

Schrödinger's mousetrap

Part 3: Negative thoughts.

Liesbeth Venema

"Was there any reason for you to dislike Rufus Jaeger?" The question was meant to provoke, but Lister was impressed with the relaxed manner in which Fenton Baumgarden reacted. He was leaning casually against the coffee machine and didn't shift his position one inch.

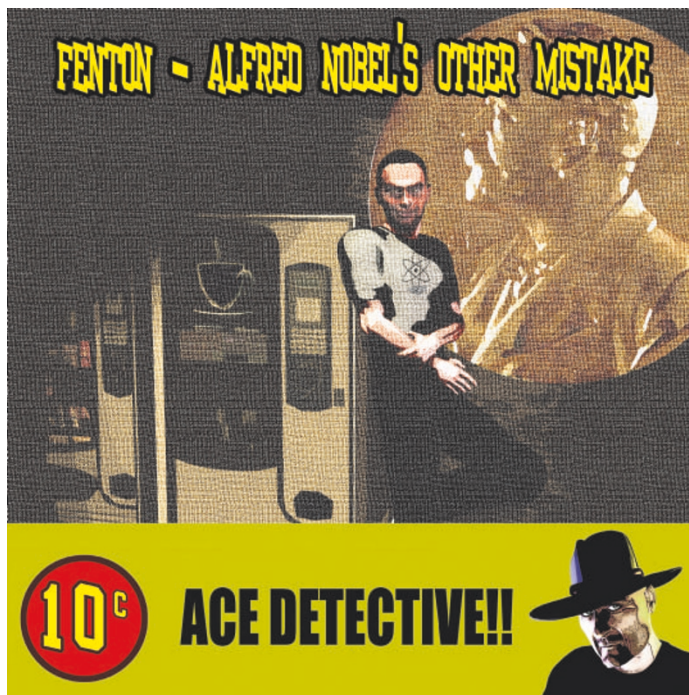
Baumgarden was athletically built, and his skin had been generously tanned by the Californian sun. Although nearing 50, he still got away with wearing a T-shirt depicting a faded logo of a long-forgotten university event, and with sporting a ponytail.

"Sure, quite a good reason I suppose. Not good enough for me though. Life's too short to be bothered by that sort of thing." Baumgarden grabbed the cup that the machine had spewed out and sat down opposite Lister, who fumbled through his notes. "You've probably heard the rumour by now," he continued. "It was Rufus's negative reference that supposedly prevented me getting the Nobel prize. Might or might not be true. To be honest, I think the Nobel is too heavy a burden to carry, I'm really better off without it. It's always a lottery anyway." Baumgarden took a tentative sip from the cup. "Rufus was a brilliant physicist and I respected him for that."

Lister briefly studied Baumgarden, but could see nothing hidden. "Let's get back to recent events," Lister said. "You said you were by yourself in one of the study rooms before the lecture, while everyone else was in the hallway for the coffee break. Are you not interested in socializing?"

Baumgarden gulped the contents of the cup down. "I would've liked to join the others, but I needed to get my head together to act as chair at Rufus's lecture."

Lister nodded absently. "Do you have an idea of what



went wrong during the demonstration?"

Baumgarden moved to the edge of the seat and looked thoughtful for a few moments. "There is something. It came to me almost straight away, but I wanted to think about it." He stood up, paced up and down the room a couple of times and finally went over to the blackboard on the wall, where a schematic of the 'mousetrap' set-up swiftly appeared from his hand. "Laser beam enters this arm here, encounters prism, goes this way. But consider for a moment what will happen if the prism refracts the beam in exactly the opposite direction, which would seem physically impossible. If you work out the optical path anyway, it goes like this, straight to the guy sitting in the chair here."

Lister scribbled quietly in his notebook. "And how can you make the prism refract in the ... er ... opposite direction?"

"That's the thing. As I said, it's not possible. At least, up till now. Negative refraction was discovered in 2001 for microwaves, but so far has not been possible for light. But now there's this new synthetic optical material. Looks just like glass, but refracts light in the opposite, negative direction. Gives totally weird effects. Petra Pruszczyński has called it negadex — it's her group that developed the material. It's still top secret."

"So how do you get to know all about this negadex?" Lister wanted to know.

"Petra has just submitted a paper about the discovery to *Nature* ... and I am one of the

referees." Baumgarden made a dismissive gesture. "Look, it's probably a crazy thought. In any case I can't believe Petra could be involved, she has way too much sense for that. But I had to tell you about the possibility." Baumgarden sat down again and folded his arms. "Anything else I can help you with?"

Lister held up his hand to indicate he needed a moment to arrange his thoughts. So the demonstration set-up was probably compromised during the coffee break, as it now turned out by replacing a prism with a piece of negadex — a material that only a few people in the world knew about. Petra Pruszczyński was present at the conference, and was already on Lister's list of suspects. He needed to find out whether anyone else with ties to her group was present. Baumgarden him-

self couldn't be ruled out. Who else? Lister had a brainwave.

For the first time during the interview, Baumgarden looked a little uneasy. The detective had surprised him by asking which editor was handling Pruszczyński's paper. "Nigel Lorimer. Yes, he is here too..."

Lister sensed that there was more to come. Baumgarden fiddled with his sunglasses. "I should probably tell you before you hear this from someone else. There was a paper from Rufus's group, some five years ago. It was generally seen as a huge breakthrough, and received massive publicity. But it turned out soon after that there was a crucial error in the data that should have been spotted.

"Rufus himself started an internal investigation, no doubt to head off criticism. He cleverly accepted responsibility for the mistake, but made sure it was clear that it was a student who had messed up. Rufus actually managed to emerge with his reputation largely unstained." Baumgarden looked at the floor and shook his head. "The paper had to be retracted. Poor Nigel was devastated — he was the editor who handled it. Nigel is a very decent guy but he tends to take things personally. I think he has been rather obsessed about it ... felt the whole affair damaged him. He tried to keep up appearances and stay polite with Rufus, but I think it must have been clear to everyone that he hated him."

To be continued...

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