

Public Communication of S&T German and European Perspectives

Paper presented by

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PCST-7 Session

Dialogue in Science Communication

Germany has been a late
developer in the field of Public
Understanding of Science!

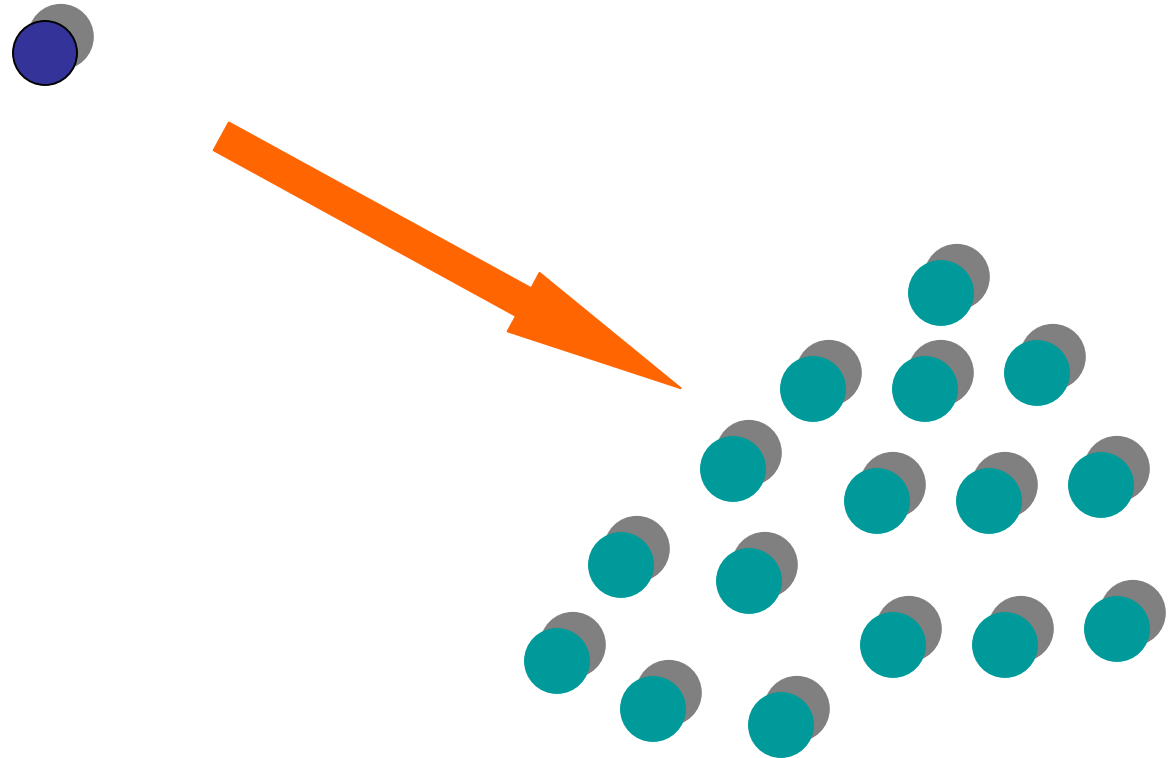
Objectives for the first nation-wide initiative „Science in Dialogue“

- Mobilising political support for S&T in Germany (after reunification!)
- Counteracting the declining interest of young people in the natural sciences and engineering
- Improving science education in schools
- Raising public awareness of science in general

Instruments

- **Science Years:**
2000 Physics, 2001 Life Sciences,
2002 Geoscience, 2003 Chemistry
→ Mobilization of the scientific community
- **Science Summers:**
2000 Bonn, 2001 Berlin,
2002 Bremen, 2003 Mainz/Wiesbaden
→ Increased visibility by joint action
- **PUSH Competition:**
→ Funding grass-roots activities

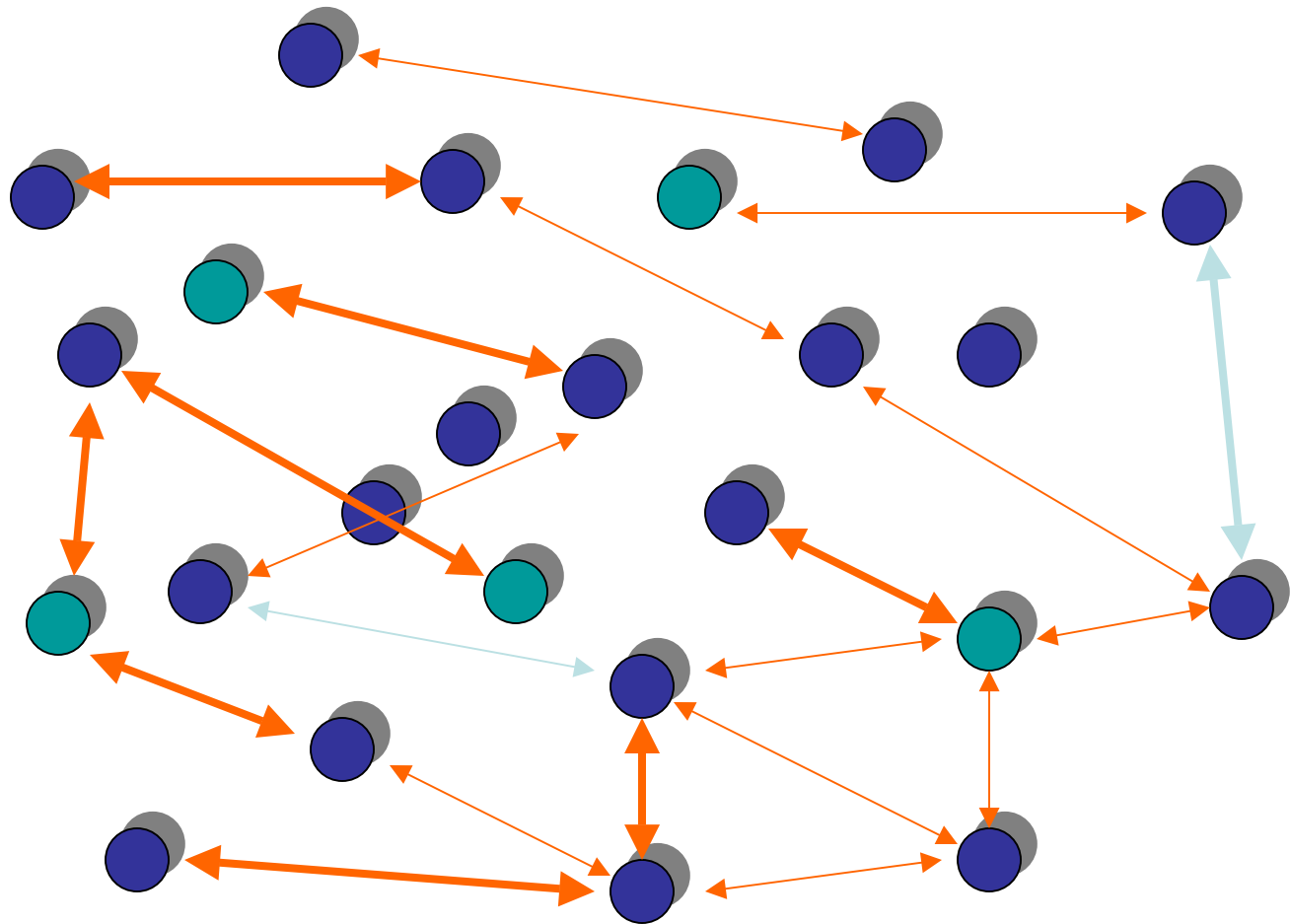
Public Understanding of Science (and Humanities) today



Problems for dialogue

- Many scientists still believe in the „Deficit Model“
- They lack communication skills
- ... and are not used to disputes outside their discipline
- In Germany, the theoretical background = „scientific understanding of the public“ is meagre!

Public Understanding of Science tomorrow = Public Engagement?



Receiver

<i>Sender</i>	<i>Science</i>	<i>Industry</i>	<i>Education</i>	<i>Politics</i>	<i>Media</i>	<i>Citizen</i>
<i>Science</i>	Exchange of knowledge	We have some great new ideas!	Discoveries Education	More Money! We have some Problems	Whats new!	It's just too complicated...
<i>Industry</i>	We need products that sell!	Business as usual	More (young) consumers!	They don't tell us!	Advertising, New Products	Advertising, Products
<i>Education</i>	Questions?	More money!	Exchange of ideas. Society..	Criticism..	No teacher watches TV!!	We know – you don't!
<i>Politics</i>	You get less money! We need some solutions	We need more money! Solutions, Jobs	No politics in school!!	They don't just speak!	Dear citizen Vote us	We are the best
<i>Media</i>	Protest, Hope for cure, Problem solving	Protest, Problem solving	Science is fun!	More liberties More channels	We are the best	Dear viewer Stay with us
<i>Citizen</i>	Protest, Hope for cure, Help..	Consumer,	Questions, Children	More jobs, more money	The answer is: Yeah	Gossip...Just talk

New ways conducive to Public Engagement in Science

1. Informal Science Education at the interface university – school
→ Public Understanding of Research
2. Science in Fiction
→ Reaching unreceptive target groups
3. Finding a „Responsive Mode“
→ Science Hotline
4. Setting the agenda
→ S&T Foresight

PUS vs. PUR (NSF)

PUS

- established knowledge
- one-time learning experience
- past applications

PUR

- research into the unknown
- ongoing presentation (research process incl. setbacks)
- future applications, incl. ethical, social and policy implications

Consensus conferences for kids?

Example: „Pathways to Utopia – Understanding and Assessing Technology“

to show realisation of utopian ideas as a societal process, to further a non-reductionist concept of science and to improve power of judgement

- Schoolchildren and apprentices defined the topic (in this case communication technology)
- They chose the experts they wanted to interview
- They wrote a report
- They presented it to and discussed it with politicians

The Boloney Detector

- Understanding complex systems
 - Interpreting statistics
 - Telling the difference between science and pseudo-science: „What is a scientific question?“
 - Understanding uncertainty and the limits of science
- Challenges for the responsible citizen

Reaching unreceptive target groups

- „Science“ Film Festival: Hollywood movies + introduction and discussion with a scientist (e.g. Jurassic Park, Outbreak etc.)
 - Theatre(-in-education): Pig in the Middle, Copenhagen, Oxygen, Calculus, An Immaculate Misconception etc.
- science / sender driven approaches!

Finding a „Responsive Mode“ (I)

- Science Hotline** experiences e.g. in France, Germany and the UK → *Science Line*,
- a free telephone helpline and website that answers all science questions (Mo – Sa 1-7 p.m.)
 - 6 full-time staff
 - 1.500 enquiries per month, 500-600 accepted, 70% can be answered while on the phone; max. waiting time for clients 6 weeks
 - database with some 10.000 questions and 1.500 experts
 - Links to specific TV programmes

Finding a „Responsive Mode“ (II)

Bioethics debate in Germany 2001:

- elitist debate on feature pages
- far from the lives of ordinary citizens

→ „**1.000 questions**“ campaign in 2002:

„We need your question!“

- Target group: general public, handicapped people
- start October 10
- some 3.000 questions within 6 weeks

What has been achieved ...

- Growing attention of the media
- Increasing numbers of visitors, audiences etc.
- Much easier recruitment of scientists (estimation: Communicator Prize!)
- Lasting effect of events
- Growing number of freshmen in science
- Growing number of actors (foundations, museums etc.)

European dimension

- Very similar objectives to national activities (Dialogue ...?!)
- Multitude (and weakness) of national organisations
- Limits to pan-European cooperation
- Weakness of European organisations (with respect to remit, available funds etc.)
- Cultural differences (a wealth of Europe!)
- Different languages

The science & technology field

- Is increasingly important
- Interests, concerns & affects people
- Is not always well understood or perceived in the media or by the public
- Is to a large extent funded by the public
- Needs to communicate with society
- Is relatively underfunded in Europe

EuroScience Open Forum 2004 in Stockholm



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Main aims

- To present science and the humanities at the cutting-edge
- To stimulate scientific awareness
- To foster debate on science & society

Formats

- Keynote & plenary presentations
- Specialised symposia & seminars
- Interactive discussions
- "Pro" & "Con" debates
- Interviews
- Computer interactive sessions
- "Mini-referenda"
- Poster presentations
- Other formats



ESOF 2004 should ...

- make use of the rich experience in Europe (and beyond!) concerning science communication;
- be a platform for many actors, i.e. organised in a bottom-up fashion;
- be funded from a variety of sources;
- put a lot of emphasis in outreach activities;
- develop into a „virtual science center“.