

Discussion at BEMS 2000 broadcast by the Bayerischer Rundfunk (television) during the program „Kultur-Gespräch“ on July 2nd 2000

# Who is afraid of “elektro

The second event on the agenda of the final press presentation at this year's meeting of BEMS was a panel discussion about the topic „Who is afraid of electrosmog?“.

The participants of the discussion broadcast by the Bayerischer Rundfunk, were experts from politics, administration, science and journalism.

Dr. Walter Flemmer from the Bayerischer Rundfunk presented the event.



The topic of discussion was the uncertainty of a part of the public regarding the increasing use of radio services. Electro-magnetic fields produced by radio transmitters in communications are suspected to cause adverse health effects. This phenomenon is popularly called „electrosmog“, a simplifying catchword referring also to the emissions of power supply. In the past the discussion about possible health dangers quite often was highly controversial and emotional. Public uncertainty mainly results from the fact that numerous partly contradictory studies on the topic „electrosmog“ are available. In addition, media approach to this sensitive topic is often characterized by sensationalist headlines.

The discussion round was meant to reflect the different views and the difficulties that arise in dealing with the topic. The focus was the role and attitude of politics, science, administration and media to the topic, particularly the question, whether the general population is sufficiently informed or whether there are gaps of knowledge needing to be filled.

## Do media contribute to the uncertainty of the public?

Presenter Walter Flemmer came straight to the point addressing the uncertainty of the public concerning „electrosmog“: „Electrosmog‘ - the term produces fear and emotion. Practically every week somewhere a new action group is launched

aiming to prevent the installment of an antenna, and in newspapers and magazines we continually read of all the harm electrosmog does to us.“ According to Flemmer, scientific knowledge is greatly contradictory, ranging from insisting that there are effects to claiming that there are no effects at all. Thus, it is of great importance what attitude not only the individual, but, even more so, authorities, scientific disciplines and journalists take to the problem. Flemmer first turned to the representative of the media, scientific journalist Jörg Blech, asking following question: „Did we as journalists contribute to the fact that people are afraid?“ He cited headlines from media coverage such as „The hidden danger“ or „The danger from the dark“.

But in Jörg Blech's opinion media alone are not to be held responsible for the anxieties concerning electrosmog: „Media did contribute only partly to the problem, as they do not create the ‘Zeitgeist‘. In the contrary, they react to it, and at some point reflect it.“ Blech continued that, incidentally, in the last few years worries have noticeably lessened. The media have grown weary of the topic „electrosmog“. Only with the boom of mobile phones the interest was rekindled. „As I see it there are two phases of press coverage: At first, the ‘classic‘ electrosmog was in the news quite often; this phase gradually comes to an end. Now we have great media attention rather on ‘mobile phone smog‘, as I call it.

# smog?"

But I do have the distinct impression that the topic for the big papers does not hold interest anymore."

## Do politicians have to be more cautious than scientists?

Walter Flemmer pointed to the „schizophrenic situation“ regarding mobile radio antennas. On so-called sensitive buildings such as schools, hospitals and nursery schools antennas are not permitted to be installed, but at the same time more and more students take their mobile phones with them to school constantly using it. „They hold the antenna close to their head, while an antenna on top of the building is thought to be risky. Logically, we should prohibit both.“ Promptly, Walter Hofman of the „Arbeitskreis Landesentwicklung und Umweltfragen des Bayerischen Landtags“ indicated that the precautionary principle has absolute priority regarding hospitals: „Though there have been carried out numerous scientific investigations on the topic, until now there are no definite results.“ Thus, in the opinion of Hofman in particular government must act „providing that above all the sensitive area of hospitals does not produce magnetic fields or emissions.“

Do politicians therefore have to be more cautious than scientists aiming for the protection of the public? Ingeburg Ruppe from the Bundesanstalt für Arbeitsschutz und Arbeitsmedizin which is responsible for the protection of the public suggesting



## Participants of the discussion – experts from politics, state authorities, science and journalism

- Dr. Walter Flemmer, Bayerischer Rundfunk, presenter of the discussion
- Dr. Ingeburg Ruppe, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin - a public institution responsible for research and evaluation (administration, setting standards, legal drafts) for the protection of the public.
- Walter Hofmann (MdL), Arbeitskreis Landesentwicklung und Umweltfragen, as representative of politics' viewpoint concerning the practical consequences of scientific knowledge and the concerns of the general population.
- Dr. Roland Glaser, Humboldt University of Berlin, as a representative of the research community on questions such as: What is the contribution of science? Why can „compatibility“ not be proved (zero effect)? Why is pure research necessary and where are its limits?
- Dr. Peter Neitzke, ECOLOG-Institut, editor of „EMF Monitor“, representing the part of the research community with a critical attitude to effects of EMF on health and environment, primarily concerning the debate whether limits for the protection of the general population are sufficient.
- Jörg Blech, scientific journalist, „Der Spiegel“, representing media concerning the question: How are research results perceived by the public? How do media use scientific news for manipulation?

regulation standards and developing legal drafts answered to this question: „We seek to set limits which are certain to eliminate any risks“, Ruppe explained. „As soon as we obtain recent research results, we decide on threshold values.“ The individual threshold value is then once again reduced at a safety factor given by bodies such as the International Commission for Radio Protection or the WHO and other institutions, above all for the protection

of the public. The resulting „precautionary value“ for the general public lies below the value of occupational protection, since employees generally are assumed to be healthy. Dr. Ruppe, however, admitted that science ultimately can not provide guarantees concerning the dangers of electromagnetic fields. „In fact, on balance the research results say us: We did not find anything, but at present we do not know for certain that there will be no effects.“

## Is sensitivity imagined?

The issue is made even more complicated by people who claim to be electrosensitive. Flemmer provocatively asked: „Is all that pure imagination?“ Peter Neitzke of the ECOLOG-Institut which is known for his rather critical attitude towards the compatibility of EMF, stressed that it may be difficult to answer this question, but „all in all there is a grain of truth in it.“ He told about inquiries of persons affected who accused their neighbours to operate a field-emitting appliance, but in the end it became clear that a ten-year-old conflict between the two parties involved was behind it all. However, there are numerous cases where „with high probability“ electromagnetic fields do play a part. „Only scientists find that difficult to accept, since in these cases numerous symptoms are mingling.“ Neitzke pointed out how difficult it is to connect an individual symptom with 'electrosmog', as not even medical questions are satisfactorily solved. On the one side there are studies such as the one from America which comes to the conclusion that around 3% of the population are affected. „Others insist that laboratory studies can not prove this allegation.“ In spite of this uncertainty Neitzke demands that we „see to it that presumably affected persons are not unnecessarily harmed.“

## Is setting limits simple?

But how can we set limits under such conditions? Roland Glaser from the Humboldt University of Berlin countered the impression possibly gained from the discussion that scientists are not as yet able to draw definite conclusions. He mentioned regulations concerning the case of potential accidents in the power system:

„There we have very precise guidelines. After all, we know beyond doubt, at which potential a nerve cell reacts and when electric power causes cardiac disturbances.“ Concerning the relevant electric fields of the low frequency range it is definitely possible to set precise limits. In this respect Glaser pointed to the risk of brain overheating. But as to presumed adverse health effects below this heating range, Roland Glaser added: „Such effects are not known. But though they are not known, we can not claim to have given proof that they do not exist.“ A temperature rise during the use of a mobile phone alone is not sufficient to prove this connection, as also, for example, a lamp in the same position causes a heating of the ears. „We can only say that we are definitely able to set limits to those effects which are discernible. Show us a person who has been damaged by these heat effects, then we will react.“ As to precautionary measures he added: „The values known to have no adverse effects we reduce by a security factor. That's all we can do so far.“

## Are concerns a purely psychological phenomenon?

Ingeburg Ruppe reverted to the widespread concerns of the public which, in her opinion, have mainly psychological reasons. She argued that people, as they are passively exposed to electromagnetic fields from base stations, are unable to take any influence, in contrast to when they use a mobile phone or indulge in dangerous habits such as smoking or drinking. In addition, fields cannot be smelled, tasted or heard. „And this inability to take influence and to perceive causes the uncertainty, even fear.“ These

frightening aspects often could trigger illness symptoms. „This means that not the fields are directly responsible, but at best a secondary factor, through knowing or not knowing about possible impacts.“ At this point Dr. Neitzke interfered to counter the impression to reduce this complex issue to „a psychological problem“.

Neitzke criticised above all Roland Glaser who previously had said: „Show me someone who has been harmed, then we may set new limits.“ In Neitzke's opinion, these words sum up our current dilemma: Limits in Germany, all in all, refer to visible, acute effects. He gave a number of examples of effects that limits as yet do not account for, „since we think that a chain of effects in the organism must be proven“. But, according to Neitzke, sometimes you must react to risks only thought probable. „Our limits do not account for these“, in contrast to limits of some other countries such as Switzerland, Italy or Canada orientated on the precautionary principle. Neitzke did not mean that we should not use mobile radio, but that we should „choose sites a little more carefully“. Antennas, for example, should continue to be banned from residential areas, nursery schools and schools. He pointed to the role of legal authorities: „In a situation like ours, when dangers are only presumed, legal authorities must act.“

## Trapped in contradictions

Science journalist Jörg Blech for his part denied that there are risks involved. He mentioned two studies to emphasize his point: British scientist Alan Preece in his study on the impact of mobile phones claims that there is an increased fall-out



of stress proteins. In a test carried out with 15 participants, the users of mobile phones reacted 3.5 milliseconds faster (0.9%) than the control group. „As usual the conclusion of the study is that there are no immediate health risks involved, but that further investigations are necessary.“ This he characterized as irresponsible and as an example of manipulation of the media. The same would be true for a Swedish study that did not mention the fact that research scientists of the Max-Planck-Institut in Köln already had carried out a similar study concluding that there are no risks to be confirmed.

The same contradictions as in scientific research also apply to politics, as claimed Walter Hofmann, member of the Bayerischer Landtag. As an answer to the question whether there are health risks or not, he cited Dr. Lin from Chicago: „In the most a schizophrenic ‘maybe’.“ Along these lines, politics should create a framework to make certain that possible adverse health effects through use of communication technologies are prevented. „Politicians always are very slow when science is not able to define under which conditions a health risk is to be presumed. Insofar, the only possibility we have is to go along with the precautionary principle: as little artificial waves as possible.“ To take precautions, however, is not only the responsibility of politics. All those concerned and affected should contribute to an active information policy, „since acceptance, trust and understanding of the public can only be gained by means of providing adequate information on the question which effects will come out from the use of a certain technology.“

The dilemma is that there is no way to prove the impact of electromagnetic fields

for example on cells. Science can not achieve this, as Peter Neitzke, editor of the „EMF-Monitor“, explained. Therefore we should join „the side of precaution“, as this would not necessarily would be connected with additional costs. Next to legal authorities and producers, each individual should be held responsible in the private sector, too. However, Neitzke pointed to the uncertainty arising whenever people voice their doubts on the precautionary principle. The situation gets particularly difficult „when there is spread conflicting information, in the end harming the public“. There are obstacles that prevent taking precautionary measures, „on one side economical interests, second, inflexibility of politics, and, third, scientific conservatism. There is an overall tendency not to act and to openly accept new knowledge.“

### **Public need for information**

Dr. Ruppe criticized that scientific results quite often are published without being reviewed and that they are available only to a small group of experts - the reasons for the general uncertainty. Therefore she demanded an appropriate information of the public though conceding how difficult it is „to inform public objectively“. The press should play its part in passing on matter-of-fact information. She stressed the role of the Bundesanstalt as a public institution for research and evaluation aiming „to inform working people“, but unable to reach the general public. „In any case, ours is not the right institution to fulfil this task.“

Concerning the role of the media Jörg Blech talked about the difficulties which journalists meet in their work. „I will give you an example: The English press cites a forceful statement that would be a good

headline, but the correspondent in London at best has three hours to decide whether he should do a feature on it or whether there is further research necessary.“ On the other side, according to Blech, scientists in conversation often are quite decisive, in their studies, however, they hold back „since the written word still has much more weight.“ He appealed to citizens and interest groups to read original sources to put worries to rest - an outrageous suggestion for Dr. Neitzke, who found that too much to ask from the public, as „they in every respect would have to be scientists or semi-scientists to be able to draw necessary information from scientific sources.“ He, for his part, diagnoses a great need for information in communities, cities and public authorities. „To this date houses are built directly below high voltage lines, because of the currently valid limits a legal, but in fact not necessary proceeding.“ Since there is an overall „lack of awareness“, information should be given not only on the regional, but also on the level of communities, Neitzke concluded.

### **Conclusion**

In his conclusive remarks Walter Hofmann as the representative of politics talked about information, too: „Concerning the selection of sites for mobile radio we will seriously think about the public need for information, together with municipalities, legal authorities and so on.“ He warned against playing down and trivializing the topic, but also against worrying the public out of whatever reasons. Walter Flemmer closed discussion with the words: „The need for information continues to be there, and we should dissipate widespread concerns by giving as much information as possible.“ ■