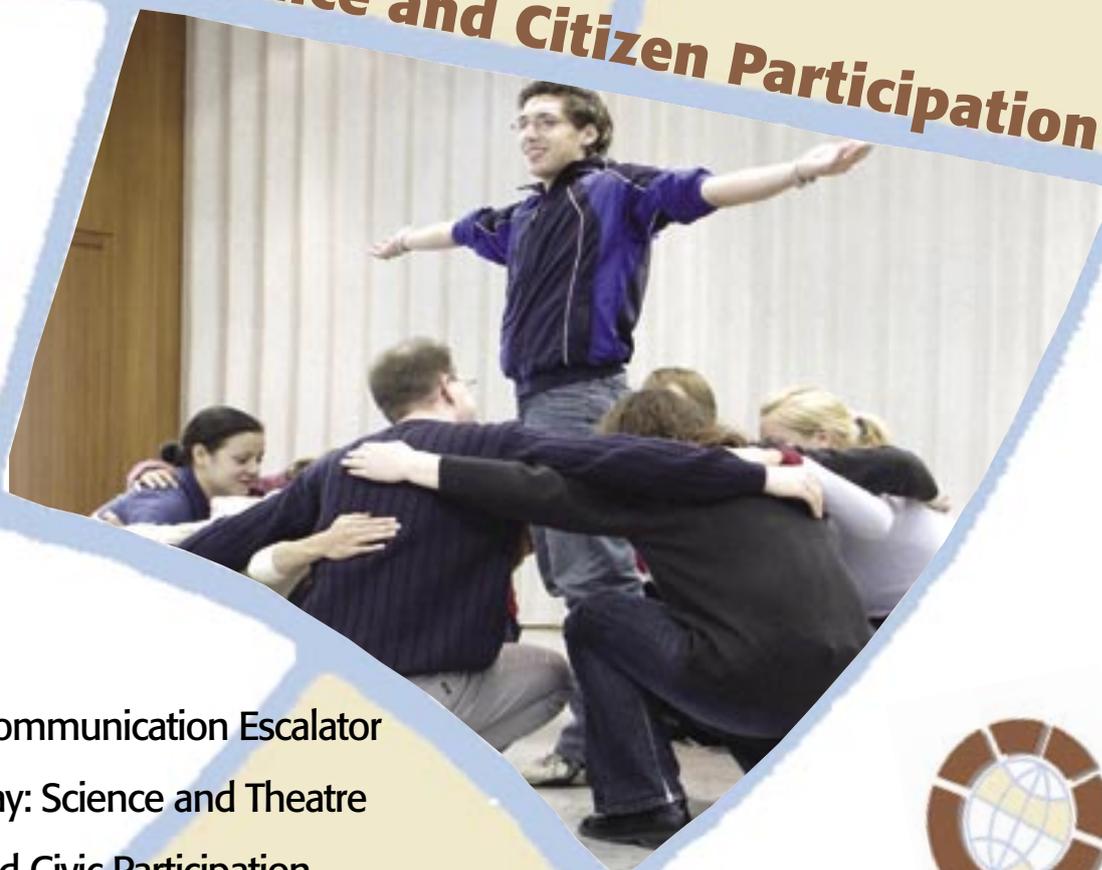


Living Knowledge

■ International Journal of Community Based Research

Science and Citizen Participation



- The Science Communication Escalator
- Fruitful Interplay: Science and Theatre
- Universities and Civic Participation



Living Knowledge
The International Science Shop Network

Contents

Focus: Science and Citizen Participation

The Science Communication Escalator

Every type of knowledge needs its specific way of communication. At the moment there is no blueprint for the communication between scientists and society. Ann Van der Auweraert from Antwerp describes a model of a 'science communication escalator', based on the 'risk communication escalator' by Ortwin Renn.

» 5



Fruitful Interplay: Science and Theatre

Do logic and inspiration lie closely together? How can molecules be made visible? The Science Shop Tübingen demonstrated that a combination of science and theatre offers new approaches to increase the popularity of science among pupils

» 8



Lack of Confidence

A seminar at the University of Barcelona focused on the experiences with the co-operation between researchers and citizens. The presentation of projects outlined the problems in mutual acceptance but also gave input how to set up a Science Shop at the University.

» 10

FOIST

At the University of Sassari in Sardinia, Italy, is a social science laboratory which understands itself as a place for idea generation and sharing as well as place for active social engagement. It actively encourages contributions and participation of people who are not normally involved in academic activities.

» 13

UfU

With its roots in the environmental movement UfU was the first independent institute for environmental concerns established in the former German Democratic Republic

» 11



A unique and ideal situation

Koen Dedoncker from a Belgian NGO explains how his organisation co-operates with the Brussels Science Shop

» 11

Around the World

» 3

Forum

» 18

Clippings

» 20

Editorial

The flow of expert knowledge is undergoing rapid change. As information highways are constructed around the globe, new questions about ethics, goals and economics must be answered. Science communication addresses theoretical and pragmatic questions central to many of today's debates. But also the involvement of civil society and citizens in policy deliberation and decision-making processes relating to scientific and technical issues has undergone significant and also highly heterogeneous changes in European countries. Ways of involving civil society and empowering the community have been very diverse, ranging from social mobilisations, the development of associations, Science Shops and NGOs, to the introduction of formal participatory procedures in decision-making settings.



The fact that Science Shops respond to civil society's needs for expertise and knowledge is a key element that distinguishes them from other knowledge transfer mechanisms. However, many initiatives are similar to Science Shops and do the same type of work. Despite their different names and differences in operation and organisation, basic principles and goals are comparable. With this issue of Living Knowledge we want to give an impression of the increasing activities and the increased capacity to amplify local voices.

After two and a half years and six issues of the magazine the publication structure of the Living Knowledge network will change. With the end of the funding period of the ISSNET project we have to change the publication rate of the magazine. The next printed issue of Living Knowledge will be published in autumn 2006 within the TRAMS project. In the meantime the Living Knowledge Newsletter will be further developed to a specific web version with links to additional information to guarantee continuity in reporting on experiences of Science Shops and similar organisations in Europe, to disseminate expertise, and examples of good practice as well to provide relevant information for Science Shops such as conference announcements or calls for proposals.

Keep on contributing!

Yours sincerely
Norbert Steinhaus

Living Knowledge

International Journal of Community Based Research

No. 6 – July 2005

Published by: ISSNET, c/o Wissenschaftsladen Bonn e.V., Buschstr. 85, D-53113 Bonn, Germany, phone: ++228 201 610, fax: ++228 265 287, mail: info@wilabonn.de, http://www.wilabonn.de

Editor: Norbert Steinhaus (norbert.steinhaus@wilabonn.de), Assistant Editors: drs. Caspar de Bok (c.f.m.debok@bio.uu.nl), David Hall (djh@liverpool.ac.uk)

Layout: Norbert Steinhaus, Pictures: Archive, FOIST, Interchange, UfU, Wissenschaftsladen Tübingen, Wissenschaftsladen Bonn

Printed by: druckladen gmbH, Bonn, July 2005, Number of Copies: 3500

Living Knowledge – Journal of Community Based Research is part of a project called ISSNET which has been awarded financial support by the European Commission through the contract HPRP-CT-2002-00011. ISSNET is a 'Thematic Network' in the 5th Framework Programme, under the theme 'Improving Human Potential & Socio-economic Knowledge base', section 'Raising Public Awareness of Sciences and Technology'. For further information please see www.scienceshops.org or contact drs. Caspar de Bok, c.f.m.debok@bio.uu.nl.

The next printed issue of Living Knowledge – International Journal of Community Based Research will be published in October 2006. Information about coming online editions and the editorial guidelines can be found at the homepage of the Science Shop network (www.livingknowledge.org). The magazine (print and online) welcomes the contribution of reports, articles, news, press releases and clippings, letters, contribution to discussions, job offers, internships, internet links etc. Reports and detailed articles should follow the editorial guidelines. Please feel free to contact the editors for your questions and any support.

The views expressed in the articles and papers are those of the authors and are not necessarily endorsed by the publisher. Whilst every care has been taken during production, the publisher does not accept any liability for errors that may have occurred.

Bonn, D

Competition, co-existence or „clash of civilisations“?

Integration and conflict depending religious pluralism in North Rhine-Westphalia

The broad discussion about integration and conflict potentials of the increasing religious pluralism in the German society is situated in an empirical vacuum. Although the civil and scientific predictions about the role of religious communities in conflicts or integration processes have to refer to a knowl-



edge of the religious pluralism, a valid database of religious statistics still not exists. As a reaction to this empirical deficit and considering the consequences for societal actors the Chair for Comparative Religion at the Ruhr-University of Bochum intends to get an overview of the religious landscape in the state of North Rhine-Westphalia. The survey targets the compilation, aggregation and local distinction of statistic material and the analysis of exemplary cases of inter-religious communication and conflict constellation. Therefore the structural database of religious communities will be supplemented by aspects of organisation, regional dissemination, economic questions and inter-religious contacts. The conclusions of the quantitative and qualitative material will lead to the systematic elements, for

example the structure of inter-religious communication and the causes of conflicts, including possibilities of mediation. The project is funded by the North Rhine-Westphalian ministry of science and research. Although it is led by local questions it also is connected to similar activities in Europe and the U.S. The Bonn Science Shop will support this project by documenting the roman-catholic, protestant and orthodox communities.

Contact:

Chair for Comparative Religion, Faculty of Protestant Theology, Ruhr-University Bochum, Building GA 7/62 and 162, Universitätsstr. 150, D-44780 Bochum, Tel.: +49 234 32 – 28 272, religionswissenschaft@rub.de, www.ruhr-uni-bochum.de/rekwiss/
Wissenschaftsladen Bonn e.V. (Bonn Science Shop), Krischan Ostenrath, Buschstr. 85, D-53113 Bonn, Tel.: + 49 228 20 161 – 43, Krischan.Ostenrath@wilabonn.de, www.wilabonn.de

Utrecht, NL

Down under

The underwater vegetation in the 'Vecht' river is not doing well. Ecological recovery measures did not provide the desired results so far. In a research for the 'Hoogheemraadschap Amstel, Gooi en Vecht', accompanied by the research group for landscape ecology at the faculty of biology of the Utrecht University, it has been described which ecological reason or combination of reasons cause the most important obstacles for the development of underwater plants in the Vecht river. The circumstances appear suitable for the germination and growth of underwater plants. As most important point appears the supply of seeds and vegetative share for the establishment of new plants.

The report can be downloaded for free at <http://www.bio.uu.nl/wetenschapswinkel/> (in Dutch)

Liverpool, UK

Rising to the challenge

INTERCHANGE provides a research and volunteering exchange between university and the Merseyside community and has been operating as a registered charity since 1994. The main ethos of Interchange is based on partnership – acting as a 'broker' to community and voluntary groups needing research or volunteers, and to students interested in conducting research or volunteering as part of their academic studies.

LIVERPOOL CARES is a business in the community initiative. It helps businesses and their employees undertake short voluntary projects for community organisations. Businesses which join Liverpool Cares undertake between two and eight team challenges a year. They generally involve physical labour, renovation, decoration, tidying up, gardening etc, for organisations are struggling to help disadvantaged people. Liverpool Cares helps businesses to prepare for their

chosen challenge by undertaking site visit and risk assessments, and by briefing team leaders. Whatever the challenge, the aim is to create a win:win:win situation, benefitting the business and the individual volunteers, as well as the community organisation. Following discussions with Liverpool Cares, Interchange prepared a research brief and recruited a final year sociology student from Liverpool University to carry out the study. The student devised a sample frame and a semi-structured questionnaire and conducted a series of face-to-face-interviews. Her informants were drawn from three community organisations which had recently specified challenges, businesses which had responded, and the employees who had risen to these challenges. The research revealed that in some cases, their challenge had taken volunteers to territory they had not experienced before – geographically or



socially, creating a deep impression and a wish to do more. Many of them had not known their fellow volunteers when they embarked on the challenge, but they had learned to work as a team, organise themselves and manage their time well, and this had helped them back at work. The community organisations had received the help they needed – and raised awareness of their activities. The employers felt that their businesses had gained from the experience – in terms of better morale, team spirit and productivity, as well as improving their image in the community. For some, it was

also eye-opening from a staff development perspective. The study also identified steps which Liverpool Cares could take to improve its service – creating a website to advertise the latest challenges and celebrate completed challenges; ensuring that risk assessments are undertaken jointly by the community organisation, the business and Liverpool Cares; promoting good communication between the three parties; and redesigning its post-challenge evaluation forms.

Interchange, the University of Liverpool, Dep. of Sociology, Eleanor Rathbone Building, Liverpool L69 7ZA, stockley@liverpool.ac.uk, www.liv.ac.uk/sspsw/interchange

Tübingen, D

Genetics-Discourse: Plenty of contributions – even more readers

Approximately 130 participants from universities, NGO's and churches, as well as a large number of private persons took part in the recent online-discourse on "Green gene technology and food safety in developing countries". More than 200 contributions were made – many of them with substantial back-up analysis. The internet conference ran for three weeks in June and was directed at people actively involved in development policy and biotechnology. The German Federal Ministry for Economic Cooperation (BMZ) and the German Technical Cooperation (GTZ) as initiators, wanted to find out how the technical community rates the opportunities and potentials of such technology, but also its risks. The Tübingen Science Shop was asked to shape the concept and the contents of the discourse.

Green gene technology continues to be a controversial subject in Germany. Up to now there has been relatively little discussion of any contribution it could make towards eradicating extreme poverty and hunger, and thus to achieving the Development Millennium Goals. The online discourse was instigated by the Dialogue Forum of the German government's Action Programme 2015. In three different forums participants discussed the prospects, risks and the global political framework of green gene technology. Despite of the sometimes

heated discussion, in the end there were important areas of agreement. Most participants tended to be critical of gene technology, and did not see it as a key to solving the hunger problems in the developing countries. Increased production of food alone could not erase the problem of hunger. There was an extensive debate on whether farmers should be free to make their own decisions regarding the use of green gene technology.

The general consensus of opinion was that in fact the technology cannot be stopped. The question remains, however, how the community can best use the technology to help the poor, and what control mechanisms need to be put in place to avoid any negative effects. Another hot topic of discussion was the use of BT-cotton in India. Here too, feelings were mixed, culminating in the question of whether (poor) farmers can really benefit. The large number of hits has led the organisers to assume that many people were interested in the outcome of the discourse. The processed results will be made available to the members of the Dialogue Forum 2015, to institutions and political decision-makers. The final report and all contributions to the Forums can be accessed on <http://www.aktionsprogramm2015.de/onlinediskurs>.

Christina & Ludger Benighaus, DIALOGIK gGmbH and Wissenschaftsladen Tübingen, Kronenstraße 4, 72070 Tübingen, Tel. +49 7071 - 252219, E-Mail: info@wila-tuebingen.de, www.wila-tuebingen.de



Wageningen, NL

Urban planning and neighbourhood

Local governments rarely take into account the social impact of new housing estates in existing districts. Public spaces as 'Boules' places, sheep pastures or small paths are very important for keeping good terms with the neighbourhood. In their report for the neighbourhood association in Hoogstede Klingelbek in Arnhem researchers from the Science Shop of Wageningen UR described that sacrificing those places to city planning aspects weakens the community feeling in the district.

The local government wants on the open spots in this rural district for the construction of a large number of houses, whereas the research workers recom-

mend to leave these spots partially untouched and to take into account the existing social-spatial qualities of the area. Physical interventions in the environment or the city structure have always social impact, Mirjam Koedoot and Dr. Henk de Haan wrote in their report for the city neighbourhood. Urban planners and policy makers usually take these aspects into account, especially if it concerns problem districts. But in this case an obvious lack of knowledge has been observed.

The report can be downloaded at www.wur.nl/wewi (in Dutch). For further information please contact Henk de Haan Tel. + 31 31 74 84 374 or Mirjam Koedoot tel. + 31 31 74 86 117.

Vienna, A

A PARCEL for technology enhanced learning

Recently the European Commission awarded a grant for the project *Participatory Communication Activities on E-Learning (PARCEL)* under the Horizontal Action *Promoting the „embedding“ of science and society issues across the Framework Programme* of the Science & Society Work Programme. The project aims at complementing the dissemination activities of up to now the only two Networks of Excellence (NoE) on technology-enhanced learning – KALEIDOSCOPE & PROLEARN – with participatory communication activities. Being of regional nature, these activities aim at social profit organisations which are actual or potential providers or users of technology-enhanced learning. Furthermore the consortium will develop principles and methodologies for conducting similar participatory communication activities. Conceived as pilot actions the parallelized activities will take place in Ostrava (Czech Republic) and Vienna (Austria). When successful,

they will offer good practice for participatory communication activities for similar Integrated Projects and Networks of Excellence. By stimulating the further development of content, hard- and software for technology-enhanced learning, the success of these communication activities could translate into improved marketability of such technologies and the needs and aspirations of citizens and consumers would be met to a greater extent. The consortium consists of the Science Shop Vienna (Austria), who co-ordinates the project, the Centre for Social Innovation (Vienna, Austria), the Centre of Information Society Technologies at Sofia University St. Kliment Ohridski (Bulgaria) and Predika s.r.o (Ostrava, Czech Republic). PARCEL commenced in June 2005 and is scheduled to end in August 2007.

Contact: Michael Strähle (project co-ordinator, Christine Urban (scientific co-ordinator, Science Shop Vienna, Währinger Str. 59, 1090 Vienna, Austria, T (+43) (0)1 401 21 28, F (+43) (0)1 401 21 66, wilawien@adis.at

Antwerp, B

The Science Communication Escalator

by Dr. Ann Van der Auweraert,
Antwerp, Belgium



Science communication is like happiness : no-one is against it, but everyone has a different notion of it. The concept of science communication certainly needs to be refined. At present, there is no perfect blueprint for the communication between scientists and society. Maybe the search for such a model equals the search for the holy grail, but at the same time it gives us some food for thought about the possibilities.

The risk management escalator

For instance: is the organisation of science communication related to the nature of the scientific knowledge? This question was inspired by the presentation of the 'Risk Management Escalator' by Ortwin Renn, on the ESOF 2004 at Stockholm (Ortwin Renn). "Risk management is confronted with three major challenges: complexity, uncertainty, and ambiguity (Renn and Klinke 2001; Klinke and Renn, 2002)." Starting point for Ortwin Renn is that there are four types of knowledge / science : simple, complex, uncertain and ambiguous knowledge.

Straightforward or simple knowledge are facts that don't involve any discussion or uncertainty, or simple relationships between variables. It is usually what we mean by 'basic science' and what is being taught at schools. This knowledge is the result of scientific investigation that reflects a positivist view on truth. This form of knowledge tends to be generally accepted and there are no conflicts about it.

- e.g. water boils at 100° C. under atmospheric pressure of ...
- e.g. gravity
- e.g. the sun evolves around the earth

"Complexity refers to the difficulty of identifying and quantifying causal links between a multitude of potential candidates and specific adverse effects."

In a situation where scientific knowledge is context dependent, it is called complex knowledge. This can be the case when for instance external environmental factors influence the results. These results can therefore vary according to the factors. The conflicts that arise are solely of a cognitive nature.

- e.g. lab results can produce entirely unexpected effects in field experiments
- e.g. western agricultural knowledge cannot always be implemented in the Third World
- e.g. scientific knowledge is not interpreted or used in the same way by everyone

"Uncertainty is different from complexity. It comprises different and distinct components such as statistical variation, measurement errors, ignorance, and indeterminacy (WBGU 2000, pp. 52ff.), which all have one feature in common. Uncertainty reduces the strength of confidence in the estimated cause-and-effect chain"

In the case of uncertain knowledge, emphasis is on ignorance, determinability, deviations in measurements, statistical variations. Conflicts arise both on a cognitive level as on the level of valuation / reflection. Science provides for the knowledge, but it is insufficient. More research does not necessarily result in more knowledge, certainly not in the long run. Trust is an important parameter of this kind of knowledge.

- e.g. nutritional applications of biotechnology

"ambiguity or ambivalence. This term denotes the variability of (legitimate) interpretations based on identical observations or data assessments"



Figure 1. The risk management escalator
(from simple via complex and uncertain to ambiguous phenomena)

If different interpretations of one set of data, methods or instruments of measurement are possible, and if there can be discussion about what these mean for mankind and the environment, then this knowledge is ambiguous. The conflicts that arise also concern values and are therefore strongly prescriptive.

e.g. greenhouse gases: is the earth warming up or are we on the verge of an ice-age ?

For each type of knowledge needed for the calculation of risks, a different type of risk communication is involved. Orwin Renn's model of risk communications is based on the hypothesis that each kind of knowledge about risk, requires its own kind of risk communication. Characteristically, the diversity of the group of communicators involved, increases with the uncertainty and ambivalence of the risk knowledge.

Is this hypothesis also feasible for science communication ? In other words : do we need to implement another kind of communication for each different type of scientific knowledge ? In the following pages, we will construct a model resulting in the presentation of a science communication escalator.

The science communication escalator

In the science communication escalator, four dimensions of science communication are being presented. Each dimension comes with its specific characteristics and is related to the kind of knowledge that it communicates. Vice versa, we can say that each type of knowledge needs its specific way of communicating.

Originally, science communication is the dissemination of scientific results to a generally passive and monolithic public, usually through the formal education system, or through the mass media. In this diffusion model the communication process goes in one direction, from a sender to a passive receiver. (Logan Robert A., 2001) The aim of communication is the 'understanding of science' by citizens, in the hope that there will be a greater support for science, and especially for the great amount of money that goes to science. (Lewenstein B.V., 1992) A lot of effort aim to increase the scientific literacy of the public. This results in the creation of several 'public understanding of science' programmes (PUS), based on the concept of this 'deficit model'. See for example: (Paisley William J., 1998; Laugksch Rudiger C., 2000; Wynne Brian, 1991) Simple or straintforward knowledge is communicated

			PPS Public participation of Science
		PES Public Engagement of Science	
	PAS Public Awareness of Science		Actors : scientific experts + specific target groups + representatives of the public + external experts
PUS Public Understanding of Science	Actors : scientific experts + specific target groups	Actors : scientific experts + specific target groups + representatives of the public	
Actors : scientific experts			
Sender-predominance	Receiver-oriented	Expert / layman	Partners
<ul style="list-style-type: none"> inform one-way monologue top-down mass-media 	<ul style="list-style-type: none"> context target group needs, wishes feedback loops 	<ul style="list-style-type: none"> consulting both ways closed participation 	<ul style="list-style-type: none"> dialogue open participation mutual bottom-up local knowledge
No conflicts	Conflicts : cognitive (incomplete or incorrect comprehension)	Conflicts: cognitief + evaluative/reflective	Conflicts : cognitive and reflective /evaluative + prescriptive (different norms and values)
Simple	Complex	Uncertain	Ambiguous

Scheme: the science communication escalator

most efficiently through Public Understanding of Science.

Where complex knowledge is concerned, the sender is still the agent trying to pass on knowledge to the receiver, but precisely because the knowledge is complex, the sender has to pay special attention to the target group, and whether this group has received the knowledge, has interpreted it correctly and whether the group is receptive to the knowledge. The greater attention for the public also involves a greater creativity in the 'packaging' of the message. A variety of events arise with the audience in mind. The 'public awareness of science' (PAS) is the main aim, not only the public understanding of science. See for example: (Stocklmayer Susan, Gore Michael, & Bryant Chris, 2001; Wynne Brian, 1991; Laugksch Rudiger C., 2000; Clark Fiona & Illman Deborah L., 2001) As the public understanding of science is supply driven, the public awareness of science is more demand-driven.

As mentioned before in this paper, knowledge can also be uncertain. More research does not necessarily result in more knowledge. When communication in this area has to be initiated, and especially if decision making on a management level is involved, science provides the source of data and knowledge used to give substance to standpoints. Moreover, representatives of the general public take part in the communication process. For instance, this is the case in citizen juries or panels. These activities can be ranged as Public Engagement of Science, PES. The aim is to consult the public for decision-making. It is still supply driven and a two-sided communication process between experts and non-experts.

At last, we need to mention ambiguous knowledge. It is characterised by a large complexity, a lot of uncertainties, different interpretations of data and disputes about the right choice of methodologies and instruments of measurement. When communication about this kind of knowledge is concerned, a dialogue involving all interested parties, becomes necessary. Where scientific knowledge does not have all the answers, complementary types of knowledge from other fields of intellect and other sources such as experience and practical knowledge can be available. This form of communication (PPS) is not common practice in Flanders, but certain experiments are being implemented. In the past few years for example, we have seen stakeholder dialogues, citizens' discussion groups and focus groups – meeting and sharing vision, values and interpretations. The communication that arises is not only of a cognitive (as with PUS and PAS), but also of a reflective and prescriptive kind. Thus, communication becomes hard and time-consuming, since this process requires more time, energy and openness from all participants.

Taking the science communication escalator as a model, it is paramount to adjust the methods of communication according to the nature of the knowledge, which can be straightforward, complex, uncertain or ambiguous.

Tendencies in science communication

These dimensions and the science communication escalator show us that the tendencies noticeable in communication in view of an increasing complexity and uncertainty of the scientific knowledge are :

- from large, anonymous groups to small conversation groups
- from little interaction to intensive interaction
- from mass-media communication to interactive communication
- from knowledge-driven to problem solving – driven
- from applicability to serviceability
- from supply-driven to demand-driven
- from transmission to transaction
- from closed to open
- from product to process communication
- from objective knowledge to socially constructed knowledge (positivist to constructionist)
- from ignorant public to competent public
- from short-term to long-term interaction

A lot of head work is still necessary, and I would like to appeal to anyone who can come up with new insights or ideas.

Contact:

Dr. Ann Van der Auweraert, Department of science communication, University of Antwerp, Groenenborgerlaan 171, 2020 Antwerpen, Belgium. Tel: 0032 32653484, email: ann.vanderauweraert@ua.ac.b

Reference List

- Barbagallo Fiona (2002). Should we continue to pursue dialogue? In South-Africa: Conference Public communication of science and technology 7.
- Bucchi Massimiano (1998). Science and the media , alternative routes in scientific communication. Routledge London and New York.
- Clark Fiona and Illman Deborah L. (2001). Dimensions of civic science. *Science Communication*, 23, 5-27.
- Gibbons Michael (1996). The new production of science and research in contemporary societies. London Sage.
- Gibson Ian (2000). Scientists are citizens too. *Fabian Review*, 112, 11.
- King Suzanne (2002). Understanding your audience. In South-Africa: Conference Public communication of science and technology 7.
- Laugksch Rudiger C. (2000). Scientific literacy: a conceptual overview. *Science Education*, 84, 71-94.
- Lewenstein BV (1992). The meaning of "public understanding of science" in the United States after World War II. *Public Understanding of science*, 1, 46-68.
- Logan Robert A. (2001). Science mass communication, its conceptual history. *Science Communication*, 23 nr 2, 136-163.
- Paisley William J. (1998). Scientific literacy and the competition for public attention and understanding. *Science Communication*, 20 nr 1, 70-80.
- Stocklmayer Susan, Gore Michael, & Bryant Chris (2001). Science communication in theory and practice. Kluwer Academic Publishers.
- The Wellcome Trust (2001). Science and the public: a review of science communication and public attitudes toward science in Britain. *Public Understanding of science*, 10, 315-330.
- Wynne Brian (1991). Knowledges in context. *Science, Technology and Human Values*, 16, 111-121.



Sciences and theatre - it seems as if both don't have much in common: On the one side the world of logic and exactness, on the other side the playful and imaginative world of theatre. That both sides can form a fruitful combination in the search for new, innovative teaching tools was shown by a drama education project initiated by the LAG Theaterpaedagogik Baden-Wuerttemberg and the Science Shop Tuebingen. Their project „Young scientists meet pupils” was financed by the Landesstiftung Baden-Wuerttemberg within its PUSH-programme (public understanding of science and humanities). As the number of students especially in subjects like maths, physics and chemistry has decreased significantly during the last years, the programme promotes new approaches to increase the popularity of sciences with pupils as main target group.

Following this idea LAG and Science Shop invited high school pupils at the age of 15-19 years to meet young scientists that do research in the fields of biology, chemistry, biochemistry, physics and landscape architecture. Supported by drama educationists they worked together on questions like „What is laser?” or „What happens in the brain, when we get frightened?” The topics were chosen by the scientists according to their specific field of research. Two workshops were organized with different participants, each of them lasting one and a half days.

The project organizers expected the techniques of drama education to speed up and intensify the processes during the initial phase of the workshops making it easier for pupils, teachers, scientists and drama educationists to forget barriers and to become acquainted with each other. They further assumed that owing to the playful methods and artistic presentations pupils would more easily be able to relate to the scientific topics and would get more motivated to discuss them.

For the main working process workshop participants were split up in smaller groups, each of them dealing with another

Tübingen, D

Fruitful interplay: Science and theatre

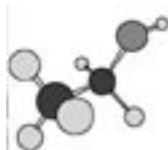
by Alexander Tyroller,
Science Shop, Tübingen, Germany

subject represented by one or two young scientists. It was the task of the latter to give their group some basic information. That could be done by common methods like short lectures and powerpoint presentations as well as by drama educational techniques like statue building or theatre machines. The scientists had received some basic training by drama educationists during a former meeting.

Inspired by the given information each group started to work on questions like „How is it possible to make molecules „visible?” Supported by drama educationists the participants had to transform their new knowledge into a presentation which was developed in a joint working process: Anybody with an idea for realization could make a suggestion and arrange the other group members according to his/her imagination. The resulting scene was reflected and if anyone had an idea for improvement he became the next director. Through this process, the solutions presented became more and more differentiated and complex. They were finally performed in front of the other groups at the end of the workshop, giving them also the chance for suggestions and further improvements.

Making molecules visible

How is a certain molecule constructed? Which atoms is it built of? How are the single atoms arranged within it and what characteristics appear due to a certain structure? Questions like these keep Angelika Winter busy as she explained to her working group. Winter has obtained a doctorate in inorganic chemistry in the field of metalorganic compounds that can serve as catalysts within the chemical industry. She thinks that her work can be compared somehow to that of criminalistics: There are pieces of circumstantial evidence that build a puzzle and must be put together forming a possible three-dimensional structure of a molecule. Even if one knows the number and kind of atoms a certain molecule consists of, one must still think of different possibilities for their sequence and neighbourhood with different forms of bonds and angles. All these factors can influence the specific characteristics of a molecule.



Winter supposes a certain structure, formulates an hypothesis and tries to proof it. She uses different methods to make chemical reactions, weight, size or the position of single atoms „visible”. The proposed structures are presented in a model with balls or shorthand symbols to represent the atoms and with lines for the bonds. Chemical construction kits can pupils help to deal with such three dimensional models. In Winter's group it was shown, that the construction kit can



easily be replaced by the pupils themselves using the method of statue building: Each member represented a single atom. A sculptress arranged them in the same way the atoms would be placed within a certain molecule. Taking each other by the hand the „atoms” got connected by bonds or double bonds. Getting physically involved in a „living statue” allowed the pupils to make a new holistic experience.

Other drama educational methods were introduced to deal with other questions – for example to show how a mass spectrometer functions. Within this measuring instrument atoms or molecules get deflected by attractive forces from their formerly straight course, the extent of their deflection corresponding to their weight. Thus the place, where they impinge on the wall of the mass spectrometer provides the researcher with hints for the atomic structure of the examined molecule. These processes were reproduced on the stage by the participants who explained the specific role they were taking over to the others:

„I’m an electron which releases another electron of the atom.”
 „We are the magnetic field that deflects the released electrons.”
 „I’m the detector the electrons impinge on.”

Conclusion

Drama education provides holistic, playful learning methods that have proved to generate great acceptance among pupils as well as among scientists. This happened in the project described above in spite of the great scepticism a part of the pupils showed at the beginning. At the final event that brought together all participants and further interested teachers, pupils and scientists the experiences made were considered as helpful and valuable. It can therefore be recommended to test the potential of drama educational techniques for teaching scientific topics in further projects. The project „Young scientists meet pupils” has been documented in written form and on DVD. The documentation material can serve as a basis for the organization of similar projects within schools or for teacher training courses. It is available in german language only and can be ordered from the Science Shop Tuebingen.

Contact: Science Shop (Wissenschaftsladen e.V.), Kronenstr. 4, 72070 Tuebingen, Germany, info@wila-tuebingen.de, www.wila-tuebingen.de



Lack of Confidence

Focus on co-operation between citizens and university in Barcelona

by Michael Sogaard Jørgensen, Technical University of Denmark
and M. Angels Alio Torres, University of Barcelona

Experience with co-operation between citizens and researchers at the universities in Barcelona and the European experience with Science Shops was the focus at a seminar at University of Barcelona 8 April 2005. The aim of the seminar was twofold: to discuss the experience so far with co-operation between citizens and university and to discuss the idea of setting up a Science Shop at University of Barcelona. The seminar was organised by the Geographers Group for Social Ecology at University of Barcelona.

The seminar had presentations from researchers from University of Barcelona, who all had experience with research in topics raised by citizens. One area is public health, where examples were presented with focus on conflicts between citizens' concerns and the concern of industry and government within nuclear waste, use of pesticides for fumigation and waste incinerators. In some cases citizens' concerns were not taken seriously although they report to have health problems connected to a certain exposure. Another example describes threshold limits being exceeded in the smoke from waste incinerators, where the risk is not taken seriously by the government. The relationship between public health, environment and epidemiology is an area, which needs continuous co-operation between researchers and citizens' organisations, and where citizens' experience should be given higher legitimacy.

Another area discussed was urban planning and development and the role of neighbourhood organisations. The proposals and concerns of these groups are often not taken into consideration by the local and regional governmental authorities. There are experiences with co-operation between researchers and such social interests groups, which show the need for developing new ways of documenting the concerns of the citizens and developing ways of timing of the social groups and the researchers. It is important that co-operation with social groups is not seen as a badly recognised scientific activity – because of the often limited resources the citizens' organisations face in their work.

A third area presented was water management. Co-operation between some researchers and social groups has called upon a new "culture of water", which was seen as an eco-system itself which needs to be protected. In the past river water was just seen as a way of transporting the pollutants from cities and industry into the sea. It has been a hard job to get attention to the quality of river water. University researchers have for example been lecturing for judges in order to teach them about the pollution of rivers, so that they could run legal cases about water pollution. The urban administration felt torn between the request for urban development and the request for concern for the environment. An important topic is the language of the publications. Some of the researchers publish in Catalan in order to make the publications understandable for the social and environmental groups, but this is not welcome among the other researchers and the university.

The presentations showed how interaction with social groups and social issues leads to new lines of research and new ways of doing research. The citizens' concerns about toxic substances implied a combination of toxicology and epidemiology. The work around urban planning has implied new lines of research concerning social aspects of housing. Sometimes

researchers live a divided life where they are involved in social and political issues outside the university, but they don't see the social and political aspects of their own research. Sometimes such integration of research and social and political aspects is not welcome by the academic environment, university management and business. Funding of this kind of research can be difficult, although it sometimes can be integrated into other research projects.

Experiences with co-operation between university and citizens from the Autonomous University of Barcelona and the Catalan Polytechnical University have also been presented. The discussions stressed the importance of channels for interaction between university and civil society, so that university staff and students can work together with social groups as part of research and education.

The seminar included a dialogue with a representative of the directorate for citizen participation of the Catalan government and from the Catalan research foundation about the possibility supporting co-operation between citizens and university. The representative from the research foundation stressed the need for scientific work and knowledge to understand what is going on in society in order to take part in the shaping of society in a sustainable way. There should be more channels for co-operation between university and civil society. The foundation can bring stakeholders together to discuss the interaction between science and society, including the role of universities. The representative of the directorate for citizen participation sees a lack of confidence between society and universities. Universities have not been able, as expected by society, to help society developing strategies for how to work with societal problems. It is not enough to have knowledge to be an expert. Citizens should not only be seen as receptors of scientific knowledge.

The seminar was organised by the Geographers Group for Social Ecology at the university of Barcelona. The group has experience in collaboration with citizen groups from research in local environmental audits in a number of municipalities around Barcelona. The research has been financed by the government as a recognition of the importance of involvement if citizens in Local Agenda 21 activities. The focus is on auditing of consumption of water, production of waste, energy consumption etc. Citizens participate in the diagnosis of the environmental situation and in the development of proposals for a more sustainable development, like changes in environmental plans and changes in practice among citizens and business. The groups are also developing competencies so that they can continue the activities. The research group has signed an agreement with an ecological association in the region in order to further develop the participatory approach of the environmental auditing. The Geographers Group for Social Ecology sees this project as a pilot project for the establishment of a Science Shop at University of Barcelona.

Contact: M. Angels Alio Torres, (2GES) The Geographers Group for Social Ecology, University of Barcelona. Tel. +34 934 409 200



Sassari, I

FOIST

University as an open place for community empowerment and civic participation

by Andrea Vargiu, FOIST, Sassari, Italy

FOIST is an acronym that in Italian stands for Formation, Occupation, Information, Territory. It is now a social science laboratory operating within the Department of Economics, Institutions and Society at the University of Sassari (Sardinia, Italy). It is directed by sociology professor Alberto Merler since its foundation, back in 1977, as a documentation centre open to both academic and non-academic users and covering such themes as social policies and services, education, school, training, social work, non profit, and others.

Besides that documentation service, FOIST's main activities concern promoting and running theoretical and empirical research with a strong engagement in positive social intervention. That is why its extensive name is presently the equivalent in Italian of "FOIST Laboratory for social policies and formative processes". A laboratory is a place for idea generation and sharing as well as for active social engagement; in that sense, FOIST is conceived as an *open* place since its foundation: it is presently composed of faculty members and hosts non tenure track researchers as well as PhD and graduating students. It also functions in close connection and collaboration with other faculty institutions and research bodies and actively encourages contributions and participation of people and organisations that are not normally involved in academic activities, such as social workers, educators or volunteers. Within the University of Sassari, FOIST supports the study courses in Education and Social work; while, as to research, it is especially connected with the Institute for Insularity and Composite Development (ISC: since 1989) and with the Research Center for Interculturality and Human Condition (intHum: since 1992). Some key concepts are shared with those research centers regarding composite development, insularity, interculturality and co-development. The main non academic partners in recent FOIST activities have been non profit organisations, public institutions, schools, as well as informally organised groups of citizens.

The main activities consist of social research which conjugates communicative methods and community participation, and other activities such as public meetings, debates, conferences, training courses and seminars for professionals and persons responsible of social policies, institutions or organisations, as well as any other initiative that is suitable for promoting wide civic participation and awareness raising. Those activities are very seldom run apart one from the other, but are more likely to be strongly integrated. The overall approach tends in fact to conjugate research with the promotion of civic participation, solidarity building and community resources activation. That results in a shared production of useful knowledge through the removal of the classical distinction between "the experts" and "the profanes". The most recent projects focussed on such subjects as: civic society; the non-profit sector and social economy; participa-



Alberto Merler, Director of the FOIST Laboratory (right), portraied with Prof. Michinobu Niihara from the Okkaido University (Japan) with whom the Italian institute for a long time has an interchange on experiences and who has set up a "parallel" FOIST experience in Japan.

tion to public decisions in rural areas and medium-small sized villages (action research for the creation of a rural community school); local knowledge and community empowerment. From the methodological point of view, a special interest is on methodologies that could enlighten the actors' points of view and enable their engagement in the social arena. More broadly speaking, interest lies on reflexivity as well as on the relationships between societal change and knowledge systems (for instance, the relations between science, traditional knowledge and "ordinary" knowledge).

Studying and supporting the non profit sector

Very briefly, a definite "set" of activities can be identified amongst those run within FOIST. Work on the non profit sector has been run for a while: in 1998 FOIST researchers joined a consortium of civic associations (Consorzio SIS: development of social entrepreneurship) and thus worked on different projects covering research, formation, consulting and information for and with non profit organisations. The research projects mainly merged into two distinct reports on the actual situation of the non profit sector in Sardinia and another book which sets some theoretical aspects of the non profit experience from the sociological point of view. Formation mainly consisted in two high level university courses (masters) for the running and management of non profit organisations and shorter seminars for people already working in the non profit sector.

At present FOIST is not part of the consortium anymore, but still runs a book collection with a nation publisher on themes concerning organised solidarity. Research activities are also still carried out, presently through a national research project on responsible consumption within which FOIST research unit particularly focuses on fair trade. Moreover, formation is carried

out through profession oriented study courses run in collaboration with a local social cooperative and high schools.

Community involvement and empowerment: creating a "maison familiale rurale"

Another set of activities presently run concerns the possible creation of a "maison familiale rurale" in a rural area. The idea behind the project is to try to contrast young people's abandon of rural areas through the valorisation of local knowledge and "savoir faire". Thus, the "maison familiale rurale" should help as it would give "official" recognition to forms of knowledge that are not often considered as "valuable"; it would also be a specific place where those forms of knowledge could be taught and kept alive not through their "museification". The school would function through rotation of class and practice on the fields as well as through a pedagogy of sharing. The idea of "maison familiale rurale" is not new and has a long tradition, especially in France – where the first "maison" was born in 1937 – and (under the French influence) in South and Central America as well as Africa and other parts of the world; but is not very well known in Italy, although some important experiences exist. A "maison familiale rurale" groups local families and people concerned with its objectives (education and training of young people or adults) which come from the determination of families that decide to change their conditions of life and to increase their autonomy. That is why, it allows the long term development of the area where it is based.

For that project, FOIST is collaborating with associations promoting that kind of experiences or that directly manage them on the field (notably AIMFR – Association Internationale des Maisons Familiales Rurales; AFR – Associazione Famiglie Rurali and MEPES – Movimento de Educação Promocional do Espirito Santo). Since the creation of a "maison familiale rurale" wouldn't go far without community implication, a long term project to try to evaluate the feasibility of that project with local populations and administrations has been running for a while now. Thus, many activities have been carried out since 1999 on a wide area comprising 18 municipalities: from classical "background" research (statistical data, individual and family interviews, analysis of previous development projects, historical and

cultural background...), to more participatory activities, such as public meetings, exchange visits with other people who experience "maison familiale rurale" elsewhere (in particular, northern Italy and south of France), focus groups, participant observation, information and awareness rising activities. Among the latests, the most important one was an international seminar on "maisons familiale rurale" that has been held in 2001 in collaboration with the Institute for Mediterranean Studies and Programmes (ISPRM). The project is presently running, as it takes a lot of hidden relational work and patient weaving of resources of different kind. Very roughly, we can identify three partially overlapping moments of the project which consist of a) research (getting to know the territory); b) dissemination and awareness rising; c) returning, giving feedback to population involved and stakeholders; d) support for decision and action planning; e) eventual support for project carrying out and management.

Citizen participation in technological and development choices

Another important activity more specifically concerned attitudes of people towards technological innovation and participation of citizens in technological and development choices. A specific project has been run in 1997-98 within the European research programme named SERF (Socio-Economic Research on Fusion): very briefly, within that framework, FOIST researchers worked on sociological and participatory aspects of the hypothesis of implanting a research plant on nuclear fusion (called ITER – International Thermonuclear Experimental Reactor) in a town close to Sassari. Two other candidate sites have been under consideration for its construction: Cadarache in France and Rokkasho-mura in Japan. End of June finally Cadarache has been chosen as the site for hosting the ITER nuclear fusion project.

Main activities within this SERF project consisted, once again, of "classical" research (main statistics, interviews, historical and cultural background, mapping of relevant actors – both individuals and organisations) along with information and awareness rising meetings. The carrying out of a EASW (European Awareness Scenario Workshop) was of the utmost importance for the good running of the project. The methodological approach followed in that occasion has proved to be quite effective. At the end of the project four main issues emerged: 1) the strong need for participation in decision processes expressed by local populations; 2) the fundamental role played by local actors in stimulating and managing such participation processes; 3) the role played by people attending the EASW and their motivation in keeping up with participation; 4) the need for strategies of development that are not monocultural, but that can be configured according to composite development visions. Besides this, the need for substantive action following awareness rising and participation activities emerged very clearly.

Laboratorio FOIST, Università degli Studi di Sassari, Dipartimento di Economia, Istituzioni e Società, Piazza Conte di Moriana 8, 07100 Sassari (Italy), Tel. + 39 79 22 96 61. Fax + 39 79 22 96 60, Director: Alberto Merler, foist@uniss.it (+ 39 79 22 96 59), Contact person: Andrea Vargiu, larvanet@tin.it (+ 39 79 22 96 62)



The FOIST team welcoming welcoming partners (with Prof. Merler (left) and the author (2nd from right))

Berlin, D

ufu

Independent Institute
for Environmental Concerns

by Malte Schmidthals,
Unabhängiges Institut für Umweltfragen e.V., Berlin, Germany

UfU e.V. (Unabhängiges Institut für Umweltfragen - Independent Institute for Environmental Concerns) was the first independent institute of environmental science established in the former German Democratic Republic.

The UfU was initiated in November 1989 by a group of nearly 40 East German scientists. With its roots in the GDR environmental movement, its impetus was to foster the progress of environmental awareness at a grass-roots level and analyze the development of environmental policy.

Today the UfU has its head office in Berlin, with a branch in Halle/Saale, and a consulate office in Dresden. Around fifteen people work in the departments of environmental law & public participation, climate change & education, noise pollution and landscape ecology. About 250 members and donors support the work of the institute. In addition to its six board-members, the UfU's work is supported by a scientific board. Members of the board help to establish relationships to partner organizations and other institutions or are invited as speakers on UfU-conferences.

Environmental sciences – Close to the public

The Independent Institute of Environmental Concerns is both a scientific institute and a citizen-based organization. Its vision is focused on the creation of a society with an economy that respects criteria of sustainability. Goals of this society are:

- the maintenance or restoration of ecological equilibrium
- more democracy through more public participation
- the achievement of social justice and stable economics.

The UfU continues to work in the tradition which it helped to establish during the citizens-movement in the former German Democratic Republic. It strengthens citizens' commitment through consulting and information. UfU launches developments and processes that respect the environment. It initiates applied scientific projects, actions and networks, that are relevant in public and for the society, that try to change ecologically unsustainable conditions and that need and support public participation. UfU is working to close the gap between knowledge and action and fosters the progress on necessary changes in society.

UfU sees itself as an independent institution working as an initiator, facilitator and moderator. It runs local, regional, national and international projects and collaborates actively in global networks. But it still remains a "learning institution" and as such is receptive to people with new ideas for projects. It fosters a continual culture of learning. Thus it:

- reinforces and improves the quality and competence of the scientific capabilities
- cultivates its own internal capacity and mechanisms of continual learning and renewal



Project on the use of renewable energy resources at schools

- is catalyzed by its ability to integrate the participation of its partners, members and volunteers in its work.
- strives for the highest possible measure of an environmental friendly way of working.

Fields of work

With its 15 employees and its two offices UfU has developed a huge variety which is reflected in its different fields of activities. In the department of 'Environmental law and public participation' the research focuses on empirical studies about environmental law concentrating on practical experiences in public participation and access to justice. But also the policy of the German Democratic Republic's environmental past is part of the studies. Current activities deal with consulting and educational projects on national and international level (e.g. Moldova, Poland, Czech Republic, Vietnam) and the implementation of Aarhus-Convention for strengthening public participation in Germany. While coordinating the international project "Environmental Protection through Participation", the UfU generated several laws on public participation and environmental protection in Moldova. In the department of 'Noise pollution' the research focuses on the impact of leisure noise on children and youth, currently working on noise-prevention at schools and kindergardens and the empowering of citizens to help themselves through measurements of noise in their surrounding. The department of 'Climate change and education' runs applied research about climate change indicators, the use of energy saving measures through incentive systems and projects on mobility learning in schools. Reports, studies and conference-documentations are available for almost all of the UfU's projects. In addition UfU offers books, information brochures and guides in the areas of environmental law, public participation, energy saving in schools, environmental education, noise prevention, environmental history and more.

Contact:

Malte Schmidthals, Greifswalder Str. 4, 10405 Berlin, Germany, Tel. +49 30 428 49 93-0, mail@ufu.de, www.ufu.de

Interview

A unique and ideal situation

Science Shop offers platform for organisations with little means

At random of a 'workshop on Science Shops', held at the beginning of June in Brussels, Norbert Steinhuis asked Koen Dedoncker of a local NGO to give a little explanation how they cooperate with the Brussels Science Shop.

Mr. Dedoncker, can you tell me about your organisation?

The full name of our organisation is 'Movement against Violence – Beweging tegen Geweld Vzw ZIJN'. We fight against domestic violence because we think this is a big and underestimated problem in our society. Most violence occurs within the 'safe' compounds of the home. We as a non profit organisation want give insight in the complex problem of violence and abuse within relationships and help to prevent it. Our aim is to break the circle of violence as it passes from generation to generation. You have to know that children who are abused or maltreated today or the children who witness maltreatment and abuse are the criminals, perpetrators or victims of tomorrow

This is a sensible and difficult field of activity. How do raise awareness for it?

To obtain a prevention of domestic violence and raise awareness we use different means. One part of our activities can be headlined as 'education'. We offer training for persons who are potentially involved in domestic violence, addressing to professionals as well as non-professionals. These trainings are not meant for victims or perpetrators of domestic violence, but for people who are in closer contact with them, such as the police, nurses or doctors.

But we also try to make the government and people in general more sensitive to the problem. A

large cooperation is needed to stop the violence. Therefore we are networking with other organisations. With various actions and campaigns we try to make people aware that domestic violence exists.

Why did you think about contacting a Science Shop, the Science Shop of the Free University of Brussels?

Our organisation has been active in the field of domestic violence since 1998. During that time we have build up a certain expertise. However we are a very small organisation, first recognized and supported by the government only six months ago. We don't have the financial or other means to do scientific research. Here the Science Shop steps in. For our organisation the collaboration with the Science Shop is crucial first of all because we do not have the financial opportunities to acquire our research by other means.

Science Shops do not supply any research budgets to their clients.

That is right. But we felt that the vision Vzw ZIJN has on domestic violence has to be supported scientifically. Additionally we want to make sure that our knowledge is up to date and that the vision we have and our aims are justified. We want to be informed about new developments. If the research brings new or different information and ideas we incorporate them in our daily work. By this our organisation stays dynamic. It keeps on moving - it's a movement.

Can you explain how you cooperate with the Science Shop?

Over the last few years we formulated different questions to get more insight into the mechanisms of violence and abuse within relationships. The Science Shop mediated the contact to students of the university, so that at this moment five students are working on their thesis on a question of relevance for our work. Vzw ZIJN has agreed on the way of scientific research by student theses because small projects are easier to handle. We would be unable to oversee larger projects. Three of the students just have handed in their thesis and we hope they did ok.

One of the researched subjects for example is the 'psychological violence towards men'. This is a topic where only little or no research exists, so we are very excited about it. All parties (the student, the Science Shop and us) come together on a regular basis to discuss the progress and to interfere if necessary.

As you can imagine working with those students is a unique and ideal situation, financially and scientifically. Besides that working with the students is very fruitful and pleasant and we experience the Science Shop as perfect mediator.

One of the criteria for Science Shop assistance is that the research results become public. How do you use the results of the research to achieve your mission?

The theses form the material for different projects, we translate the research in education and we also use the research to run certain actions in collaboration with other organisations.

So your conclusions will be ...?

As you can see the collaboration with a Science Shop is essential for our organisation. If they didn't exist Vzw ZIJN would experience a significant gap, which we would be unable to fill ourselves. Scientific research would be impossible.

I can easily imagine that we are not the only organisation in this position. The Science Shop offers a platform for organisations with little means in which they can develop their subjects. They offer students the possibility of writing an important thesis, one that will be used. I for one will keep on promoting the Science Shop cooperation to other associations we are affiliated with.

Thank you very much, Mr. Dedoncker.

Contact:

Koen Dedoncker, Beweging tegen Geweld – Vzw ZIJN, Middaglijstraat 10, B-1210 Brussels, Belgium, Tel. + 2 229 38 70, E-mail: zijn@amazone.be



Communicatie

Workshop

Involving NGO's in EU research

Representatives from Universities, Science Shops and NGOs recently attended a European Commission meeting in Brussels. The meeting aimed to look at mechanisms for NGOs and civil society organisations to be involved in, and influence, EU research. The meeting was organised and chaired by Nicole Dewandre, Head of the Scientific Advice and Governance Unit of the Science and Society Directorate. This meeting was organised as a follow on from a session at the EU-sponsored Science and Society Forum in March 2005 entitled 'Civil Society and Science: an increased role for NGOs'.

During the morning session, there were presentations from different areas of the Directorate General for Research, such as energy and nanotechnology. In the afternoon, there was a discussion around instruments which would allow NGOs to access research support and be part of research partnerships. The CRAFT model, which currently exists, was discussed in some detail. There was also some discussion around a proposal by Prof Michael Jorgensen of the Technical University of Denmark which suggested instruments to support civil society involvement in FP7, based on his experience with ACCENT (The Atmospheric Composition Change Network of Excellence).

It was suggested that an NGO representative should be included on all EC evaluation panels for grant applications as a way of ensuring that civil society issues were further embedded in FP7. It was also suggested that NGOs be regarded as stakeholders and involved from the outset in new policy discussions.

It was agreed that the meeting had provided a very useful opportunity to think about ways that NGOs could be involved in EU research, but that there was still plenty of thinking to be done. A further meeting should take place in Autumn 2005 to develop ideas discussed at this session and with a greater spread of stakeholders present.

Emma McKenna and Eileen Martin
Science Shop, Queen's University Belfast

A report of this session by the EU commission is available at: http://europa.eu.int/comm/research/conferences/2005/forum2005/docs/library_report_ong_en.pdf

Call for proposals

Make participatory democracy a scientific reality in the Region Ile-de-France

by Marc Lipinski,
Vice-president of the Paris Ile-de-France Regional Council



Our societies are getting more and more complex. Science and technology underpin almost every aspect of our lives. But if scientific progress can improve our standard of living, at the same time, it raises a lot of questions. Citizens are very concerned about some of the latest science's hot issues such as stem cell research or the safety of genetically modified organisms. They are eager not only to get information but also to participate in the scientific process.

As a policy-maker, I consider my duty to provide both scientists and members of civil society the means to find and explore new ways of collaboration.

On my initiative, the Regional Council of Paris Ile-de-France, a region of 11 millions inhabitants with 40% of the French national research capacity, adopted, on the 26th of May, a new strategy for research, higher education and innovation. Among various provisions made to promote exchanges between science and society, the "PICRI" (Partnerships between Institutions and Citizens for Research and Innovation) can be seen as the most innovative.

The "PICRI" call for proposals (on line under "Appels à projets" on the Regional

Council website www.iledefrance.fr) offers a support for research programs grounded on a close collaboration between members of academic institutions and members of non-profit-making organizations. From 2006 on, elected projects can get a grant up to 50.000 Euro per year, during a period between 6 months and 6 years. The main purposes of PICRI are to encourage knowledge sharing, to increase the valuation capacity of civil society and, also, to stimulate public debate on science. The first experience as such in Europe, "PICRI" call for proposals is part of a more general ambition for our region to make participatory democracy a reality at the local level... and maybe to give ideas to decision-makers at the national and European levels.

Contact: Marc Lipinski, Vice-president of the Paris Ile-de-France Regional Council in charge of Higher Education, Research and Scientific and Technical Innovation, Conseil regional d'Ile-de-France, 6 rue Monsieur, 75007 Paris, France, marc.lipinski@iledefrance.fr,

Workshop

Science Shops as actors for regional development

Most regions of the European Union do have representatives in Brussels. Among others these liaison officers inform regional authorities about EU activities and project that are of special interest from the region. On June 9 the unit Science and Education of Directorate Science and Society organised a meeting to inform the liaison officers about the possibilities that Science Shops offer the civil society organisations and the role regional authorities could play in supporting them.



Around 25 representatives attended the meeting. After a brief outline of the Science Shop concept, concrete examples of Science Shop projects from Belgium, UK and the Netherlands have been presented. It was clear that the concept isn't known in many regions. The European Regions Research & Innovation Network (ERRIN, www.errin-brussels.org) can play an important role in the information exchange between the Living Knowledge network and the European regions. The meeting raise interest in the Science Shop concept and some representatives will actively inform the regional authorities and regional community organisations.

If you want to know if your region was represented at the meeting you can contact Caspar de Bok of the international Science Shop contact point at c.f.m.debok@bio.uu.nl or +31.30.2535796

Training and Mentoring of Science Shops

On 1 May 2005 the EU funded project Training and Mentoring of Science Shops (TRAMS) has been commenced.

The general objectives of TRAMS are to encourage the development of emergent science shops through the provision of training and mentoring support and to support the ongoing professional development of existing science shops and similar organisations through the sharing of training materials and the experiences from daily practices to update professional development.

All members of Living Knowledge can participate in activities of TRAMS (e.g. workshops) and make use of the results and materials of TRAMS.

In August 2005 TRAMS will organise an internal workshop to introduce the concepts and activities of science shops to its project partners. One of the objectives of this workshop is to develop a summerschool 'Introduction in science shop concepts and activities'. This summerschool will be a yearly activity of the Living Knowledge network. Participants will learn and discuss about options, do's and don'ts, procedures, examples of science shop and alike organisations. The summerschool will focus on people that want to learn about the concept of science shops and discuss the opportunities to start a new science shop initiative in their region. The first summerschool is foreseen in summer 2006. Information about the summerschool will be published on the Living Knowledge discussion list. Organisation can already express their preliminary interest in the summerschool.

For more information you can contact the coordinator of the project, Caspar de Bok, (tel. ++31.30.2535796) of the International Science Shop Contact Point located at the Science Shop for Biology, Utrecht University, the Netherlands.

Science and Society Newsletter

In October 2004 the EC Directorate Science and Society launched the first issue of the Science and Society Newsletter. This quarterly newsletter provides news from Science and Society activities at the European Commission. In May 2005 issue 2 has been released.

You can find the newsletters at http://europa.eu.int/comm/research/science-society/documents_en.html

Forum on university-based research

In May 2005 the EC report 'European Universities: Enhancing Europe's Research Base' has been published. As a follow up of the conference 'The Europe of Knowledge 2020' a high level expert group has discussed recommendations for actions for the European universities in order to contribute to achieve the Lisbon and Barcelona objectives.

One of the recommendations for action to improve universities' role in the exchange and transfer of knowledge with industry and society is to promote the creation and the advancement of Science Shops at Universities.

The report can be downloaded from http://europa.eu.int/comm/research/science-society/index_en.html

Call for proposals

Promoting science and scientific culture

To improve communication between the scientific community and the public on issues of European research the EU commission recently has published a call for proposals. Proposals are invited in the following topics:

1. Actions to promote an interchange of user-friendly scientific information products (e.g. travelling or permanent exhibitions, documentaries, science theatre etc) between European countries. The information products should be targeted at members of the public unfamiliar with research and scientific issues. This includes the adaptations necessary for transposing the products to other countries, including translation into other languages (0.6 M Euro)
2. Co-production of audiovisual programmes and support to TV and radio productions on research and science, preferably involving more than one Member State or associated country. The action should target members of the public unfamiliar with research and scientific issues, including young people. Proposals should include a clear indication that the relevant organisation intends to broadcast the programme in question (1.0 M Euro).

Closure dates: 25 10 2005, 17:00 (Brussels local time). **Call identifier:** FP6-2005-Science-and-society-15

For details and further information – also on the open calls on 'Risk governance and ethics' as well as 'Women in Science' – please see <http://fp6.cordis.lu/fp6/calls.cfm>.

What is a Science Shop?

A „Science Shop“ provides independent, participatory research support in response to concerns experienced by civil society. Science Shops use the term „science“ in its broadest sense, incorporating the social and human sciences, as well as natural, physical, engineering and technological sciences.

There is not one dominant organisational structure defining a Science Shop. How Science Shops are organised and operate is highly dependent on their context. Organisations that meet the definition of a Science Shop and do provide civil society with knowledge and skills through research and education on an affordable basis will be taken into account.

There are forums for all parties interested and involved in Science Shops and other forms for community based research. They can give input to but also get information from the Living Knowledge discussion list, the bimonthly newsletter or this magazine, which provide users with resources and tools related to community-based research.

Living Knowledge Website:

www.livingknowledge.org

International Science Shop Office

isso@bio.uu.nl

If you want subscribe or unsubscribe to the magazine or the newsletter please send a message to C.F.M.deBok@bio.uu.nl or visit our website at <http://www.scienceshop.org> and select 'Discussion list and Newsletter'

Science Shop Brochure

An international brochure on Science Shops has been released.

This brochure was produced by the European Commission in close co-operation with the International Science Shop Network. In the brochure information can be found on activities and impact of Science Shops. The examples in the brochure give an outstanding overview of the different contexts in which Science Shops operate and the networking of Science Shops. The brochure is of special interest for people who want to adopt the concept of Science Shops or are involved in science and society issues (on a practical, political and management level). The brochure is available in English, German and French. Brochures can be ordered for free at the European Commission, Science and Society Directorate.

For ordering the brochure please contact Jette Gents, jette.gents@cec.eu.int, tel. +32.2.29.99909