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Biologist and journalist **Dagny Lüdemann** is chief reporter for the knowledge section at “ZEIT online”. She headed the science department for ten years until 2021 and also trained science editors.

“We need to communicate science more honestly”

Mrs Lüdemann, you have been following the Corona pandemic as a journalist at “ZEIT online” from day one. What was your experience of this time?

For me, the outbreak marked the beginning of the most exciting, successful and instructive period of my career. Never before had my work been in such demand. Everyone had finally come to the realisation that science is not just a place for nerds, a place for rocket science, gene therapies for rare diseases or fascinating animals. It’s something on which the lives of millions depend. I also saw an opportunity in that.

What was this opportunity?

This resonance confirmed to us how important our job is. All of a sudden, people beyond the small scene of science journalism were asking themselves: What makes a study meaningful? What makes a good expert? We thought: now is the time to show people what we can do. But I didn’t realise then how much would go wrong in the media.

What went wrong?

When the epidemic broke out, everything got chaotic. Journalists from the worlds of politics and business

as well as culture and sport were now reporting on COVID-19. Assessments of the state of research, expert debates on aspects of individual studies, political disputes about what measures to take – all this got mixed up and turned into total cacophony and hardly anyone could filter out what was important from what was unimportant and what was well documented from what was nonsense. In the clash of opinions, facts were often misrepresented

What were the consequences of this?

To the general public, it seemed as if science was fundamentally at odds with itself, and findings that initially seemed set in stone were now crumbling. This mood fuelled fears and mistrust and opened up space for conspiracy theories and misinformation.

During the first lockdown, the vast majority of the media covered the measures favourably.

In the absence of other sources and being stuck in home offices themselves, editors relied heavily on the institutions and reported what was officially recommended. This was partly out of concern that they would be complicit in people’s deaths if they did not issue clear enough warnings. When the press realised



When people are exposed to misinformation on a daily basis, we need to ensure informed knowledge

that it was becoming too uncritical, it deliberately looked for dissenting voices. But in doing so, it also created false balance.

How does this false balance come about?

When an assertion that is well documented is juxtaposed with a minority opinion as if both were equally valid. This is what happens when, for example, a medical doctor who explains why homoeopathy cannot work on the body is juxtaposed on a talk show with a homoeopath who claims that globules cure diseases. In the end, people think there are equally good arguments from scientists for both views. Homoeopathy, however, does not work any more than a placebo. That's a fact – not a matter of opinion. Studies claiming otherwise have always turned out to be dubious. Similarly, in the pandemic, erroneous minority opinions were given as much space as things that are indisputable among researchers.

So this confused the public more than providing it with guidance?

Definitely. The Cosmo study, for which people in Germany were representatively surveyed, and the BfR Corona Monitor prove this. It's paradoxical: the more knowledge we had about the virus, the less informed the population felt.

What conclusions should journalists draw from the pandemic?

Science communication must become even more honest when it comes to what is unknown and uncertain. This should always be stated transparently. Moreover, science journalism should not shy away from political interpretation. Traditionally, we like to refer to facts. Along the lines of: this we know, but for that we need long-term studies and we won't know the answer for another 200 years. But people need sound advice today.

When it comes to the media, they say “bad news is good news”. Is that why gloomy forecasts have received the most attention?

This pandemic was also unpredictable for journalists and researchers. I think many were over-cautious rather than reckless. And everything that seems threatening

generates a lot of attention and thus higher ratings. Yet we have also found that people are longing for good news.

Too pessimistic, too optimistic – is there a middle ground?

Journalism should be more constructive while remaining critical. We cannot paint the world more beautiful than it is. But we should look where there are solutions to problems.

What can science learn from the pandemic?

First of all: how important it is for everyone. I find it fascinating that people who normally don't have much contact with research are now discussing what's proven and what's not. Researchers should have more courage to share responsibility for political and social issues instead of retreating into their own world.

Researchers involved in politics?

Scientific expertise must influence politics. But on an interdisciplinary basis. Ethical, psychological, social and economic issues – all of these must be factored into political decision-making. In the pandemic, it seemed for a long time as if there were only virologists on one side and an unscientific world on the other. How long should schools be closed? How many seriously ill people are we prepared to accept? All the sciences should join in the debate here. And we should be aware that people act more on the basis of emotions than on facts.

Traditional media are no longer gatekeepers to the world of information. The internet has opened this gate for everyone. How do you react to this at “ZEIT online”?

With transparency, openness and the courage to repeat. During the pandemic, I've been constantly experiencing déjà vu: ventilation is more important than disinfecting hands. Vaccinations help. How many more times? I'd say: as long as it takes to get there. If people are exposed to misinformation every day, we have to make sure that they also find well-founded knowledge every day: in the form of infographics, analyses or videos on TikTok. ■