Science—love it or hate it?

A young scientist's view of the public relations problem of European science and the possible solutions

Up until World War II and for more than two decades afterwards, physics and its applications in war and technology were the natural science that caught the public's attention. Nevertheless, at the same time as the first atomic bomb was dropped, or while Neil Armstrong stepped on the moon, the basis for a novel natural science was being laid. Great minds, such as Salvador Luria, Max Delbruck, Francis Crick, Linus Pauling, James Watson and their fellows blended knowledge of genetics, biochemistry and organic chemistry into what today is called molecular biology.

I am fortunate to live in a time when science is undergoing major develop-

public caused by every news-breaking discovery and you start wondering how to overcome this.

I attended the EMBL meeting 'Developing a New Dialogue' because I was attracted by the diversity of the topics and the speakers listed. I thought this had to be different from the usual, stereotypic conference about the lack of public trust in science and scientists that make newspaper headlines but hardly ever meet their goals.

The big question was asked right at the beginning: How can scientists develop a new dialogue with the public? Was this not a bit too much to be asked of a 3-day meeting? Having a dialogue, establishing

everything seemed to go back to square one.

The scientists wondered how they could ever appear trustworthy to the public, if they could not even agree on anything among themselves. Furthermore, there was an intense debate on whether the public believed in science at all, particularly in the light of the way the press has presented the latest developments in molecular biology, genetics and biotechnology. Myths of hidden lab monsters and crazy scientists are among the scandal and scare stories that some representatives of the media are all too eager to pass on to the public. On the other hand, there is the apathy of some scientists who simply refuse to regard themselves as part of society, thereby denying any responsibility for their actions or potential abuse of their research. These attitudes are certainly not the most efficient ones when it comes to rebuilding public trust in science and scientists.

On top of that, the scientific community allows itself to be seen as—or it is indeed—incapable of making a unified stand, when it comes to topics that affect

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ment. Indeed, it is extraordinary to realise that we humans share half our genes with bananas or that less than 0.1% of our genome makes us unique individuals. Perhaps some readers may smile at my enthusiasm, but it will certainly change some people's attitude next time they eat a banana. And as we have the human genome sequence at hand, we may finally get a completely new image of ourselves and what makes us different from each other. And smokers can dream of the marvellous day when the nicotine mop-up gene will be detected and used, bringing an end to nicotine gum and patches!

At the same time, being a student of cell and molecular biology is not at all easy. Friends and relatives, even people who just happen to be around you when the latest biological discovery appears in the evening news, think that because you know the structure of DNA, you know the answers to every question they can come up with. And when you try to explain your 'ignorance', you realise that it is hopeless, because they are already debating whether these new discoveries will be for our good or for our destruction. So, as a biologist, you sense the increasing unease in the

a dialogue, or even improving the way in which an already existing dialogue is conducted, is one thing. But developing a new dialogue is definitely a completely new ballgame. It is talking about a novel approach to communication. It means creating a new perspective of how we see each other. It involves changing rules and getting used to them. And it is not easy.

On the other hand, not easy does not mean impossible. We were about 200 delegates from all over the world, so we could be expected to come up with some productive proposals for a new dialogue. But first and foremost, it must be made clear which parties should be involved in this 'developing dialogue'. Which communication needs to be improved? That between the scientific community and the public or that between the scientists and the mass media? But then again, why should anyone bother to establish a new dialogue at all, if many scientists do not feel that the existing one needs to be improved? As the debate progressed and different views were expressed, we all struggled our way to a conclusion. Whenever there seemed to be light at the end of the tunnel, another odd angle came up and

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society such as genetically modified food or the use and manipulation of human embryonic stem cells. Logically, the non-scientific observer would think, 'If scientists cannot make up their minds about these technologies, how can I ever feel safe?'

So what should we do about this? Do we ignore the public, arrogantly thinking that they will see the good—or the bad—in the end? Do we fight each other until we come to a final understanding or should each of us go public and express her or his personal views? Or do we try to get down to the public's level and teach

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them that we are not gods—even though we would really like to be—and that exactly because big issues are big, it is healthy to debate on them for longer? However, imagine this short imaginary dialogue:

Scientists: 'Big issues are big, and it is healthy to debate on them for longer, so differing opinions should not worry you.'

Public: 'So what are we supposed to think in the meantime?'

Scientists: '...?'

Indeed, we scientists have not got the answers to such questions. Neither has the public. But the key here is to understand that those who know more about a certain topic have a direct obligation to educate those who know less about it. By translating the incomprehensible 'scientenese' into plain and simple language, we might even create a constructive opposition to scientists' work. God forbid! This would mean allowing simple mortals to judge us, and what is more, they might even be right. But really, who exactly do we think we are? Who do we think we are working for? And to whom do we think we are trying to sell our work in the end?

In fact, we are integral members of society, who have become what we are now through paths and institutions that

society has established and financed. But still, some of us are working to satisfy only our vanity, some of us are working simply to put food on the table, and some of us are pursuing the 'big idea'. I am not the one to say which motive is right and which is wrong. But in the end, we are responsible to the public as the results of our work will affect them when turned into technological applications. This gives the public the infinite right and power to

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choose which motive to do research they will support and which they are going to bring down. Ultimately, we are servants to society, and we simply have to serve right. If we do not do so, I am sure the public will show their disaffection—one way or the other.

Nicely as all of this might be put, I still have to answer the question whether the

meeting was successful in establishing a new exchange between science and the public. I heard a lot of opinions, I expressed some of my own, and what it boils down to, is the simple truth that there will always be arguing. So, if we accept this let's move on and try to make the arguing and bickering productive. Personally, I am grateful to those I argued with during the meeting, because they helped me to get my thoughts organised. But I would also like to thank those who did not speak at the meeting, as they demonstrated in the best way that a lot of committed work needs to be done in order to create effective communication.

At least for me, the meeting improved my way of thinking about these matters, and in that sense made me more aware of the issues than I was when I arrived. If the same happened to a quarter of all the attendants, then we are definitely on the right track.

Ilias Charlafti

The author is a student of cell and molecular biology at Oxford Brookes University.

E-mail: ebv@talk21.com

DOI: 10.1093/embo-reports/kve079