

Schrödinger's mousetrap

Part 2: Enter the detective.

Neil Mathur

Wearing his long brown coat and crumpled features, Karl Lister looked out from the platform at the sea of faces. He had never seen so many physicists and they were not like he imagined. Indeed, only one of them had a beard ... but he was lying dead on the floor with a hole in his head, made by the laser. And although the burning odour had now gone, the impenetrable detective smelt murder.

While his colleagues interviewed members of the audience, a study of the video footage allowed Lister to establish that a rather sophisticated crime had taken place. If Rufus Jaeger was indeed the intended victim, the overly powerful laser was set up with a knowledge of the seating plan for the platform. After all, he reasoned, one would hardly engineer the whole scenario just to make a random hit. The more he learnt about scientists, the more they frightened him. No wonder someone had once called physics the science of death.

Lister decided to begin his questioning with Jaeger's head technician, Tony Trotman, as he was the person responsible for the fatal demonstration. Trotman's silver hair and craggy features exuded a strange serenity that Lister registered at once.

"Mind if I smoke?" asked Trotman.

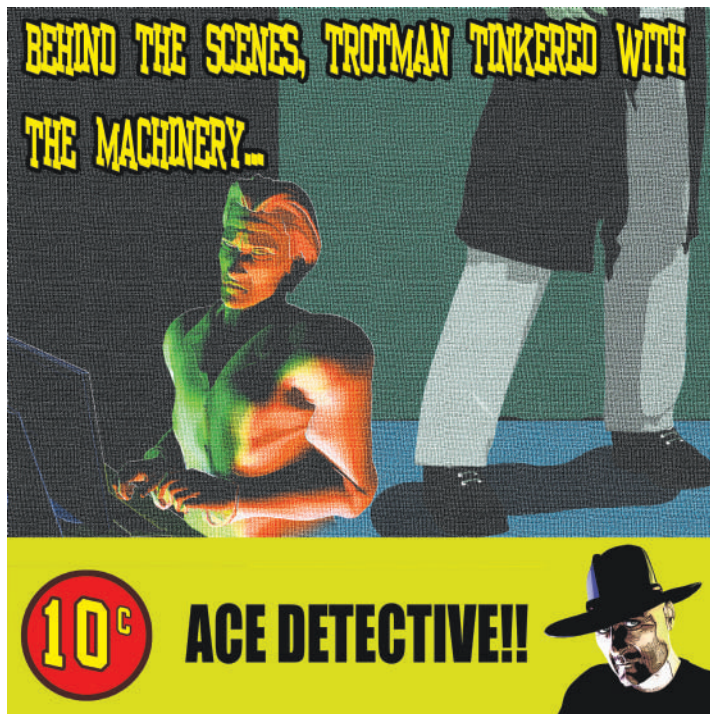
Lister flinched but said he didn't mind, as he wanted Trotman to relax fully and open up to him. The nicotine, however, immediately produced the opposite effect. Before Lister could ask his first question, Trotman began to look agitated and started muttering something that finished with "... and I need this like I need a hole in the head". Immediately regretting this choice of words, he by turns reddened, coughed and pretended to have something in his eye.

Impassively, Lister opened the interrogation by asking whether Trotman had been close to the deceased. Becoming animated, Trotman launched forth.

"Not exactly. To be honest, maybe I shouldn't say this, but nobody liked Rufus very much. Except for his postdoc Ludmilla, but she likes everybody."

A frown spread across Lister's face. "What's a postdoc?" he asked.

"It's basically someone in the lab who doesn't have a cat in hell's chance of getting



a proper job." Lister made a mental note that this reference to cats and probability could be significant.

Refocusing, Lister asked Trotman to describe the fatal demonstration from his perspective. Trotman explained that he had taken his cue from the end of the multimedia presentation.

"And then what?" asked Lister.

"And then ... I proceeded to reset everything for a second trial..." Trotman faltered, "since a second trial had been agreed."

"You didn't notice anything untoward after the first one?"

"Certainly not," replied Trotman with total confidence.

Lister proceeded to ask Trotman a series of questions about the set-up. Yes, it was Trotman who supervised its construction, but Jaeger had the final say. No, it was an external supplier who provided the prisms. "And who decided which laser to use?" asked Lister.

"Funny you should ask," said Trotman darkly. "The laser that Rufus planned to use was a much more modest affair, but it stopped working two days ago. So we ended up using our other one which is ... much more powerful." Regaining his composure, he went on. "Look, Rufus put his faith in me. We never had any accidents. Ever. I feel awful about what happened. But I can't see what went wrong. With half an hour to go, Rufus and I tested the set-up and everything worked fine."

Lister wanted to know what happened

next. "The two of us left the room together. As far as I know, the hall was then empty till the start of the lecture." Where did Jaeger and Trotman go? "Rufus went to join the coffee break in the hallway next to the lecture hall. As for me, mingling with scientists is not my cup of tea so I went for a smoke outside." Had Trotman seen anything suspicious? No ... well, he did see Jaeger's next-in-line Wilfred de Bruijn barging away from the coffee break angrily. "Then again, Wilf always seems to be angry about something."

Experts arrived on the scene and with Trotman's supervision they carefully set about testing the 'mousetrap'. Lister meanwhile was making notes. If Trotman was telling the truth, there was about half an hour during the coffee

break to tamper with the set-up, assuming that it was not already compromised. But in what way had it ever been compromised? Trotman and the experts found that although the laser still pointed in the wrong direction, all the prisms seemed mysteriously to be exactly where and how they should be. Things were looking complicated and Lister's mind came back to the many factors that had come together to ensure the murderous outcome: the powerful laser, the seating plan for the platform, the multiple tests ... now hadn't Jaeger said something in his presentation about superposition effects?

Lister wanted to know how many times Trotman had tested the set-up. The answer was twice. Then, with an insight that betrayed his grasp of quantum mechanics, Lister threw another question at the technician: "And after those two tests was the mouse 'dead' or 'alive'?" Trotman replied that the first test had given 'alive', with the amusing consequence that Jaeger had declared the need to increase the budget for cheese on future grant applications. "And what about the second test?" demanded Lister impatiently. Sounding perhaps slightly less self-assured than before, Trotman explained that he had been hidden behind the apparatus and couldn't actually see the hologram projections himself.

To be continued...

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