

Schrödinger's mousetrap

Part 10: The trap is sprung.

Henry Gee

Lister had finally lost the battle. Coping with disputatious, driven scientists was far worse than dealing with gun fights on a Saturday night. And trying to imagine what entangled photons looked like had pulled his mind in more directions than he could cope with. In any case, the nicotine patches had failed. He pulled a crumpled pack of Marlboro Reds from his pocket, yanked one free and lit up. The tang of fresh tobacco cast Nigel Lorimer back to his first day at *Nature* many years before, when he was employed by an editor whose reputation for shrewdness equalled his notoriety as a chain-smoker.

"Want one?" Lister asked the suspects gathered in the seminar room. Tony Trotman put up his hand without a second thought. Wilfred de Bruijn hesitated before accepting. Anything, Lister thought, to steady their nerves. His, too.

The crash course in physics, although challenging, had set him on the right path. "I guess you know why I've brought you all here," he began. Petra Pruszczyński looked defiant; Veronique Dubois, impassive; de Bruijn, quietly seething. Fenton Baumgarden? Jirong Feng? Zen surf dudes, both. Ludmilla Shlomiuka had a thousand-yard stare. Trotman withdrew to the back and Lorimer was all attention.

"The reason," continued Lister, "is that each one of you had reason to loathe Rufus Jaeger — perhaps reason enough to kill him. Rufus had you by the balls, Mr Trotman, after that fire you started. And he snatched a Nobel from you, Professor Baumgarden." The Californian said nothing. "Neither of you has a decent alibi for the coffee-break immediately before Rufus's circus act, either. Professor Baumgarden was — get this — meditating, and you, Mr Trotman, say you went for a smoke.

"Those of you who were mingling among the coffee and biscuits aren't off the hook just yet, though. You all still had motive, and there's more than one way to skin a quantum cat." Nobody laughed.

"You're a dedicated editor, Nigel." Lorimer looked up, startled. "But Rufus burst your bubble. And you, Professor Pruszczyński," he almost spat, "hated Rufus Jaeger and all he stood for.

"He stole some of your best ideas, Professor Dubois. Would you kill him, just to get even?" Dubois' lips compressed to a sere line, the question was left hanging in space. Lister pressed home. "You spent the coffee break with Professor Pruszczyński, 'collaborating'



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as you put it. Nobody else can cover your alibis. Collaborating on murder, maybe?

"And Dr Shlomiuka loves everyone, but she has history. Or rather, her mother did. Back in the old country. You found out soon enough that Rufus was not your father but you have been obsessed with your mother's past. Am I right?" Only then did Shlomiuka look up, jolted from her reverie.

"Mr Feng, sent packing in disgrace — again by Rufus — and you, Wilf, forever turned down for promotion by Rufus, who steals not just your ideas but your best girl. And where did you go after being angered to boiling point during the coffee break?" De Bruijn looked broken and, like his spent cigarette, as if all the fire had gone out of him.

"It turns out, apparently, that a prism in Rufus's contraption was switched," Lister went on. "In its place we found one made of a substance with what's called a negative refractive index. The result was that a power-

ful laser beam drilled through Rufus's head. I believe it's called 'negadex.'" Pruszczyński gasped.

"The prism had to be switched during the coffee break before the presentation — only Ludmilla, Jirong and Nigel have good alibis. The rest of you, as I've said ... don't." Pruszczyński looked like she was about to explode.

"But let's step back a little," continued the detective (at last, he was beginning to enjoy himself). "The negadex is a red herring, for when the prism was switched, Rufus Jaeger was already dead." His pause for effect was, well, effective. He lit another Marlboro.

His next words broke what seemed to be a hostile and active silence. "He was killed by a lethal drugs overdose. Now, I don't know much about physics, but narcotics are something I do know about."

Confusion. Pruszczyński, de Bruijn and Lorimer began to talk at once. Lister pressed

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on regardless — all fell silent, to hear where the axe would fall.

“If Rufus was already sitting dead in his chair, the prism could have been switched during the demonstration. Could you have poisoned him, Professor Baumgarden? You broke a confidence to tell me about negadex,” Lorimer looked angrily at Baumgarden, “diverting me from the real cause of death. And you were chairing the session. Perhaps you dosed his glass of water? And what was your real reason for inviting Rufus to give the plenary lecture?”

“Now just wait a goddamned minute...” began Baumgarden, visibly agitated for the second time, but Lister waved him down. Forensics had said Jaeger’s glass on the podium was clean. “Petra and Veronique hated Rufus enough, and have no alibi, either — but they had no opportunity to slip Rufus any poison.” Except with their eyes, he thought, meeting Pruszczyncki’s enraged stare.

“Nigel and Jirong are in the clear,” Lister continued, “both having alibis for the coffee break and sitting a safe distance away from the podium. And are Tony, Wilf and Ludmilla likely to have known about negadex? Tony and Wilf, no. But, you see, it all comes back to Dr Shlomiuka.”

The others shrank back from her, involuntarily, as if she bore a curse. “She knew Rufus very well. Just like she knows all of you. Dear Ludmilla, how she tries to please everyone. Dear, poor Ludmilla. Accent on the ‘poor’. The expense of keeping her husband Dmitri alive! The pressure! The stress! How well she has learned her pharmacology! She kept up her acquaintance with Jirong, and softly but determinedly put him under pressure, making him feel she needed his help and that he had some favours to return.

“I am guessing that now and then he would provide her with various bits of confidential information. Eventually, he even handed her a piece of negadex from Gdansk, all the while innocently believing that Ludmilla was just being curious. Another miscalculation, my dear Jirong.”

Pruszczyncki turned to Feng with a shaft of pure, icy venom. Feng looked away as if slapped. His first error had been a well-publicized mistake; his second, well, would Petra count that in her 10%? But still Lister rolled along.

“Being Ludmilla, she at first only wanted the negadex to praise her mentor, not to bury him.” Damn. Must stop these literary allusions. He’d get laughed off the force.

“But then Ludmilla got a q-mail offering her money to kill Rufus. A lot of money. Enough to keep Dmitri comfortably numb.” Another mental note. Stay off the vintage rock allusions, too, especially those floydian slips. “She quickly real-

ized that her piece of negadex could be invaluable in such an enterprise. So she poisoned Rufus with her husband’s drugs during the coffee break, when she had a perfect alibi — just a little, the exact right amount in a chocolate biscuit she knew Jaeger couldn’t resist — so that some way into the presentation, he would expire. The timing was crucial, but she knew precisely how these drugs would work, and when Rufus was stiff in his chair, Ludmilla could switch the prisms so that nobody would notice, confident that only those who knew about negadex could be blamed.”

This time it was Trotman’s face contorted in fury — how could anyone tamper with his machinery?

“But why would I want to kill Rufus?” protested Shlomiuka. “I liked him!” She burst into sobs — too well-practised, thought Lister, but he stepped down from the dais and sat next to her, reassuring.

“It’s as Oscar Wilde wrote it,” he almost whispered — listening to himself in abject horror. “We always kill the thing we love. And then there was the money. The money you needed for Dmitri.”

“But I never...”

“It was that q-mail from de Bruijn that finally drove you to murder.”

Shlomiuka looked puzzled.

“What?” shrieked de Bruijn, “all I did was complain about him stealing my work!”

“Ah yes,” said Lister, meeting de Bruijn’s incredulous eyes. “What you tried to send was this...” He waved to the back of the room. One of two impassive policemen, guarding the door, dimmed the lights. The other switched on a projector. Time for his own surprise presentation.

A message flashed up on the whiteboard, the typeface ragged under magnification.

Ludmilla, hi. I think you should be careful about your relationship with RJ. He is a liar and a cheat. I will give you an example. He has just accepted a prize of 100,000 Euros for the paper on parallel quantum codes which is entirely my work. I realize now that I should have asked the journal to eliminate Jaeger from the list of authors. Wilf.

Lister spoke out of the shadows, his form only partly illuminated by the incriminating quanta. “But thanks to the laws of physics, Wilf, that wasn’t the message that got

through. As a way of testing her own, rival system, Professor Dubois intercepted the message, destroying most of the text.” Dubois looked horrified as the awful truth superposed itself on her mind. “This,” said Lister, “was what Ludmilla actually received. And knowing Wilf and his hatred for their boss quite well, she never doubted that the message was genuine.”

The old slide dissolved; a new one revolved into view.

Ludmilla I will give you 100,000 Euros to eliminate Jaeger. Wilf.

Shlomiuka stood up: “You mean there never was any money on offer? That I killed Rufus because of a silly mis...” The mouse-trap sprang shut.

One of the silent policemen switched on the lights. The other led the sobbing and unresisting Shlomiuka outside to the waiting police car. Job done.

“Thank you, ladies and gentlemen,” said Lister. “You are free to go — for the present.” He left the room, leaving the door ajar.

The demonstration had been a triumph, almost matching Jaeger’s own inflated view of his own showmanship. Pruszczyncki was quite right, of course: showmanship was what it was. But there was a serious point to it all — something dangerous, too dangerous to reveal to the conference organizers.

Doing experiments in the quantum macroscopic realm could have unforeseen effects on the experimenters, too, and the other observers, including the audience. Just look at it from the viewpoint of Schrödinger’s cat — the audience, too, existed in a superposition of states. Jaeger believed that his line of work might even establish a connection between quantum mechanics and the einsteinian world of space-time, such that reality itself could be altered — or, he thought, our perception of reality, which amounted to the same thing.

He kept these views to himself, of course — wisely, he thought. For now, the showmanship was the thing.

After the session, Baumgarden, as chair, took him out to lunch: just the two of them, plus Lorimer, of course (he just couldn’t shake the guy free). Ludmilla would join them later, after calling Dmitri at home.

Trotman would be occupied dismantling the equipment. At the restaurant they found themselves next to a table at which Pruszczyncki,

Dubois, Feng and de Bruijn were already seated. At Lorimer’s suggestion they pulled the tables together.

Let professional rivalries stay just that — professional. Just as they were about to order, Jaeger’s mobile phone went. It was Trotman. There had been a terrible accident. Ludmilla...

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