Once a physicist: Thomas Fraps

Thomas Fraps is a professional magician based in Munich who founded Metamagicum, which presents stage shows that combine physics and magic. He came third in the World Magic Championships in Lisbon in 2000

Why did you originally choose to study physics?

My interest in science was first sparked by my grandfather, who was an engineer and mathematician. Later I started reading science-fiction and popular-science books by the likes of Carl Sagan and Douglas Hofstadter. I finally decided to study physics when I was doing my military service, which would have been an intellectual vacuum for me had it not been for some science and philosophy books that I managed to read. In 1987 I went to the Ludwig Maximilian University in Munich, graduating in 1994.

How much did you enjoy the subject?

Only partly, to be honest. One reason was that I always had a strong interest in the philosophical implications of physics, which just were not covered at all during my degree. In addition, I found out that my brain has a limited ability to understand the abstract mathematics necessary to work creatively with theoretical physics. On the other hand, one of the best times of my life was a six-week practical course that I went on at CERN in 1992 as part of the Crystal Barrel collaboration. We were looking for "glueballs" and I wrote a primer on the software tools we were using. This felt like cutting-edge physics. I was part of a team, there was an international flair to it and the whole idea of CERN was inspiring.

How did your interest in magic develop?

I once saw some card tricks on TV and then one day when I was about 12 my father showed me a simple card trick that blew me away. He wasn't a magician, but he knew this one trick. A few months later he gave me a book on card magic. Later on – just before my interest would have faded away – I discovered a magic shop in Munich and from that day on I was hooked practising card tricks. By the age of 17 I was one of the youngest members of the Magic Circle in Germany.

What do you do in your magic shows?

I prefer smaller tricks, and introduce elements from stand-up comedy and theatre into my magic. A lot of my work is at corporate meetings, management-training seminars and popular-science events. I try to combine the theme of the function into the show, either by using special props or by rewriting my patter as appropriate. I also perform a full-evening theatre show called Metamagicum, which I developed with my fellow magician Pit Hartling. We present strange inventions, such as a device that can beam socks into a parallel universe, thereby "explaining" the spontaneous disappearance of single socks in closed washing machines. The magic tricks serve to verify that the inventions work – for example our test sock vanishes. We also have quieter moments, where Pit and I talk about things like quantum mechanics, pseudo-science and free will.

What is your favourite trick?

I have two at the moment. In "Frapsology" – a kind of reverse-engineered astrology – I ask a person from the audience who I have never met some personal questions about their shoe size, the digits of their phone number, and so on. From the answers I successfully calculate the exact day and month on which they were born.

The other one is more complicated, needing a laptop, projector, screen and Internet connection. A randomly selected person from the audience thinks of a word in a book, but I fail to read that word from the spectator's mind. I therefore go into Google and type "What is the word Andrew (or whoever else) is thinking of?" Google's results do indeed match the word that the person was merely thinking of.

What do you think magic can teach physicists?

First, it helps you to think "outside the box" because magic trains lateral thinking. Second, performing magic is a good training for giving talks or lectures, since you have to make the tricks (with sometimes very dry, complex methods) entertaining and interesting for a live audience. You also have to keep their attention and develop some kind of stage presence. On a more scientific level, I guess it teaches us a lot about how the brain works. Magic demonstrates that our brain can sometimes contradict itself by short-circuiting the hard-wired perception mechanisms and higher-level thinking processes. That, in turn, could teach us a lot about how we all construct different realities in our minds.

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