ROMAN KOTECKÝ'S

LAUDATIO

ON THE OCCASION OF AWARDING THE PRIZE
OF THE DAGMAR AND VÁCLAV HAVEL
FOUNDATION VIZE 97
TO

N. DAVID MERMIN

PRAGUE CROSSROADS
5TH OCTOBER 2017

Dear Mrs. Dagmar Havlová, dear Mrs. Dorothy Mermin,
Ladies and Gentlemen,

I have the honour to introduce Nathaniel David Mermin, this year's recipient of the Dagmar and Václav Havel Foundation VIZE 97 Prize.

Let me begin by stating that David Mermin is a prominent theoretical physicist whose works are milestones in several branches of physics: in statistical physics, low temperature physics, solid state physics, quantum chemistry, the topological theory of deffects, and the crystallography of aperiodic crystals. Already one of his first results, the famous Mermin Wagner theorem, made its way into the canon of statistical physics. Being a case of a "no-go theorem", it stipulates severe rigorous restrictions on the behaviour of concerned systems and is a constant inspiration for generations of statistical physicists. Just last year I served as a reviewer for a habilitation submitted at Munich university devoted mainly to an extension of the Mermin-Wagner theorem to so called hard-core models. And there are more results bearing his name like the Mermin-Ho relation or the Mermin-Lindhard dielectric constant.

However, we would also like to celebrate his other talents here. David Mermin is a legendary and tireless scientific expositor — in Czech I like to use the slightly archaic word "vykladač" — somebody who is able to make the most complex scientific results accesible to everybody. I first learned about this passion of his in a curious way. In September 1993, we were organizing, in Center for Theoretical Study, a workshop Brain, Mind, and Physics, bringing together specialists from various fields to discuss recent works related to brain, mind, cognition, and consciousness. We also invited David Mermin to attend, but he was not able to come. As he explained to us, the workshop falls exactly on the first week of the term and he is teaching the course "Physics for Poets", the course that is too important to let himself to be replaced. David Mermin is famous for his pedagogical articles in the American Journal of Physics. If I were to characterize his pedagogical passion, I would just say that he is somebody who used some idle time in hospital to write a briliant and entertaing article under the title Logarithms!

Another legend is his numerous columns in Physics Today devoted to topics concerning various aspects of academic life with a title that always start with words What's Wrong with... ? Just replace the dots with a burning timely topic: What's Wrong with These Prizes?, What's Wrong with This Prose?, What's Wrong with These Grants?, or What's Wrong with This Quantum World? I remeber, there was time when I was eagerly expecting every new issue of Physics Today, "what is going to be wrong this time"?

As he so vividly described in his essays, David Mermin has, since his teenage years, been fascinated by the magic of relativity and that of the quantum world. Later, being an expositor, he was very efficient in sharing this fascination with non-experts. This is witnessed by his two popular books about relativity and a recent book devoted to explaning the quantum world to mathematicians and computer scientists interested in quantum computers.

There is then only one small step to his studies of a broader philosophical background. Is it indeed so that, in the words of Bruno Latour, "Instead of considering instruments (rulers and clocks) as ways of representing abstract notions like space and time, Einstein takes the instruments to be what generates space and time"? With regard to the quantum world, David Mermin is offering, in his own words "a philosophical answer — viewing quantum mechanics as an aspect of the nature of human understanding — to a philosophical question: What the hell are we talking about when we use quantum mechanics?" Actually, this last question brought David Mermin to adapt QBism — I assume that he will say more about this theory that grew up from using a subjective view of probability in quantum mechanics — in clarifying the interpretation of quantum mechanics.

I am in danger of beginning to be too technical here, so let me just state that, even after ninety years of quantum mechanics, there is a vigorous debate about its interpretation with David Mermin's very active participation. This spring he took part in an exchange on the pages of The New York Review of Books triggered by the article The Trouble with Quantum Mechanics written by Steven Weinberg who concludes his final reply by an anecdote featuring Prague. There is an indication that Einstein's office in Viničná street was on the second floor. This fact is implied by Einstein mentioning that he had a view over a high wall (which still exists) into Kateřinky, the gardens of an insane asylum. When a visitor to his office noticed people in the garden, Einstein explained that these were the madmen who did not think about quantum mechanics.