

Schrödinger's mousetrap

Part 7: Lessons from the past.

Nicola Spaldin

"How could he have known?" Ludmilla Shlomiuka asked herself frantically. "How could he possibly have known?"

The interview with Inspector Lister had started uneventfully. She had expected the question about her relationship with Rufus Jaeger, of course. The stereotype of the beautiful young researcher and the brilliant professor just lends itself to gossip. And it's no secret that de Bruijn does his part to propagate the rumours. It's sad that he's so bitter and confused. He blames Jaeger for his lack of professional advancement — now that is just plain silly — and he envies the excellent collaboration she has with him. Yes, he's been obsessed with her since the day she joined the research group! Lister had asked whether she had received any strange messages from him recently. Of course, she said no. At least no more strange than his usual attentions.

And where was she during the morning break? In the hallway, where the coffee was served, talking to various friends and colleagues. Yes, she also talked to Jaeger; in fact they were discussing the demonstration when de Bruijn came along looking for an argument. Everyone must have noticed him squabbling with Jaeger, it was really quite awkward.

She had also carefully prepared her response to cover her husband: "Dmitri! He suffers from Parkinson's disease and is very sick. Thank goodness that we have such good medical facilities in this country! This morning he was heavily drugged and could barely walk." Surely Lister did not think that Dmitri had been jealous and... She'd pulled that one off rather well, she thought, complete with some convincing tears and sobs. Lister had been quite embarrassed.

And yes, of course she felt sorry for Feng. It was a pity that he had not calibrated the detector correctly, but at least his research was back on track now. No, she hadn't been an author on the retracted paper; she was working on a different project at the time. Yes, she'd heard a little about his latest project with



Petra Pruszczyński; it was apparently quite a breakthrough in optics. She was very much looking forward to reading the paper; there were rumours that *Nature* was rushing it through for publication. No, she didn't think that he was the murdering type.

But her mother? How could he have known? It had been almost 35 years since the state department sent its science envoy to Dubna! She only knew herself because of the old handwritten lab books in her mother's attic. There would be official records listing Jaeger as a member of the envoy of course, but how could Lister have seen them? Surely they were buried in a dusty cabinet somewhere in Washington. There were no leads in the open literature; joint publication would never have been allowed, and anyway there had not been a collaborative project to write about. Just the lab books.

How enthralled she had been when she had found them! Everything was there. The fundamental mathematical development and suggestions for implementation that were decades ahead of their time. The ideas on which Jaeger had built his career.

Growing up, she had heard her mother talk occasionally about the visit. It had been so exciting for the Soviet researchers to discuss their work with outsiders. The nuclear programme was top secret, of course, but they had been

given permission to talk about their basic research, maybe even encouraged to show off a little. At the time her mother had been developing some theoretical aspects of what we now call quantum entanglement. There were very few hours to devote to it because of her commitments to the nuclear programme, but she was playing with some new ideas more-or-less in her spare time. In fact, she wasn't even sure whether they were new or not, as her access to the literature was restricted, but it was interesting to develop them anyway.

Her mother had had such a passion for fundamental physics.

It's funny the things that people remember. Years later she had mentioned that they were separated from the visitors at lunch, not to prevent social interaction, but because the foreigners were served a better quality meal!

And they had been allowed to turn on the heating in the lab, even though it was only October. And she had recounted with great fondness her discussions with the young American who had been so courteous and showed such interest in her results...

Shlomiuka tried to compose herself for the rest of the interview. Why had she applied to join Jaeger's group? Because he was indisputably the leader in the field. No, no other reason. Well, yes, the healthcare for Dmitri was a bonus of course. And he had selected her because she had produced an excellent PhD thesis and she was very good at her work. Yes, she was sure that was the only factor. He probably didn't even recognize the name Shlomiuka. Of course she was a little curious, but no she wasn't resentful. Yes, he was an excellent mentor to her; he had been promoting her for a faculty position of her own before...

Just as she started to collect herself, Lister pulled out his trump card: "And finally, Dr Shlomiuka, is it a coincidence that the state department envoy was sent to Dubna 35 years ago, and that you just celebrated your 34th birthday?"

To be continued...

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Who do you think killed Rufus Jaeger? Catch up on all the evidence and vote for your suspect at www.nature.com/news/mousetrap

