



## Science communication is undergoing change

*Interview with Alexander Gerber, Managing Partner, Head of Marketing & Communications, Fraunhofer ICT Group, Berlin*

In a country which to a great extent owes its prosperity to the inventiveness of its scientists and engineers, and whose most important resources are stored in people's heads, the topic of science communication should play a prominent role. Yet the traditional media continues to have difficulty taking the subject of research at all seriously. It is not sufficient to simply spread the results of research. Rather, an atmosphere of acceptance needs to be created for new technologies early on in politics, business and NGOs, and of course among the wider public. For although general interest in technology in Germany has increased over the years (as shown in a recent study by the Allensbach Institute), it is all the more alarming just how little "functional interest" exists – i.e. the desire also to understand these technologies. It is therefore hardly surprising that when complex technical innovations are introduced, the resistance of the public, NGOs, politicians and the media is more opinion-driven than knowledge-based.

The extent to which science communication is undergoing a radical change is illustrated by the most comprehensive trend study in Germany, which has been running since the end of 2009. A sector survey of over 300 PR managers, journalists, scientists and communication researchers revealed a whole series of trends and challenges which are now being followed up in a Delphi study. 75 of the most renowned experts on science communication in the German-speaking world are developing forecasts and scenarios concerning future developments. Their aim is to create roadmaps and strategy recommendations that can then be discussed publicly with the community in a third phase via blog and twitter. We spoke to the initiator and coordinator of the trend study, information scientist Alexander Gerber, who is in charge of communications at Fraunhofer for the alliance of its 17 IT institutes.

### **What would you say, Mr. Gerber: Is science given sufficient space in the media and among the public?**

Hardly. Although Germany is no exception in this respect. In the US, for example, which continues to be the world's number one high-tech country, every interview given by each candidate during the last presidential election campaign was evaluated, and out of almost 3,000 questions exactly six dealt with the topic of climate change. Okay, there were also three questions about UFOs, but isn't that just where the problem lies? The fact that science today is still regarded as "knowledge" at best? There may well be over 100 so-called knowledge formats on German TV – more than in any other country in Europe. But here science above all is staged or instrumentalized in order to explain to the audience things such as why you can't use the washing machine to whip cream. Science has a de facto one-percent share of German television news coverage. People can decide for themselves if this does justice to the socially important role played by research in the great challenges of our time – in climate change, pandemics or global malnutrition, in biotechnology or media convergence.

### **Maybe scientists have too little interest in communication?**

That may well once have been true, but today it goes against every analysis. The case is rather that research itself "broadcasts" at one volume – in other words, it has resources at its disposal that have long drowned out the rapidly shrinking area of science journalism. Our trend study also unfortunately showed that the circulation of almost all relevant print media in this area has been falling dramatically for years. What is flourishing is corporate publishing in science too, and increasingly of course direct communication between scientists and their public. In the case of scienceblogs.de, for example, we now have 300,000 readers – as many as "Bild der Wissenschaft", "Spektrum der Wissenschaft" and "Technology Review" put together. Individual scientists receive tens of thousands of comments here in the course of one year! On one point, though, you are probably right with your question: At least formally, talent and commitment is hardly rewarded with regard to communication among scientists – i.e. in the case of



appointments, expert opinions or with regard to the approval of funding. Publications and scientific excellence alone continue to be the most important aspect here. Whether putting across one's own research should play a more major role remains a vexed issue among experts. I personally think it should!

### **Has there been an actual increase in the public's interest in scientific topics?**

One the one hand, yes, if by that you mean grandfather's Sunday afternoon outing to the science museum with his grandchild. Such formats work extremely well – the "Lange Nacht der Wissenschaft", roadshows, Knoff-Hoff at the exhibition stand. Interest in new gimmicks is also so great that even complex technologies can be put across without any problem. And, of course, supposed spectacular discoveries such as "Eureka! We've found a cure for neurodermatitis!". Most of these stories about the lonely inventive genius are sadly just as far-fetched as overnight innovations. There is little interest in this other, undoctored side of science. This has nothing to do with eureka moments but with gradual progress; not with black-and-white answers but with deliberations in many shades of grey; less with results rather than with processes. For this, I think, there is an urgent need for new formats.

### **And what might these look like?**

These could be broad social discourses, for example, similar to the incredibly successful science debate in the United States. For Germany we have already made a widely-observed start in this regard with the Association of Science Writers, TELI, and in the 2009 primary election campaign. Genuine scientific debates, the way I see them, should be far more than debating clubs or research forums and extend far beyond what we have come to know as journalistic formats – e.g. series of interviews or "election benchmarks" on certain topics. If the latest interactive web technologies were then also used, it could well be that the social debate on science may also finally be held outside the science supplement of "Die Zeit". Maybe not with the average Joe, but far more widely, more openly and factually than anything we've had before. Companies could also contribute suggestions directly for future public research projects with the slogan "Open Innovation". I am convinced that science and politics, if they openly face up to such debates early on, will find it easier to create greater acceptance and confidence in new research projects and technologies. There are already positive signals here, for example with the demand for "new dialogue platforms" in the German government's coalition agreement.

### **You also just mentioned Web 2.0, Mr. Gerber. What concrete role does this play?**

Apart from the "debate" that I mentioned, which can only be conceived anyway as being exclusively web-based, one cannot cite the example of science blogs often enough. In a recent edition of "Nature" there was even a fairly long article on "Supplanting the old media" by Web 2.0. But even with all the negative consequences for the publishing industry and journalism, we must also see the enormous opportunities that it brings with it – a researcher's blog, for example, will always be more authentic than any press release. Above all, however, this is the first time that science communication is not reduced to results, but the actual cognitive process also becomes clear – knowledge creation, if you like, the procedures and working methods, science as a cultural achievement, so to speak – because the path is more exciting than the goal. Incidentally, the same question can also be applied to companies. In particular, if an innovation is restricted exclusively to its product features, then the actual process of innovation remains obscured, and the user is left out of the equation. The commercial success of innovations largely depends on whether potential clients can also understand how and why a certain technology is developed and marketed in the first place. We are then no longer talking about how unforeseen resistance can be overcome afterwards, but how the willingness to change can be encouraged at the outset! A new institute for innovation and science communication is currently being set up in order to investigate this concretely.

### **The German media is often said to focus too much on risks when reporting innovations. How can PR deal with this?**

Certainly not by wishing for some sort of uncritical court reporting. The problem may be less to do with our having too



much investigative, critical journalism in the area of science and technology, but simply that more information, research time and room are needed to achieve an objective balance. Creating new knowledge now inevitably means that one causes controversy, as has been the case with just about every innovation. Concerns regarding ethical issues and data privacy are probably the most frequent. Public dialogue and the forming of opinions are an essential part of added value, because how else can there be any demand at all for new technologies? My advice would therefore be not to wait for criticism or even to complain about risk-focused reporting, but to approach potential critics as early as possible, incorporate them and inform them frankly, to display openness and accountability, and thereby create trust.

**Mr. Gerber, thank you very much for talking with us.**

Interviewer: Boris Mackrodt, *PRoFile*, @Fink & Fuchs Public Relations AG