder of a new department. At the banquet in the Kremlin in honor of the launch of the first satellite, when a toast to Soviet science was announced, S. P. Korolev, in the presence of N. S. Khrushchev and other leaders of the country, stood up and loudly said that among the scientists, he should, first of all, mention Rakhmatulin and Keldysh. In that order. The Russian language of Kh. A. Rakhmatulin, which became his native, along with Uzbek, Kyrgyz, Kazakh and Tatar, was very imaginative and rich. He said that everyone should have two languages. One is for work, and another – for writing poems.

For the great figures of Russian culture, such as A. S. Pushkin, I. S. Turgenev, L. N. Tolstoy and many others, French was their second and almost native language.

A second native language provides additional opportunities for developing the creative potential. Multilingualism is the country's wealth, and it ensures positive diversity.

And humanity as a whole will become impoverished if it retains only a dozen languages of the most numerous states, because it will not only become monotonous, but will also be indifferent. And an indifferent and monotonous people loses its humanism. He becomes uninteresting and stops having children. He will not have great poets and figures of culture. He will focus on comfort and will only be interested in football matches. And it will degrade. And big monotonous states will fight.

Therefore, large ethnic groups should at least help preserve and develop the diversity of languages and cultures, including small ethnic groups that dissolve “by blood” into large ethnic groups.