# "Science is actually completely neutral"

Priority for facts: physicist, comedian and author ("Lichtblick statt Blackout" – Ray of hope instead of a blackout) Vince Ebert calls for the separation of science and ideology – and more courage to take risks.

#### Vince Ebert, what do you think about risk?

I find it astonishing that we humans either completely overestimate or underestimate risks. We are afraid of shark attacks, terrorist attacks and glyphosate – low risk. And at the same time, we smoke and ride motorbikes, even get married – high risk. When dealing with risks, we let our gut feeling guide us instead of looking at figures and statistics. It's like: my gut feeling tells me that's how it is, so it must be true.

#### Can we do anything to avoid that?

Knowledge of science and maths helps us to better assess risks, because you learn to deal with numbers and do the calculations. In maths lessons, real-life problems should be used and checked with statistics. Instead of using unrealistic questions, such as: I have a bowl with ten red balls and ten black balls. If I take out two red balls, how does the probability of drawing a red ball in a lottery change?

### What is your assessment of how risks are dealt with in Germany?

There is often a zero-risk mentality. If there is a particular source of danger, the idea is that it

should be eliminated completely. For example: the coronavirus pandemic. We wanted to reduce incidences to zero without fail. To do this, all public life was brought to a standstill. But then the economists said: we're destroying the economy! And psychologists said: children will go crazy if we continue with this! We often forget that decisions made to counter risks can create other risks and even make the problem worse. Another example is shutting down our nuclear power plants because we think they are too dangerous. The consequences are other risks, such as energy shortages and possible blackouts. There is simply no ideal solution and no zero risk for many complex issues. It is very difficult to accept that life is a risk.

#### So we need more courage to take risks?

I lived in the USA for a year, and the way people there deal with mistakes is different. They are more likely to try things out and take more risks. For example, when an app is programmed over there, it often happens quickly and the finished product is not perfect, but the essentials work. Here in Germany, it takes considerably longer because we want it to be perfect. We spend a year fiddling about with a shower fitting or a cylinder head gasket, which then work 120

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percent. But when it comes to major social concepts or meeting future challenges, many things are just unpredictable. This is why we have to be more willing to weigh risks against each other and accept that not everything can be planned!

#### Are we allowed to make jokes about risks?

Definitely! In one of my earlier comedy routines I had a bit that went something like this: "The odds of winning the lottery are 140 million to one – it could be me! The risk of developing lung cancer is one in seven for lifelong smokers – why would I, of all people, get sick?" This joke highlights the irrational way in which we deal with

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VINCE EBERT, PHYSICIST AND COMEDIAN



statistics and probabilities. I try to use humour to make people understand these correlations. If I can laugh about something, I might become aware of the inconsistency in my own behaviour and give it some thought. At least, that's what I hope.

## Whether the coronavirus pandemic, climate change or assessing risks: science plays a central role in society. How well is it coping?

I emphasise this again and again, even in my routines: science is actually completely neutral. First of all, it only explains the causal relationships between things. It does not say how we as a society should react to these findings. A nuclear physicist can calculate how much energy is released during nuclear fission. But nuclear physics does not tell us whether nuclear energy is good or bad or whether we should use it or not.

## Is this still the general perception? Don't scientists today often act as admonishers and give warnings?

There are prominent climate researchers who clearly see themselves as activists. They want to change something; they want a political and social turnaround. That's all legitimate. But when they speak as scientists, I expect facts first – and not an assessment. I think that mixing up these roles is a dangerous development that undermines the credibility of science. That also applies to science journalism, by the way. Reporters used to simply explain how a petrol engine or a microwave works, but nowadays, they also include their ideology. I don't approve. Good science communicators should provide information, but not preach. —