

# Paul Josephson: studying history of science in Russia and the Soviet Union

Kateřina Fantová

**Paul Josephson** is an American historian who focuses on the history of science and the environment and also on Russia. He has published many books and articles concerning his field and is considered a household name. He and I talked on the 3rd of May 2024 after a History of Science seminar organized by the Masaryk Institute of the Czech Academy of Sciences. This interview has been authorized.

**When you started studying history, what was your journey into focusing on the history of science, environment, and technology? When you were a student, it wasn't even a field, right?**

Yes. I went to a liberal arts college in Ohio. I was largely in the biology department. It was one of six majors I tried. There was a student strike against the administration in the early 1970s in which Maoists, Stalinists and others took part. I didn't know Marx so I moved to the philosophy department and began to study Marxist theory. Marxist theory got me interested in Russian history. I was still studying biology. As I came close to the end of my college career, I decided to become a history major and study the Soviet Union.

Then, when I was in graduate school, working on a master's, I suddenly realized that I could study Marxism, science and history all at once. I didn't really know there was a discipline called history of science. The journal *Technology and Culture*, for example, had been published, I think, only since 1959 - that was its first year. And this is the early '70s. That's only 14 years. So, I began to study science in all of the papers I wrote in the courses that I took, and eventually entered a history of science program at MIT, where I thought I'd write a history of the reception of relativity theory and quantum mechanics in the Soviet Union in the 1920s and '30s, which is what I did.

**Why is it important to you to study the history of science? To study it not just from the point of the inventions made but also from the cultural and political background?**

More generally, science is funded to the billions and billions and billions of dollars by governments, by corporations trying to make profits. It's a major economic sector. We need to understand that. Second, many of its practitioners believe it's an objective endeavor. They're just seeking the truth. Historians of science understand that money shapes science, the biases of persons shape science, the absence

of women and people of color until recently in science shapes science. And so we have an obligation to study the history of science and technology as crucial to society and yet also as another social and cultural institution. And the Soviet Union is just a perfect place to study science because the experience is so fraught with danger and passion and scientists being arrested and working on the atomic bomb to get parity with the United States. [As one example, consider] Lysenkoism, which rejected genetics in the late 1940s. There's so much going on. It's so damn interesting.

When I entered the history of science and technology, it was during the Cold War. So there were also selfishly good prospects that I would find a job somewhere with my special knowledge. I did not want to work for the intelligence agencies, the CIA, for example. I was lucky to get an academic job because competition for an academic job was so severe. When I applied for my professorship at Kolby College, where I ended up, there were 90 applicants for this position. They chose me, but they could have chosen someone else, equally as good.

**Your work focuses on Russia and the Soviet Union. You mentioned the belief that science should be international and impartial, but that's not always reality. Is there a difference between the role that science plays in Russia and the Soviet Union to the one that it plays in other countries? Is it more political in Russia or maybe less?**

It's always more political in Russia. On the other hand, I've written a lot, and I've done a lot of research. I've written 16 books. In a few of the books, I make the case that the Soviet Union is more unique than it is like other places in the world in terms of science and engineering. But in other books I've written, I've made the argument that it's the science and technology that are so powerful and directing, almost a technologically determinist argument. So, I go back and forth on that as well. But clearly, it's a different kettle of fish or kettle of scientists, where politics plays an important role.

I should also point out that I got tired of working just on the Soviet Union. When the Soviet Union broke up, I moved to different fields, and I'm very politically active, and my brain goes wherever it wants. I was trained as a historian of physics. I became a historian of technology and an environmental historian. And then I also like to write about interesting things. I would say that every other project I do is Russia Soviet and then something else. So, for example, I've written a book called *Traffic*, which is a history of speed bumps in the roadway.

And it's a metaphor for saying that society needs speed bumps when engineers say, we need to go this way. I say, Let's put a speed bump there. Let's slow down and decide if it's good for society. I've written a history of fish sticks, and I've written this history of chickens, of sports bras, and a couple of other things. So, I write about both the former Soviet Union and new things.

**How much do you think the attitudes have changed over the years, regarding your research into the history of science in Russia? Most of today's students cannot imagine going into archives in Moscow or St. Petersburg. Was it easier or more difficult in the past?**

When you went to the Soviet Union during Soviet times, it was very hard. There was a game that the archivists played with you, about whether you could have the material you requested, how many folders they would give in a day. You really had to know your stuff or, as a historian would call it technically, you really had to know your shit. So, I knew my shit and I was also very lucky. For example, I've worked on the history of physics, which - Soviets aren't going to let you go into archives. And furthermore, I was not accepted into the exchange programme, my then-wife was. So, I got a visa that said 'spouse of a scholar'.

And yet, they interfered with her research on 19th century peasant studies, and they allowed me to do my research. I talked my way into archives. I met a historian of physics, who worked in the physics institute, who was a delightful scholar and a good man, and he helped me. So from the start I had archival access.

And then, as the Soviet Union broke up, I kept on going back. Russian archivists think I am a good guy, I've been in the archives that are in the provinces, not in Moscow and St. Petersburg - in institutions, in the far north, in Siberia. I've always had luck and access. But with the war and invasion of Ukraine, I think it's unsafe for an American to go. With the war, I think young scholars should not do Russian topics that require archival research. They can still do topics on Russia, and there's a lot of stuff online. They can do Ukraine, many of the Ukrainian archives have been digitized, but they should not go to Russia. It's disappointing but you don't support a murderous regime.

**Your most recent book, *Hero Projects*, came out just a month and a half ago, in March 2024. It tracks the mega-projects of the Russian Empire, the USSR and the Russian Federation. One of chapters concerns the Crimean bridge, which was built to connect the annexed Crimea peninsula to the Russian mainland, and later damaged multiple times during the war. What does the bridge and its damage mean to Putin and Russia in general, especially in the context of the attack on Ukraine?**

Well, the bridge hasn't come down. I'm hoping that for his (Putin's) birthday this October, the bridge will come down. But - the book talks about how these big projects for resource development, transport and so on, all serve military purposes in one way or another. And the Crimean bridge specifically. In that chapter, I talk about engineers and bridges as being a military tool, and the construction of the Crimean bridge. Hitler tried to build one there too, and Stalin did as well. Putin succeeded - and he drove the first truck over the bridge. Isn't that surprising? That they orchestrated Putin to drive over the bridge.

My hope is that with the aid Ukraine now has, they will bring that bridge down. And hurt Russia and its pride.

**Previously, you have also written about the Russian relations to the environment. An overarching theme you mention is Russia's tendency to take absolute control of whatever natural resources it has available. Maybe in other countries we try to understand the environment and their place in it, but not in Russia. How does this impact the way people think about themselves and their relation to the environment?**

Well, you know, people everywhere have a NIMBY attitude towards environmental problems - "not in my backyard". But it is true that essentially since the time of Peter the Great, the state has seen natural resources, forests, now oil and gas, platinum, water resources, what have you - as crucial to state power. Anything or anyone that gets in the way of development programs will be looked at with suspicion. In the Soviet period, of course, dissent was prevented. In the 1990s, under Yeltsin, there was much more openness and discussion and public participation, but we've moved to a stage again where the state has basically prevented public protest. The Putin government considers any NGOs that get funding from the west to be foreign agents, which is as bad as it sounds. That way they prevent significant opposition to Russian development the way they prevented opposition prevented under Soviet power.

And people of course want a clean environment; they especially want it for their children. Russians have had to live with very bad environmental situations. According to a state report I recently saw only 1% of drinking water in Russia today actually meets state standards for health. This just goes to show the dangers of the absence of public input into environmental problems. Not saying the public knows everything, but when you make officials, businesspeople, engineers, and others understand that they're moving too quickly, they don't see the impacts on local people and cultures - that's better than a situation than what you have in Russia where everything is for the state and the state is pursuing military programs.

**If there was some advice you could give to current students of history, who are maybe for the first time encountering and becoming interested in history of science, what would it be?**

I have fairly standard advice along those lines - as an historian of science I want to see more historians of science. But what I tell students with a humanistic background is that the humanists have just as much right and responsibility to study science as an institution, as a field of research, as part of culture, and point out its strengths and weaknesses. Scientists must study the humanities in order to participate as full members in society. Those are grotesque simplifications, but with humanists and scientists speaking together, there's a much greater chance that the

outcomes at the end will reflect broader social, cultural, political values like democracy, freedom, equity, equality and justice.

I just finished a book called *Race, Gender and Technology in the Internet Age*, and the whole book is about how we see racial and gender inequalities appear, even in the simplest objects that we think must be entirely free of bias. We need more students today studying these things in the Internet age to make sure that we all live in a better place tomorrow.

**Kateřina Fantová**

Je studentkou historie na ÚSD FFUK, kde momentálně píše svou bakalářskou práci na téma vědců v 19. století. Studiu dějin vědy a technologií by se chtěla věnovat i nadále.