

# I DO MISS THOSE MOUNTAINS

**In the extended interview conducted by Irena Cieślińska, you argue that one needs a particular temperament to be a scientist, because things keep turning into flops.**

MAGDALENA FIKUS: My daughter recalled that I would come home in the evenings, let my arms drop, and say, “I didn’t manage to make it work.” In this profession, we constantly think about which direction to move in; we keep testing and trying. When the answer is obvious, it’s not scientific research. But the fact that “it didn’t work again” is terrible.

**Really that bad?**

Working together with people I persuaded to join me, and then seeing the whole idea turn out to be a mistake – that’s a disaster. I’ve always thought I have thick skin and that has allowed me to survive all of this. More sensitive people would have had a very hard time.

**And the argument that, despite everything, you’re contributing to the edifice of science because others will know they need to try different paths?**

There are no journals that publish negative results. At best, you can tell a colleague about it – and only in confidence, trusting that they won’t spread it around.

**If that’s the case, the scientist’s path is strewn with thorns.**

And poorly paid on top of that.

**So why do it?**

I suppose because, despite all of that, you can have a wonderful life. If you have a good boss, good coworkers, and stability, then you spend your whole life having great fun, like a child. Science is like a treasure hunt. You ask questions and solve puzzles. Imagine a post office clerk loudly stamping mail day in and day out. I’ve always felt sorry for those women, having to stamp things so loudly all the time.



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Reflections on the bittersweet life of a scientist, building the Warsaw Science Festival, and whether knowledge helps one come to terms with aging are offered by **Prof. Magdalena Fikus** – a biochemist, Professor Emerita at the Institute of Biochemistry and Biophysics of the Polish Academy of Sciences, and co-founder of the Warsaw Science Festival.



Prof. David Shugar, Anna Lesyng (who worked in the Science Festival secretariat until 2021), Prof. Magdalena Fikus, Prof. Marek Niezgódka (director of the Interdisciplinary Center for Mathematical and Computational Modeling at the University of Warsaw until 2018; member of the Science Festival Program Council until 2025), prof. Bogdan Lesyng (Department of Biophysics, Institute of Experimental Physics, University of Warsaw, member of the Science Festival Program Council until 2021), Prof. Maciej Geller (director of the Science Festival until 2013, passed away on January 20, 2014)



SCIENCE FESTIVAL ARCHIVES

**Routine failures aren't part and parcel of post office work.**

But could you really call it a life...?

**It's subjective. There are people who like that kind of work.**

Maybe that's why I went into science – because otherwise I wouldn't have known how to do anything else.

**You say it's a treasure hunt, but perhaps it's more like scoring points and fighting for every penny, right?**

It's a matter of how science is organized. And honestly, if there's anything enjoyable about being old and retired, it's the fact that those battles no longer concern me. Where will I get the funding from, how much will it be, and what will I be obligated to do? We adopted the grant system to fund science properly, but it's a trap.

**Let's go back to the puzzles. Do you remember the coolest question you asked during your scientific work?**

I remember a very cool one, but it was quashed by my then supervisor. Those are upsetting situations. That's why I emphasize how extremely important the working atmosphere is – whether people are friendly toward each other. In science, this varies, because this path is often chosen by ambitious people who compete with each other.

Of the questions I have managed to ask and which I have sought answers, the most interesting concerned the impact of electric fields on the cell. We worked in a team of physicists, biologists, and chemists. At the time, it was a new field; today, of course, it has flourished.

**Do you think there is a particular scientist's ethos?**

Science is practiced by people, simply put, so universal norms apply to us. Those norms are sometimes violated, as scientists also lie, cheat, and steal others' results – hich is, of course, reprehensible.

One certainly must be careful when transferring scientific content. We should tell the public only what has been proven things, promote verified facts, and clearly indicate what remains a hypothesis, ideally pointing out both its strengths and weaknesses. Popularizing science may not be the responsibility of every scientist, but most researchers are aware of the need maintain contact with non-scientists.

**Exactly. Why did you become so involved in popularization? You'll laugh at that, but I think you're an icon of science popularization – at least in Warsaw.**

And I'm laughing! There was a moment when I felt that I had fulfilled myself as a scientist – that everything I was capable of doing, and everything I had been able to do under the circumstances, I had already done. Most of my life was spent in People's Republic

of Poland, where money was even scarcer than it is today and everything was makeshift, held together with stopgap solutions and quick fixes.

I was 65 years old, with 25 years of academic lecturing in genetics at various universities behind me: technical universities, teachers training colleges, medical academies, and at universities. I knew that I could lecture on my subject properly and that people understood it, because during exams, I was not interested in having students list facts and data, but in checking whether they actually knew what they were talking about.

In addition, I was able to adapt. You have to speak differently to students of physics than to those of pedagogy – these are different mindsets. The only thing I never tried was teaching in primary or secondary schools. I was afraid.

### What about the Science Festival?

We launched the first one in 1997. It grew out of fanciful ideas of optimists. There were no such traditions, no places where one could hear about science en masse. *Sonda* was broadcast television – an excellent program in its own right – and there were a few magazines. And that was it.

It was my boss, Prof. Dawid Shugar, who, after returning from Edinburgh, told the audience about an event there. “They call it a science festival. It’s interesting – people come and listen to talks about science. Why don’t we organize a few seminars?” After years of lecturing, I was mentally ready for such an activity. And that’s how it started. We found Maciej Geller, who was exceptionally good at establishing contact with people. We worked well together and collaborated on the festival for 14 years. There was Maciej Geller, Anka Lesyng (the secretary), her husband Bogdan Lesyng, and a program council. In truth, we invented this festival with nothing more than a print-out of the Edinburgh Festival program to look at.

I remember a meeting with the rector of the university, the rector of the technical university, and the president of the Polish Academy of Sciences – three distinguished gentlemen, with Maciej and me present. We received their support, and the president of the Polish Academy of Sciences wrote to all institute directors, informing them about the initiative and asking for cooperation, as well as from refraining from charging any fees for this courtesy.

Neither me nor Maciej earned a single penny during the first editions, although small honoraria came later. But the director of my institute said, “I will pay you a professor’s salary, and you will simply run this festival.” I received the lowest salary rate to which a professor was entitled, but it allowed me to calmly devote myself to the work of popularization.

We were quickly accepted by the scientific community. No one told us “no,” and only very rarely did

anyone ask for money – and even then, they ultimately agreed to participate in the festival free of charge. The issue was, and still is, money. In the beginning, quite frankly... we started with a glass of water, a heap of sand, and in the backyard. It is hard to imagine now, but we wrote letters, called them on landline phones,



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### Prof. Magdalena Fikus

Professor of Molecular Biology, Professor Emerita at the Institute of Biochemistry and Biophysics of the Polish Academy of Sciences. In her scientific work, she has conducted research in the following areas: the function and structure of nucleic acids and their derivatives, genetic engineering of bacteria and fungi, and the mechanical properties (rheology) of cell membranes.

She is a co-founder, co-organizer, and long-time chair of the Program Council for the Science Festival in Warsaw – the first initiative of its kind in Poland. She also co-founded the Science Café at the Science Festival, which is still in operation today (currently managed by the director of the Science Festival, Dr. Zuzanna Toeplitz).

She was awarded the Commander’s Cross with Star of the Order of Polonia Restituta in 2018, and in 2023 she received the Medal of Nicolaus Copernicus Polish Academy of Sciences. She has twice been awarded the title of Science Popularizer by the Ministry of Science and Higher Education and by the PAP service Science in Poland. She serves as Chair of the Science Dissemination Council of the Polish Academy of Sciences from 2017 to 2022. In 2023, at the request of Science Dissemination Council, the President of the Polish Academy of Sciences awarded her the title of Honorary Chairperson of the Council. She is also a long-standing member of the Program Council for the Copernicus Science Center.



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or went to see them in person. E-mail was not widely used yet; I think I first heard about Google during the second festival a friend from *Wiedza i Życie* editorial office told me about it.

And the program of the first edition included more than 70 events over two days.

#### **How many?!**

That's true... At the time, an idea flourishing worldwide was taken up by people who were willing to give it a try and could talk to institutions. Money was always a problem. Some companies promised support and delivered nothing.

This year, there was even a problem with funding from the ministry. As we speak, the 29th Science Festival has already ended, and there is still no decision allocating funds for it! Bureaucratic requirements for an event with such a tradition have multiplied over recent months. Granted, at the beginning we did everything "with sand and water" and for a smile – but in 2025? Things cannot go on like this. The state must take the support for science popularization, thus also adult education – very seriously.

**All the more so because we are facing a counterrevolution undermining reason. There is a huge problem with mass disinformation and pseudoscience. Is this a battle between good and evil?**

You know, I used to think that we would simply explain science to people. But now, when I listen to the radio and watch television – mainly TOK FM, TVN24,

TVP – the things that so-called ordinary people say on air are truly frightening. I still hope that the good will prevail, though my hopes are fading.

**There are some scientists who say: "We cannot give up; we must keep talking and keep fighting for reason."**

If I weren't ill, I would be fighting too. Individual scientists should be supported by institutions or assemblies of scholars that respond to such phenomena. They should also be supported by the state, as we mentioned earlier.

One cannot give up, but there is no optimism in it. For me, it feels like a lament from the valley of misfortune – mutual consolation, telling one another that somehow we must endure.

And how should we talk about science so that more people are willing to listen? This is the real challenge. The fundamental problem is that the language of science must be cautious. It must explain not only what we already know, but also clearly indicate where the weaknesses lie. Pseudoscience, by contrast, is free to propose almost any thesis, often without adequate support, while debunking such claims requires considerable effort.

**Do you think you need to start playing this game and speak in a more decisive way?**

But this approach is slippery and extremely difficult. Science always demands evidence, and even when such evidence exists, it may prove to be temporary. The moment something emerges that contradicts it, a hypothesis must be revised or abandoned. This is why scientific discourse places such constant emphasis on the current state of knowledge.

Pseudoscience, by contrast, speaks directly and forcefully is often saturated with emotions. This makes a powerful lure: people are drawn to sensation rather than a calm attitude or a nuanced approach.

You know, science, of course, can be communicated in a variety of ways. As far as its promotion is concerned, Poland could compete at the Olympic level. There is a great deal of popularization on the Internet, which is valuable, but it is not sufficient. The key lies in direct contact with scientists – the opportunity to meet them in person, see their equipment, or even handle their instruments. In institutions such as the CNK (Copernicus Science Centre), visitors can watch demonstrations and engage with carefully prepared experiments. And if we want science to develop and people to understand what scientists are actually working on, this kind of direct contact is essential.

**When you are online, you have a completely different outreach capacity.**

That is why you need to do both. The Science Café, which was established as part of the festival and

once attracted over 100 visitors, now hosts in-person attendees but is viewed by over 1,000 people online.

**What is it about you that makes people love you so much? Because you surely have a thing or two on your conscience.**

Everyone does!

**When I talk to my fellow journalists and popularizers, Magda Fikus is always spoken of very warmly.**

I am anything but aggressive. Maybe it comes down to that. It is not always an advantage, either. For example, I was afraid to ever argue with my husband, and after 29 years we got divorced. In the courtroom, the judge said that she could not really understand why we wanted to part ways. We were both non-aggressive, but we no longer wanted to live together.

I am also happy to listen to arguments and allow myself to be persuaded to change my mind when those arguments are convincing. It was also easy to persuade me to participate in various events. That is something people appreciate.

**Do you still have that notebook with the names of scientists worth interviewing?**

This narrow, long one, with quite a lot of wear and tear. Green. I still have it somewhere.

**I could always count on it.**

Sometimes I still help people by recommending them for interviews. But the number of people I know is dwindling. Last time I walked down the hallway of my institute, I didn't recognize anyone anymore.

**Do you think being knowledgeable in biology is helpful in old age?**

I think so. I am definitely immune to the nonsense found on the Internet. Recently, my caregiver showed me a "tip": soak potatoes in alcohol, apply them to the skin, strap a bandage over them, and after a week the pain will go away. I tend to think about what, if anything, could be released by a potato, how it would penetrate the skin, and how it could possibly have any effect. That kind of thinking makes you immune to such ideas. So yes, biology does help me with endure the state of being old.

**But you will never give in to illusory hope. Maybe it's nice to have such hope.**

Very rarely does anything come of it. I am not about to die of these diseases yet, but I know that they are incurable. Have you read Grynberg's *The Year I Didn't Die*?

**I'm scared.**

No! No need to be afraid. It's a very good book. It's about being on the edge.

Well, I'm not standing on that threshold yet. However, I don't know if, at a critical moment, I would refuse to drink water from Lourdes if someone assured me that it would heal me. I don't know if I would turn to a priest. "We know as much about ourselves as we have been tested," said Szymborska. And this is a fantastic sentence.

**You speak quite openly in public about old age and dying. Does that help?**

No, but it does no harm. Old age is hideous. It is even easier for me to accept it because I can still read, watch TV, and use the computer. I am still in touch with life. In a moment, however, these eyes may refuse to obey. But surprisingly, I have no desire to lecture 300 people about anything.

**When does old age start?**

When you realize that you're in the "never" land. I realized for the first time that I would never go skiing again when I fell on the slope and couldn't get up on my own. Then I sold my car, and recently my gardening plot. These are the annoyances of being old.

You can't give up, but there's no optimism in that. For me, it is a moan from the valley of misfortune – mutual consolation that one has to hold on somehow, after all.

**Your mind is all right.**

It holds together, but you know, sometimes I forget what happened in the morning. My oxygen saturation is at 95%, and it should be 99%. That has affect the brain.

**Urszula Koziol wrote a poem full of anger. "It's fine for you to laugh at me / you think I'm an exhibit (...) Give me a photocopier / or whatever you have on hand / because I'm about to lose it when I think about it / don't you understand that I will never / ever write Don Quixote again.**

It's something like this. It's not as strong a feeling as anger – perhaps more like disappointment – but it's not passive. I am not waiting for illusory hope, but breakthroughs can happen. In the case of my lung disease, COPD, new medications are becoming available. There is one such medication that allows me to move around reasonably well. I couldn't get by without it. I do miss those mountains.

INTERVIEW BY KAROLINA GŁOWACKA