Policy Recommendations

- How can Science Shops contribute to Governance
- Social Science Shops and Policy Formation
- Male Integration in Gender Mainstreaming
- Training & Certification of Professional Competences
Focus: Policy Recommendations

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Policy making is never just about the data - data, information and knowledge are only part of the complex set of factors which lead to the design and implementation of a policy - says Peter Levesque from the Social Sciences and Humanities Research Council of Canada and asks Science Shops to play a greater role as disseminators of research towards society. Also within the concept of the knowledge-based society co-operation between science and society is recognized as to be important. Science Shops and equivalent organisations facilitate scientific communication and societal demand driven sharing of knowledge with societal groups using a huge variety of methods and tools. But the focus for most politicians and university policy makers is still to generate and distribute knowledge with the aim of increasing economic competitiveness, finally forcing Science Shops to open for commercial clients. But Science Shop work cannot only be seen under the viewpoint of economics. Their value and benefits must also be judged under terms of social and educational benefits. The INTERACTS research project - a cross national study by Science Shops and institutions with science shop experience from seven different countries - aimed to improve the interaction between NGO’s, universities and Science Shops. Based upon the findings, the consortium has drawn out policy recommendations for the strengthening of the role of Science Shops in a more democratic form of societal governance, giving the economical sustainability of Science Shops a special focus of attention.

Funders often have been more impressed with a ‘true life’ case study than with quantitative evidence in tables and graphs, say David and Irene Hall from Interchange in Liverpool. And this situation might lead to a frustration of the researcher, if the work, even with high standards of research, is not used in decision making. They describe the different approaches of developing policy options for policy makers and give extracts from a project which has produced detailed policy options for a voluntary group to follow.

Enjoy this third issue of “Living Knowledge” and get a good impression of the various facets of Science Shop work. And remember that networking and making a magazine lives from participation. The next issue will be published in November 2004, focusing on ‘advancing science and society interactions’. Please check www.scienceshops.org for details, and feel free to contribute!

Yours sincerely
Norbert Steinhause

Living Knowledge - International Journal of Community Based Research

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**A new Science Shop in South Korea**

The first idea to establish a Science Shop in Daejon was articulated in 2001 by Sung-Woo Lee, present director of the Science Shop. However, it took another year to find a preparatory committee that now made an analysis of experiences in Europe and the US, produced reading materials to popularize the idea of Science Shops in Daejon, opened the website, already published several newsletters, and had an extensive discussion with NGOs in Daejon to establish pilot projects.

During the preparation, the name of the Science Shop was changed from „Daejon Science Shop“ to „Center for People’s Participatory Research“. This was because people who were new to Science Shop frequently misunderstood it as „shop“ for selling something. Finally the Center which has been long waited for opened on 1st of July. Now the Center has about 100 members. Some people are involved as participatory students and researchers. Some are from NGOs. Members also support the finance. But for stable operation the center needs to get funded from government and universities. The pilot activities include two long-term and 11 short-term projects. One of the long-term project is an investigation and research on the environmental contamination in the regional industrial complex. Other short term projects include the creation of a regional map for environmental techniques thereby helping citizens to locate environmental supports.

“We are very eager to make a good model of a Science Shop in South Korea”, said Young-Tae Lee, who is in charge of foreign solidarity for the Daejon Science Shop. “Due to different political, cultural systems, we think that there would be a lot of differences in running the Science Shop from in Europe. Thus we expect that our model would work as a good example in Asia”, he continued.

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**Medicine Consumer Reports Website**

Due to a collaborative effort of the Science Shop for Medicines Utrecht and other organizations, among which are four patient organizations, a Dutch website for consumer reports on medicines has recently been opened. It is, worldwide, one of the first opportunities for patients to directly report their negative, as well as positive, experiences with both prescription and over-the-counter drugs. Reports can concern side-effects, but also practical problems like packaging, way of administering and reimbursement of drugs. A previous pilot on the website of one of the participating organizations has shown that patients’ reports were on the whole relevant and well described, thus making the fear of a huge flood of unusable reports unnecessary.

Until now, only medical doctors and pharmacists were able to report drug side-effects to the Dutch Pharmacovigilance Center Lareb. However, previous research shows that they only report about 5% of the complaints they hear from their patients. The research also indicates that the nature of the reports is slightly different: there is much more emphasis on psychological side-effects in patients’ reports than in doctors’ reports, because doctors aren’t inclined to attribute these effects to the drug. Another difference is when patient reports show that people are so seriously impaired by the side-effects that they consider them to be more harmful than the ailment, while doctors focus more on the effectiveness of the drug and overlook other aspects. Patient, or consumer reports can have a great additive value. When taken together, they can give important signals about drug use. The summed reports also indicate what is important to patients, which helps patient organizations to better represent their members.

**Jobfair for Renewable Energies**

At the beginning of June – contemporaneous to the international conference “renewables 2004” – the Bonn Science Shop organized a “job and education fair for renewable energies”. The Science Shop brought together job seekers not only with enterprises, but also with educational institutions. The fair has awarded financial support by the Federal Ministry of Environment. More than 1.200 visitors and participants from all over Germany and the adjacent foreign countries took advantage of the various offers of the fair – such as a check of application documents or intensive trainings, a trade conference and workshops for each area of business, or company forums and individual application discussions. The innovative concept - to focus on “work and education” for an industry with high growth dynamics and to bundle the goals of search for employment, recruiting and qualification - has come up. Although the job fair stood in the shade of the outstanding public effects of the “renewables 2004” it had an unexpected large participant and media resonance and a high number of continuous guests. First evaluation results showed that the majority of visitors described the offers informative and stimulating. Every third visitor made application contacts and every second emphasized the technical extension by workshops and forum as valuable for them. All papers of the conference, workshops and forum will be documented and published with further expert contributions in an anthology in autumn 2004.

The Protected Areas of Iasi County

The project leading to this current publication of Mircea Nicoara and Essais Bonhier was jointly run by the Science Shop of Biology from “AI. Cuza” University of Iasi, Romania, and experts from the Environmental Protection Agency Iasi within a project supported by the Dutch Ministry of Foreign Affairs.

This guide is to become a very useful tool for the promotion of ecotourism in the region. It addresses at the same time to specialists in study of living nature and to a large number of people wishing to know about the richness of natural reserves from Iasi County, describing its specificity, rare elements, protected areas size, and geographic position.

The 27 protected areas from Iasi County are described in detail and a list of nature monuments completes the maps and pictures. Species of extinguished mammals and birds and international conventions and agreements signed by the Romanian state are cited. The Red Book contains local species threatened and vulnerable (according to Bern Convention and IUCN criteria) due to ecological man-made causes disequilibria. Scientific content, update information and bibliographical documentation turn this material into a very good source of documentation for student diploma projects and also for biology teachers and professors that organize field trips with students. Due to the English extended summary, the book can easily be used by foreign tourists that visit the county and town of Iasi.

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Evaluation and Social Research

Introducing small-scale practice is the title of a new book by Irene Hall and David Hall from interchange, Liverpool. The book is a comprehensive guide to evaluation research, aimed at students and practitioners in NGOs. It develops a model for collaborative small-scale evaluation based on practice at Interchange, the Liverpool science shop, and gives many examples from actual research projects.

This guide is to become a very useful tool for the promotion of ecotourism in the region. It addresses at the same time to specialists in study of living nature and to a large number of people wishing to know about the richness of natural reserves from Iasi County, describing its specificity, rare elements, protected areas size, and geographic position. The 27 protected areas from Iasi County are described in detail and a list of nature monuments completes the maps and pictures.
Interview....

Policy is a Process - Living Knowledge is a Flow

Peter Lévesque from the Social Sciences and Humanities Research Council of Canada about research alliances, networking, and the role of relationships.

M: Levesque, can you describe your function at the Social Sciences and Humanities Research Council of Canada?

My current position at the SSHRC is Deputy-Director of Knowledge Products and Mobilisation. This is a two year old division which is looking to find the best methods to mobilise the results of its research, so that the people who need the results - policymakers, business leaders, service providers, teachers, the media, community leaders - have what they need, when they need it, in a form that they can use. I have also worked in the Strategic and Joint Initiatives Division, for the Vice-president of Programs, and as the program officer for the design and launch of the Community-University Research Alliances (CURA) Program.

What is the essence of CURA?
The CURA program was launched in 1998 in recognition that as globalization, the communications revolution and other forces continue to reshape the world, our communities were being presented with an increasingly complex mix of opportunities and challenges with multiple social, economic and cultural dimensions. The purpose of the program is to support the creation of community-university alliances which, through a process of ongoing collaboration and mutual learning, will foster innovative research, training and the creation of new knowledge in areas of importance for the social, cultural or economic development of Canadian communities.

What do you think have the CURA partners learned?
I think that the CURA program has provided resources - in a fairly large way - to many activities that were ongoing but struggling under the burden of inadequate support. In my opinion the CURA partners have learned two major things - never to confuse answers with actions, and a clear recognition of just how hard partnerships can be. Sometimes, the CURA partners saw each other as adversaries, even within a project. To this day, I am astounded at both the "paper" partnerships that went up in flame and by the large amounts of social capital generated by projects that have worked through their differences. This capital is invested in communities, in reducing the transaction costs to accessing the expertise in the universities and of including the expertise that exists outside the university structure, in the design of questions which will have real impacts on the lives of real people, in using data from sources that have been locked up or simple inaccessible due to trust issues or misinterpretations. The essence is that research can, in fact, lead to the building of community identity.

Research can in fact lead to the building of community identity.

What experience should be copied to similar processes e.g. in Europe?
The European context is quite remarkable - given the extraordinary diversity of communities and long histories, I think that CURA-like programs that allow for this diversity of perspectives to be harnessed for mutual benefit could produce great results for the European community and beyond. I find it difficult to be prescriptive and say that "Europe" should do this or do that. My sense is that the community level organizations are an under-developed, under-utilized resource, with deep community roots and great access to the realities of their environment, yet are relegated to an inferior placement in the hierarchy of understanding. This is true in Canada as well however, the lesson we learned was that smart people are found in all sectors, in all areas of society and when you bring them together to work on issues some extraordinary answers and solutions reveal themselves. Some guidance is needed but not too much control over the processes.

CURA was in many ways a venture capital exercise - not all projects paid off but the ones that do, pay extraordinarily well.

How can Science Shops establish their academic credibility?
Science Shops are credible. They will never be academic departments. How good is the department of Chemistry in "X" University at being a Science Shop? I suspect that it would be terrible. Science Shops have a particular purpose and particular role - acting as a broker between at least two worlds is a remarkably difficult thing to do and I think that if Science Shops are judged strictly by the rules of one world or the other they will always come up short.

Science Shops need to focus on developing their methodologies, theoretical frameworks, case studies of best and worst practices, and a review and evaluation system that compares Science Shops to each other. The essence of peer review is review by peers. I know this sounds like I am trying to be funny but I am serious. You do not ask geographers or philosophers to adjudicate organic chemistry projects unless you are looking for specific geographic or philosophical elements in that project. Science Shops should be judged by at least the same ground rules as other focused areas of activities.

Is there a chance to connect Science Shop research to policy making?
Absolutely. Policy making however is never just about the data - data, information and knowledge are only part of the complex set of factors which lead to the design and implementation of a policy. Science Shop research has an advantage over many other forms of research. It is easier to understand and is often contextualized to the issue being tackled. Science Shops could play a much greater role as disseminators of research that has already been done by other sources, they can act as translators of research - linking.

Peter Lévesque from the Social Sciences and Humanities Research Council of Canada about research alliances, networking, and the role of relationships.
research to specific local issues in a language that decision makers can better understand, they can act at transfer agents - repackaging and designing research in such a way that it can be moved to where it is needed. Science Shops, given their community focus, are at the lead on the Open Access initiative to make research accessible. As brokers, Science Shops can play a crucial role in getting understandable, and thus usable, research into the hands of key decision makers.

Besides a basic infrastructure, what tools or skills do you think Science Shops need to influence university, local or national policy agendas? There have been a number of studies which indicate that policy makers will look at data presented to them and then ask a smaller network of researchers that they trust for their opinion on the matter. This opinion is often more important than the numbers. I cannot emphasize strongly enough the role of relationships in the design and implementation of policy. For this reason, I often refer to a statement my grandmother used to make - listen twice as much as you speak, this is why we have two ears and one mouth. Listening skills are very important, not just listening to the explicit statements but listening to the subtext and the historical references in these statements. Listening also allows one to better understand the potential mutual benefits of adopting one perspective over another. Associated to this idea, is the ability to produce reports and analyses which mesh well the receptor capacity of the audiences you are trying to reach. If a report is not read or used, what is it's value? I hold quite a strong opinion that the value (exchangability) of a piece of research is in it's use and implementation. As a trustee of public dollars, I believe it is my duty to help create the conditions which lead to the production of answers that can be acted on - sooner rather than later. The leaders within Science Shops need to stretch beyond their comfort zones and interact with people outside their normal reference points. Network analysis has shown that the ability to get things done lies in having a large amount of weak links across many fields of activity.

The ability to get things done lies in having a large amount of weak links across many fields of activity. and implementation. As a trustee of public dollars, I believe it is my duty to help create the conditions which lead to the production of answers that can be acted on - sooner rather than later. The leaders within Science Shops need to stretch beyond their comfort zones and interact with people outside their normal reference points. Network analysis has shown that the ability to get things done lies in having a large amount of weak links across many fields of activity. Close, deep ties are important for day to day functioning but without a broad network, resources tend to very quickly get used up and there begins a process where competition happens from within. Without access to broader networks in the political arena, the business world, the NGO communities, the academies, and the government bureaucracies, self referencing leads to a situation where rhetoric is used to convince each other of your opinion instead of others. Finally, one has to remember that decisions are made by those who show up at the table. Influencing policy means that you influence people. There is no better way to do this than by speaking with people, in a dialogue, in arenas where decisions are made.

How do you see the importance of networking and what do you think are the main aspects which should be considered when creating networks? I think from my previous answer you can assume that I think networking is crucial. Networking with substance is important to develop a feeling for people but once there is a mutual link, there has to be something real to discuss. In my opinion, the critical part of any functioning network is that people get what they need, when they need it, in a format they can use. Anything less means that the transaction costs of using the network has the hidden tariff of translation or redevelopment. There is always the possibility of a typical "tragedy of the commons" happening - where everyone else assumes somebody else is taking care of supporting the network. Networks are both a thing that can be referred to as well as a flow that must not only be taken from but fed with new ideas and new resources. Any analysis of social networks shows that there are some actors which play a more important role than others but there must be some resiliency and some redundancy otherwise the network functions sub-optimally. From my experience the best networks tend to have a mutual purpose, access to a broad assortment of perspectives and resources, some key people to act as brokers or facilitators, a fluidity of membership to both attract new participants as well as letting people leave when they need to, and a series of outputs that are linked to well defined outcomes.

Networks must be fed with new ideas and new resources.

Please, tell me about your initiative to create a Science Shop Association of the Americas. There are 35 independent countries and 16 dependencies, colonies or territories in the Americas. As is the case in Canada, there may be community-based research or Science Shop activity currently underway in these countries which could benefit from the creation of an association or community of practice. Given the growing policy strength of the Science Shops in the European Community and the mass of funded initiatives in Canada and the United States, I think the timing is right to push on creating a more public profile for similar activities in the Americas. An Association can reduce the cost of the exchange of knowledge, opportunities, and expertise by helping to identify patterns and brokering relationships between actors. It can also serve to protect knowledge and practice that is at risk of being lost or assimilated. My first thought however, is that many communities across the Americas, can benefit greatly from the creation of Science Shops directly or in association with existing Science Shops. The work of Dr. Henk Mulder of the University of Groningen, Netherlands with his colleagues in Romania is a good model. Hemispheric bodies, however are not created without much discussion, many alliances, plenty of resources, lots of thinking, and a great amount of political will - I know I am missing elements. To create the Science Shop Association of the Americas, linking activities from Nunavut to Tierra del Fuego, I believe that we start with identifying clusters of current activities and drawing these clusters together - CURAs, CBR Centres, public research groups. I also believe that linkage without productive activity will quickly cause dissipation of collective intentions and efforts. As such, it is important that links be made to opportunities to derive value - new resources, new personnel, new ideas, new contexts. This is why I opened a call to interested individuals, whether singular or in associations, in order to develop an understanding of what the creation of a the SSAA will mean to public science in the Western Hemisphere. I have been listening to reactions and will follow-up later this month with a series of options developed from what I have heard. This is a long term project and will grow in an organic manner. I have had some very positive responses from Brazil, Mexico, Columbia, Uruguay, Canada, and the United States.

Thank you very much, Mr. Lévesque.

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How can Science Shops contribute to Governance ...  
... and how can they be made economically sustainable?

by the INTERACTS consortium

The INTERACTS research project (“Improving Interaction between NGOs, Universities and Science Shops: Experiences and Expectations”) was a cross-national study by Science Shops and institutions with Science Shop experience from seven different countries – Austria, Denmark, Germany, the Netherlands, Romania, Spain, and the United Kingdom. It was conducted in the period from January 2002 to December 2003.

The aim of INTERACTS was to improve the interaction between small-to-medium non-governmental organisations (NGOs), universities and Science Shops by providing information on the experiences and expectations of co-operation between such NGOs and universities through intermediaries such as Science Shops. The project was funded by the European Commission, DG12 under the programme “Improving the Human Research Potential and the Socio-economic Knowledge Base” (IHP) – “Strategic Analysis of Specific Political Issues” (STRATA). The INTERACTS research project included:

- A State-of-the-Art survey about political and institutional contexts of co-operation between NGOs, Science Shops and universities in the partner countries.
- Twenty-one national case studies analysing experiences of interaction between NGOs, researchers, students and Science Shops and the impact on societal discourses, research agendas and university curricula.
- The expectations for and perspectives on co-operation between NGOs, researchers and Science Shops expressed by stakeholder groups at scenario workshops (with NGOs, researchers, students, policy makers and intermediaries).

Policy framework for the relationship between science and civil society

The analyses in the State-of-the-Art Report in the project showed that public discourses on science and society in most of the INTERACTS partners countries are connected to the concept of the knowledge-based society. Co-operation between science and society is perceived to be important, but the focus for most politicians and university policy-makers is to generate and distribute knowledge with the aim of increasing economic competitiveness. This means that scientific knowledge primarily is seen as a means to achieve economic goals rather than satisfying the needs of civil society. Business-orientation plays a dominant role in the public discourse on science and society. Due to the tendency of favouring businesses rather than civil society organisations, some Science Shops feel a pressure of having to open up for commercial clients. No legislation related to Science Shops exists in the countries consortium and the authors of the final report from INTERACTS, which the article builds upon, can be found in Table 3.

Science Shops are derived either from regulation of universities or of NGOs. This means that Science Shops depend on local conditions, regulations and goodwill, and in some cases it can put the Science Shops in a weak position when resources are distributed.

Key findings from the national case studies

Twelve of the case studies were based on projects conducted by university-based Science Shops and nine case studies on projects conducted by community-based Science Shops, involving in total sixteen different Science Shops in Austria, Denmark, Germany, Romania, Spain and the United Kingdom. The Science Shop projects that formed the basis for this study concerned either environmental issues or social welfare. Table 1 and 2 give an overview of the focus of the different case studies.

The case studies show that when NGOs or citizens approach Science Shops, their need for knowledge can be categorised as 1) Scientific analysis of a problem, 2) Enhancement of knowledge around a certain topic, 3) Research on impact of governmental projects, 4) Development of solutions to a problem, or 5) Evaluation of NGO or community services/projects. To get access to free or low cost research and independent research through the Science Shops is important to the NGOs.

The case study reports have shown that co-operation with Science Shops can have an impact on the NGOs, such as building up capacity in the NGO for analysis, networking and service delivery, and influencing the public discussion about a topic. The case study reports also show that Science Shops contribute to the role and tasks of the universities, by contributing to developing student competencies and skills, by introducing project-oriented and problem-based methods, and by contributing to the strategic societal role of universities. Science Shops might act as knowledge repositories ensuring continuity and progress from project to project, and they can act as an antenna for new societal topics. It was also shown that Science Shop projects can lead to establishment of new research and teaching areas, and give possibilities for scientific publications.

Key findings from national scenario workshops

The future expectations for co-operation and dialogue between NGOs and universities through intermediaries such as Science Shops were discussed through seven scenario workshops held in the INTERACTS partner countries as one-day events with partici-
Focus

We have developed concrete proposals for initiatives, which could be drawn out policy recommendations for the strengthening of the role of Science Shops in a more democratic form of societal governance. The recommendations relate to five policy issues, which were identified as important for the future dialogue between science and society. In order to obtain a higher degree of democracy in the decision-making processes, universities need to open themselves up to civil society so that its concerns can legitimately be addressed by both universities and individual scientists.

Policy recommendations

Based upon the findings of INTERACTS, the consortium have drawn out policy recommendations for the strengthening of the role of Science Shops in a more democratic form of societal governance. The recommendations relate to five policy issues, which emerged through the work of the INTERACTS research project. We have developed concrete proposals for initiatives, which could be taken by universities, governments at different levels, NGOs, the European Commission and the Science Shops and their networks.

Policy issue 1: How can Science Shops support the role of NGOs in developing societal governance?

NGOs are an important part of governance in society by giving voice to the citizens, and by acting to mobilise people and support those suffering from exclusion and discrimination. However, NGOs have limited access to resources because they are positioned outside statutory government funded structures. Science Shops can help bridge this distance between citizens and scientists by 1) providing access to “research capacity” for NGOs and access to the community for researchers, 2) applying negotiation techniques emphasising participatory dialogue and methods and 3) providing research at little or no cost conducted by researchers and/or by students. There is a need for more Science Shops, but also for better economic conditions for a number of the existing ones. We recommend:

• National governments should encourage city administrations and universities to establish Science Shops to support NGOs. The necessary funding should be made available in ways that are compatible with the national funding traditions.
• The European Commission should encourage Open Coordination between member states, accession countries and regions on exchange and spread of best practices related to cooperation between science and civil society, including Science Shops.
• Science Shops should make use of national networks (where

<table>
<thead>
<tr>
<th>NGO/community initiated projects: Type of knowledge production wanted</th>
<th>Number of cases, field and title of INTERACTS cases</th>
</tr>
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<tbody>
<tr>
<td>Scientific analysis of a problem about the need for action in order to establish dialogue with authorities and companies</td>
<td><strong>Denmark</strong>: One case about an environmental problem. (Title: 'Biomodulation in shallow eutrophic lakes – a study of food web interactions and lake equilibria') <strong>Romania</strong>: Two cases about an environmental problem. (Titles: 'Evaluation of the quality of drinking water supplied in the city of Iasi', and 'The impact of wastewaters resulted from the industrial production of yeast on the river of Siret')</td>
</tr>
<tr>
<td>Enhancement of knowledge around a topic as part of NGO activity</td>
<td><strong>Denmark</strong>: One case about the topic of bicyclism. (Title: 'What is a bicycle? – a social constructivist analysis of the possibilities of promoting the use of bicycles') <strong>Romania</strong>: One case about bio-diversity (Title: 'Project Vladeni 2000- Biodiversity Conservation in the Wetland Vladeni (Iasi County- Romania)')</td>
</tr>
<tr>
<td>Research of impact of governmental project</td>
<td><strong>Germany</strong>: One case about impact of infrastructure project. (Title: 'Tiergarten – Tunnel')</td>
</tr>
<tr>
<td>Access to knowledge from governmental organisations/institutions</td>
<td><strong>Austria</strong>: One case about social services for people. (Title: Evaluation of a series of lectures on precaution against heart disease for Turkish migrant women in Tirol')</td>
</tr>
<tr>
<td>Development of solutions to a problem</td>
<td><strong>Denmark</strong>: One case dealing with storage of organic food. (Title: 'Organic food in the day care centre Vognporten – with special focus on storage and local supply of fruits and vegetables') <strong>Spain</strong>: Two cases, one case concerning the development of green plan for a city. (Title: 'Urban Ecology Strategy Design, Seville 2025'), and one case about housing of minority and vulnerable group. (Title: 'Architectural Study for Romany Community, Los Perdigones')</td>
</tr>
<tr>
<td>Evaluation of NGO or community service and project</td>
<td><strong>Austria</strong>: Three cases concerning social services, and one case concerning a research project about empowerment of a community in order to improve the community’s living conditions. (Titles: 'Volunteers as Buddies for Mentally Disordered Persons', and 'Children Poverty in Austria, and Analysis on customer satisfaction of the aggrieved with respects to mediation in penal matters', and 'Mega Settlement') <strong>United Kingdom</strong>: Two cases concerning social services. (Titles: 'Lakeview Day Centre', and 'Midlands Befriending Service')</td>
</tr>
<tr>
<td>NGO wanting to develop own services</td>
<td><strong>Austria</strong>: One case concerning the social conditions for youth. (Title: 'Children and young people in the Lungau: Between participation and apathy') <strong>United Kingdom</strong>: One case concerning social services. (Title: 'Benington Hospital')</td>
</tr>
</tbody>
</table>

Table 1: Type of knowledge production wanted in community/NGO initiated projects
Policy issue 2: How can Science Shops influence the curricula of universities to make them more responsive to the needs and demands of civil society? Universities are increasingly being encouraged to relate to the needs of the wider society. Today the relation between universities and the wider society is mainly being developed through the exchange of knowledge between university and industry, and university and government. Science Shops give opportunities for developing the curricula outside narrow disciplinary frameworks and encourage through community-based projects awareness of knowledge and expertise within the community from which the university can also learn. We recommend:

- Universities should make use of the expertise of Science Shops to participate in broadening the curricula to make it include cooperation with civil society organisations. Civil society organisations as well as regional government should help this process by pressing university administrations over the necessity for such initiatives.
- Universities should ensure that students get credit points for carrying out Science Shop projects or internships in civil society organisations as part of their education and appraise faculty staff for initiatives within community-based learning and include this kind of experience in the criteria for tenure and promotion.
- The European Commission, through DG Education and Culture should support member states and accession countries in coordinating their policy on higher education to include community based learning in the curricula.

Policy issue 3: How can Science Shops help make the research agenda more responsive to the needs and demands of civil society? Scientific knowledge is often seen as neutral, but is in fact contested and negotiated knowledge, and the economic and organisational resources for research and development are unequally distributed at the national and international level. Businesses and governmental authorities and institutions have more resources and easier access to and influence on research facilities than NGOs such as consumer organisations, environmental organisations, trade unions, social welfare organisations etc. although also some NGOs have developed their own research capacity. We recommend:

- Universities should include research in cooperation with civil society organisations as part of their research strategy, include this in their criteria for tenure and promotion and make part of its PhD funding available for projects developed through a Science Shop or similar intermediaries. The European Commission should support Open Coordination also on this topic.
- National and international research councils and programmes should finance research cooperation between research institutions and NGOs in order to reduce barriers to NGO and researcher participation in joint research activities.
- The European Commission, through DG Research, should ensure that future Framework Programmes have a strategy for considering how civil society organisations can give input into programme design, and where appropriate, participate in projects. This demand can be seen as compatible with the current demand for gender mainstreaming within EU funded projects.

Policy issue 4: How can Science Shops contribute to regional development? The policy for a European Research Area as part of EU's research strategy places a particular emphasis on regions as drivers of economic development, and offers a role for the NGO sector, supported by Science Shops, to make their contribution to social and economic development by partnering in finding solutions to social and environmental issues. While university-industry links have been the prime focus of regional development hitherto, it is now recognised that the NGO sector – though of varying strength in different countries – is both an important expression of civil society as well as a vital resource for social inclusion, for socially responsible employment, for neighbourhood regeneration and for environmental initiatives. We recommend:

- Regional development associations should include Science Shops and NGOs as partners in regional development, and invest in their infrastructural development.
- Regional and national associations of Science Shops should be created to support, publicise and act as pressure groups for opportunities in community-university partnerships to become more visible and more integrated into regional social and economic development.
- The European Commission should explore the potential for financing scientific research support from the structural funds for regional development such that NGOs in underdeveloped regions could access funding for knowledge transfer, to be supplied by Science Shops.
- Science Shops should take a lead in providing training for small to medium NGOs in research appreciation and participatory methods, as part of the process of building capacity and social capital in the voluntary and community sectors of civil society, where voluntary and community sector stakeholders lack research skills.

<table>
<thead>
<tr>
<th>Researcher/Science Shop initiated projects: Type of knowledge production</th>
<th>Number of cases, field and title of INTERACTS cases</th>
</tr>
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<tbody>
<tr>
<td>Scientific analysis of the need for action in order to establish dialogue with authorities and companies</td>
<td><strong>Spain</strong>: One case about an environmental problem. (Title: ‘Health and environmental hazards at cement kilns waste incineration’)</td>
</tr>
<tr>
<td>Facilitating networking among organisations and between them and others</td>
<td><strong>Germany</strong>: One case which dealt with facilitating networking and communication between NGOs, and developing communication tools. (Title: ‘Creative Committee’)</td>
</tr>
<tr>
<td>Developing NGO knowledge about funding opportunities</td>
<td><strong>Germany</strong>: One case about seminars on how to build up a foundation and network. (Title: ‘Foundations for Environmental Protection and Local Agenda 21’)</td>
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</tbody>
</table>
Policy issue 5: How can Science Shops become economically sustainable?
Universities are increasingly being pressed by governments to develop their mission of outreach to the surrounding community and the wider society. This could provide strong pressure for the regular institutional support of Science Shop-like activity. The problem is that in the absence of specific funding streams for such activity, universities are often not willing to devote finite resources away from core teaching or learning and research. Additionally, there can be resistance to research which is applied in nature, rather than “pure” and the status of applied knowledge suffers sometimes from this discrimination, often reflected in the allocation of research grants from traditionally managed research funds.

Much Science Shop activity, which involves real costs in terms of coordination and mediation, produces benefits which are not seen or costed in monetary terms. Science Shops value therefore tends to be financially invisible. However, the INTERACTS case studies show that Science Shop research reports in several cases have been successfully used by NGOs as evidence for funding applications, and this financial value could also be imputed to research projects, which are the basis for such reports. Similarly, Science Shop projects have been found to stimulate academic funded research in a particular area. In terms of economic sustainability, it is important that the costing of science shop value and benefit is done not simply in financial and economic terms but also in terms of social and educational benefit. Based on the experience from INTERACTS and other analyses of community-based research we see a number of models for funding Science Shop activities. In order to obtain a stable operation of a Science Shop, several of the models might need to be combined:

Full funding
Universities providing direct financial support for Science Shops is the most readily sustainable model. The Science Shop staff can be dedicated Science Shop staff or it can be scientific staff conducting part of their teaching and research in the Science Shop. The project research is carried out by students for free as part of their education, by the supervisors as part of their ordinary work or by the Science Shop staff.

Part-funding
Where universities are unable to finance the full cost of a Science Shop, there is sometimes the possibility part-funding, by attracting external funding from government or European programmes or private and charitable grants. However, such funding arrangements are inherently less stable, and require Science Shop staff to devote part of their time to fund-raising. University management needs to be aware of the existence of Science Shops and their potential in order to include them in university-led bidding procedures and proposals.

Social entrepreneurship
Some Science Shops, particularly those independent of universities, act as social entrepreneurs supporting socially beneficial research activity with NGOs through staff conducting profitable research or business activity with organisations and funding agencies which can pay market costs. This model could also be developed in universities, with Science Shops being part of research centres where again profits from research conducted on a commercial basis are used to support the socially beneficial scientific research of Science Shops.

Co-funding with NGOs for research and evaluation
Another model is for Science Shops to be involved with NGOs when the latter are making applications for funding by having science shop research written into the bid to provide evidence on monitoring and evaluation of services. For funders this would ensure an independent scientific assessment as part of the bid. This model is most likely to develop when there is a long-term relationship between a Science Shop and a specific NGO.

Studentships and research grants
A further model would provide dedicated studentships and grants for Master’s level students or researchers, who would then choose the most scientifically relevant Science Shop issues to research. If this model is supplying a model with basic funding of the day-to-day work in a Science Shop it enables, in the case of PhD studentships, sustained research in an area over a period of years. This model has worked at Tilburg University in the Netherlands for a number of years.

What’s next?
We have now sent the report to the European Commission and hope that through the ongoing dialogue between DG Research and the international network of Science Shops we can prepare for the implementation of several of the recommendations. However, there are also important tasks for universities and governments in order to secure more Science Shops in the future and better economic sustainability of the existing ones. We welcome a discussion of our recommendations in the journal and in the international network of Science Shops, including an ongoing exchange of experience about strategies for societal impact of Science Shops.
Focus

Social Science Shops and Policy Formation

by Irene Hall and David Hall,
Interchange, Liverpool

In the first section, there is a discussion of general approaches to developing policy options for policy makers. A broad contrast is made between policies formulated through rational process and policies as the outcomes of value conflict. The second section is more focused on how Science Shop evaluation projects can produce change in the policies and activities of the voluntary groups where students have conducted their research. The link between evidence and acceptance of findings is made, though experienced evaluators agree that there is no guarantee that recommendations will necessarily be implemented. Finally, in the third section, an example is provided from one of the 2004 projects, in an inner-city area of Liverpool. This brings the discussion down to earth with extracts from a project which has produced detailed policy options for a voluntary group to follow, in improving its community café and pre-school provision.

The Liverpool Science Shop, Interchange, mainly involves social science students working with voluntary organisations in the fields of health, welfare, environment and culture. Students are often asked to evaluate a service provided by an organisation, through interviewing/surveying the participants, and sometimes they are asked to conduct feasibility studies to assess the viability of new services. Such information requires organisations to re-assess their policies and priorities. For this reason, we have begun to conceptualise more rigorously how science shop research connects with policy formation. This article is an attempt to put together some of these ideas.

Section 1: Developing a scheme for policy analysis

In the literature on social policy, policy analysis is usually viewed as a supplement to, rather than a replacement of, political advocacy (Wildavsky, 1980). In other words, voluntary groups/NGOs as well as regional and national policy makers will continue to press their case through political means as well as through scientific research findings, underpinning recommendations for policy. There have been two main lines of development,

1. one based on more or less rational decision making, taking its lead from Herbert Simon’s (1957) ideal type of administrative behaviour, and
2. another less consensual view based on the priority of values, rhetoric and conflict, represented by Deborah Stone (2002).

All discussions note that the rational approach to decision making is incomplete if it does not take account of value differences and they way they are expressed. As Weiss (1972) acknowledges, ‘politics is the system we have for attaching values to facts’. Stone’s (2002) critique of the rationality project in political decision making argues that rational decision making fails to capture the essential conflict or struggle over ideas – where policy making is viewed as a constant struggle over ‘the criteria for classification, the boundaries of categories, and the definition of ideas that guide the way people behave.’ (Stone, 2002: 11) Despite these important caveats, the rational decision making model provides an ideal type for identifying the stages through which a policy issue may pass (Hogwood and Gunn, 1984). Under options analysis, Hogwood and Gunn argue that the analytical approach involves the following steps:

1. Identify readily available options, and consider whether additional, less obvious options, should be generated
2. Define options carefully
3. Appraise and compare them, using a wide range of criteria (political as well as technical) and analytical techniques
4. Present a preferred option or a small number of feasible options to the decision maker

Weiss (1982: 306) writing from her background in evaluation for decision making, argues strongly that policy making is about compromise rather than simply rationality. It is ‘about reaching wise decisions to realise desired objectives within the constraints set by the need to maintain coalitions of support.’ She argues that social science findings do impact on policy decisions, but often not directly but indirectly in the longer term, through the ‘percolation’ of ideas that help to structure the ways administrators and politicians think about policy issues. In such a world of diffuse policy decisions, with multiple sources of authority and disjointed mechanisms for producing policy, the rationality approach for presenting policy options, as given above, do not seem to apply. Instead, Weiss suggests that a diffuse process of ‘enlightenment’ is a more realistic view of how policy making operates. Social science information may not be used directly, but may be picked up later as knowledge is more generally disseminated, when many of the details of research findings are lost but the headlines are remembered. Social science has the possibility of operating at this diffuse level to:

• frame the questions,
• subject old assumptions to practical test and
• introduce alternative perspectives into the policy process.

This may be somewhat comforting for researchers in suggesting that limited immediate short-term impact on policy should be balanced against longer-term influence. Science Shop projects, in other words,
may not lead to specific action in the near future, but could have an effect long after the student and academic supervisor have left the scene. Whether for the short or long term, researchers do have an obligation to present their findings in ways to which policy makers can respond. Science Shop reports need to be written for usage.

As Hogwood and Gunn (1984: 194) insist: ‘There is no easy way of resolving the tensions between the danger of neglecting possible consequences of a given option and the danger of flooding the decision maker with too much material. The most effective compromise is probably a brief in the form of an ‘options paper.’ … Each option should be described briefly in terms of (a) the course of action involved; (b) the costs and benefits in summary form. Among the costs and benefits which might be included are financial implications, manpower implications, social impact, likely reaction by groups and organisations to selection of that option, and (if appropriate) the party and electoral implications. A recommendation about selecting one or more options might be made at the end of the paper. Above all, it is essential to keep such a paper to a readable length for a busy person, yet provide relevant information.’

It must be considered that these writers, like most of those working in the evaluation field, are describing large scale projects often on a national scale, and not the local small scale projects of the Science Shop. Their views are of value in setting standards, but are not necessarily realistic for students working on limited resources and with a short time frame to complete their work.

Section 2: The link between evaluation and policy

How can Science Shop research be conducted in a way that will increase its chances of being taken seriously in policy formation? For some decision-makers, quantitative research methods have greater credibility than qualitative, though if they don’t like the findings, they can still raise technical methodological issues to question them. For instance: Was the sample size large enough? Was there a control group? Did the questions really ascertain the sample’s true views?

Other people may be more persuaded by the illustrative case story, or a rich description of a social problem and the related program of intervention. Here the critique would be along the lines: Is this evidence representative or restricted only to the case studies? Is the case study unique, and was it chosen because it demonstrated the desired results? The researcher or evaluator, who wishes to be heard and to influence policy decisions, therefore needs to consider what sorts of evidence are going to be most persuasive to the decision makers, and which are likely to be discounted (Hall & Hall, 2004).

In our experience with Interchange, it is notable that funders are often more impressed with a “true life” case study of an older person in need, or a woman suffering domestic violence, than with quantitative evidence in tables and graphs. It is the human story that sticks in their memory and can be influential. Those specifically concerned with the utilisation of evaluation findings argue that one of the reasons for lack of impact within the organisation itself may lie in the failure to involve stakeholders in the evaluation process. Not only do program participants contribute to improving quality by asking relevant questions, but they often have a role to play in implementation as well (Patton: 1990). Failure to bring program staff on board can result in action that can hamper research or provide misleading results (Hall & Hall, 2004). Students conducting Interchange projects are therefore encouraged to involve the organisation participants throughout the research, and to regularly communicate with the sponsors of the evaluation – managers and other appropriate staff.

It is obviously frustrating for evaluators if their work, even with high standards of research, is not used in decision making. However, it is fair to say that research conducted by the CoBalT Project found that most organisations were able to use the Science Shop findings to improve their services and as evidence to take to funding bodies in order to expand their work into new areas of need (Hall, Hall & Lockley: 2000).

Section 3: An Example of a Science Shop Project

This section is based on an evaluation of services provided by the ‘Community Support’ Project in Liverpool. The student researcher was Dominique Rundle, Liverpool Hope University College and the academic supervisor, Irene Hall. This was one of the Interchange projects in 2004. The research was conducted with a charity working to improve the lives of residents in an inner-city area of Liverpool, and the project involved the evaluation of two services – a Community Café and a pre-School play group. The charity was the outreach arm of a local Baptist church, though the services provided were not restricted to any religious denomination.

The Community Café was designed to provide the local community with good value food, and a place where they could feel welcome and relaxed. The service was provided by a mix of paid staff and volunteers and the charity was proud of the friendships which had developed between customers and staff, in an area with few public resources. The Pre-School Play Group was staffed by professional teachers, with some volunteer support and the charity was keen to increase the involvement of parents – both for the development of the children and to improve the capacities of the parents. The findings of the research were largely positive, but the student was able to derive number of detailed policy recommendations to help the charity evaluate and improve its activities. A few recommendations have been selected from the 14 made, to show how a small scale Science Shop project can provide an input to policy formation.

Recommendations for the Community Café

Recommendation

The Stepping Stones Café should attempt to raise its profile within the local area. This could be done in a number of ways:

- Advertise in local papers, including free papers
- Leaflet the community
- Run promotions for members of the Church or parents from the Tab Pre-school to encourage their usage of the Café
- Advertise on local radio stations
- Erect more prominent signs around the building
- Restore the canopy above the entrance to the Stepping Stones Café

These recommendations would encourage more people to visit the Café. As a Community Café it is important that members of the local community are aware that it is there. Therefore by leafleting local
houses, and specifically targeting other groups within the building such as the Pre-school and the Baptist Church, the Café will be encouraging local people to use its facilities.

Recommendation
The results of the research with the Café staff indicate that there might be some value in reconsidering the Café’s opening hours. This could be done by:
• Research the opening hours of other local cafés and evaluate whether these are more appropriate
• Run a pilot scheme where the Café opens earlier to assess whether there is any value in doing so
• Run a pilot scheme where the Café’s opening hours are longer to assess whether this holds any benefit for the Café
• Run a pilot scheme where the Café is open in the evening and invite members of the local community into the Café for their evening meal
• Consider using the Stepping Stones Café in evenings for outreach work with members of the local community i.e. the elderly, single parent families, children

By altering or extending the Café’s opening hours, members of the community who have not had access in the past because of the restrictive hours, will have access. However, any changes in opening hours must be advertised to raise local awareness. Again, leafleting local houses with details should be effective.

Conclusion
Evidently, a lot rides on the profile of the Café. An increased profile would encourage more people through the doors. Inviting parents from the Pre-school and members of the Baptist Church would strengthen links, not just within the building, but also within the local community. Through raising the profile of the Stepping Stones Café locally, the Café is in a better position to recruit new volunteers. This in turn would allow a greater flexibility in opening hours, and in the menu choices. An improved local profile might also allow the Café to work together with local people in outreach programmes.

Recommendations for the Pre-school play group

Recommendation
The Pre-school should actively encourage parents to enter the Pre-school and support the activities that go on.
• Letters should be sent home to all parents explaining why their help is required and the benefits of helping with the activities
• With regard to outings, letters should be sent home to parents with asking for suggestions of places the children could visit. It should be made clear that parental help would be required on these visits, and volunteers should be asked for

Lack of parental support for activities such as outings, was one of the key findings of the research. For the parents to want to take part, the importance of such excursions must be explained to the parents, and it should be made clear that parental help will be needed if the outings are to take place.
The Parents’ group, which is currently low on numbers, should be promoted throughout the Pre-school.
• Arrange news letters to be sent home to all of the parents, describing the work that goes on in the Parents’ Group, and the achievements they have accomplished
• When the Parents Group have completed the ‘Sensory Room’, have a grand opening and invite all parents. Ask some parents from the Parents’ Group to speak about the activities they do

Some parents may be reluctant to join the Parents’ Group because they see it as a ‘closed shop’ or as intimidating. Every effort should be made to encourage other parents to the Parents’ Group meetings, and the achievements of the Parents’ Group should be celebrated.

References
Giving my Personal Opinion is not Research
A fictitious expert roundtable on policy recommendations, with a voice from the Other Side


T. Ifosi-Morbillo: Flipping the pages of research reports, which contain policy recommendations, such as commissioned by the European Parliament, e.g., it strikes me that these recommendations are not in a standardized format. In general, the different formats tend from short lists of sometimes more, sometimes less concisely formulated recommendations without justification and elaborated sets of thematically clustered recommendations, which, e.g., are made plausible by references to research findings, something self-evident and documents drafted by the commissioning organisation. As if the chosen format could be taken for granted, the decision for a specific format is, as often in science and research, not justified.

V. Agary: And I have come across anything like that someone explains how s/he arrived at the policy recommendations almost never – as if their derivation would be self-evident or to be disguised.

H. Edgemugger: Opening an empirical study, in Austria those educated in social sciences would read the methodological chapter first. In international studies such a chapter is often missing or difficult to get. It is striking that methodological discussions seem to be less usual. Especially in the “soft” sciences it is important that it is understandable how researchers got findings. Otherwise the room for interpretation of what counts as science or research becomes quite large.

V. Agary: Giving my personal opinion is not social research, even if I am educated in the social sciences.

K. Ropfpickel: Exactly. Only a systematic inquiry following specific rules with support of proven methods, which meet specific standards of validity and reliability can be research. Otherwise social research can be done just as you like. Following the European tradition, the applied methodology is presented in full detail, this is different from the USA, e.g., where social sciences are partly instrumentalized for the legitimation of political decisions. This leads to a situation that everybody with a university diploma is free to make unjustified assertions.

V. Agary: As the most extreme case comes to mind Herrnstein & Murray’s „bell curve“, which lacks any methodological seriousness. I presume, in Austria and in most parts of Europe such kind of research would result in an exclusion from the scientific community, but in the USA one of these gentlemen was a professor at Harvard University.

H. Edgemugger: This difference is also important for Science Shops, because if they want to make science and research accessible to the public at large, they have to reflect on which forms of research make sense.

T. Ifosi-Morbillo: How can I give policy recommendations on the basis of research?

K. Ropfpickel: Actually, it is not in the tradition of social sciences to give simple guidelines for complex circumstances. The whole idea of recommendations maybe comes from other disciplines, I presume. For those being active in the cultural and social sciences this idea gives a much too reduced picture of reality; perhaps the idea is rooted in technical-scientific world view. In the social sciences one faces a complex fabric of multiple factors, which are additionally constantly changing and developing. If recommendations could be given, experts would give them with much more cautious than is asked for and considering that many different future scenarios are possible.

H. Edgemugger: The circumstances are much more complicated than presented by the usual policy recommendations. You are right, when we agree to make them, we have to be very, very cautious not to talk big.

T. Ifosi-Morbillo: It can be difficult to give an advice to someone we know, because to give a proper one, we have to know quite a lot: of how to give so that it is accepted; of the circumstances on which I make a judgement etc. Applying these requirements to commissioned research, policy recommendations give a grotesque impression: We do not know how and for which purposes they are used for; maybe we do not even know those to which they are directed etc. – we prattle sentences without knowing what developments they could trigger and without being able to do anything against their erroneous use or to know about it. This prattling can be negligent.

V. Agary: Let us come back to legitimisation once again. Cultural and social sciences (meanwhile also ethics) are precisely used for that purposes: for legitimising political decisions. Especially for cultural and social scientists a critical attitude also to one’s own work is necessary, criticism has not to stop before what I am doing. They have to ask themselves. What could be legitimated with these recommendations? What could I possibly support with my work?

T. Ifosi-Morbillo: Yes, but research is also erroneously, resp. misused. What can my clients expect from me? At first I would say: Everything that supports the commissioned work without risking my professional and personal integrity.

S. Nakenmaker: I am obliged to objectivity.

T. Ifosi-Morbillo: Exactly. That means: I should present understandably why I give this and not another, contrary recommendation (I refute counter arguments instead of declaring something); I show to which situation following the recommendations may lead to (I have to present possible negative effects, too!) and I formulate possible alternatives that make sense (here the mentioned future scenarios fit into); if necessary, I reflect on the limits of this recommendation and state them; and I avoid the impression that I pursue my own interests on the expense of others or, not better, to serve interests of the customer only. We cannot avoid the question
Male Integration in Gender Mainstreaming
More men as gender mainstreaming agents needed

by Gabriela Schroffenegger
Institut für gesellschaftswissenschaftliche Forschung, Bildung und Information, Innsbruck

The European Commission commits itself clearly to promote gender equality. It supports a wide range of existing activities to optimise the efficiency of “Gender Mainstreaming” and make it visible inside and outside the Commission. This article is based upon a two years practical experience in implementing gender mainstreaming in the European Social Fond (esf) projects “AQUA - Lehre mit Qualität (Apprenticeship Quality)” and “MIDAS - Wirksame Strategien gegen Rassismus und Diskriminierung am Arbeitsmarkt (Coping Strategies against Racism and Discrimination in the Labor Market)” - aiming to contribute to the development of a common framework strategy on gender equality.

In the context of esf projects a general gender mainstreaming strategy is a necessity. Thus specific measures for both sexes are developed, enabling them to participate on an equal footing for the benefit of the project itself, its results and also for the project target groups. One main success of gender mainstreaming is that an equal number of women and men participate in the measures offered. What stands out in particular from trying to implement gender mainstreaming in two esf projects is the discrepancy between a general gender mainstreaming strategy and the way gender mainstreaming is perceived and understood is completely different between men and women. Men have a strong tendency to view upon gender mainstreaming as a strategy just to support women. Women joyfully take the chance and come up with suggestions on how to contribute to gender equality. On the other hand men seem rather confused and do not perceive gender mainstreaming as a measure also supporting their needs and improving their situation. Men have a strong tendency to view upon gender mainstreaming as a strategy just to support women.

But gender mainstreaming must be seen as an analysis of the needs of both sexes providing offers for both, women and men. To communicate this holistic approach of gender mainstreaming particularly to men is one of the great challenges for a gender mainstreaming agent. In this context it would be very helpful to use examples illustrating the advantages of gender mainstreaming measures for men. Moreover the majority of gender mainstreaming agents are female, which even more strengthens the already existing impression that gender mainstreaming is a way just to support women. A strategy to improve that gender mainstreaming measures benefit both sexes and to increase the acceptance of gender mainstreaming could be to increase the number of male gender mainstreaming agents (trainers) or to have mixed teams (a women-men team) implementing gender mainstreaming in projects.

Innsbruck, Austria

by Gabriela Schroffenegger
Institut für gesellschaftswissenschaftliche Forschung, Bildung und Information, Innsbruck

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A strategy to avoid this situation in the future could be to enlarge the committees and to include those who actually do the work. Therefore the number of women participating in decision-making processes should be increased. The way gender mainstreaming is perceived and understood is completely different between men and women. Which is not surprising, because - basing upon the fact that traditional structures are male dominated and are favouring men - gender mainstreaming measures in the majority of activities will support women and improve their situation. Women joyfully take the chance and come up with suggestions on how to contribute to gender equality. On the other hand men seem rather confused and do not perceive gender mainstreaming as a measure also supporting their needs and improving their situation. Men have a strong tendency to view upon gender mainstreaming as a strategy just to support women.

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Training and Certification of Professional Competences

Academics and Workers Researching Together

by Noela Invernizzi and Acácia Kuenzer

Productive Restructuring and Education Studies Unit (NERE), Federal University of Paraná, Brazil

The Productive Restructuring and Education Studies Unit (NERE) of the Federal University of Paraná (Curitiba, Brazil) has, since 1995, been conducting research into the new demands for education experienced by workers in a productive context marked by far-reaching transformations.

NERE has developed and implemented innovative methods to provide scientific and technological education for workers: both those employed in high-technology sectors and those who have been made redundant and need to update their skills to rejoin the labor market. For this, it has a team of researchers from various areas, including educationalists, chemists, physicians, mathematicians, linguists, social scientists, and science and technology specialists. Other regular participants include undergraduate students with research fellowships and graduate students from various disciplines. Although the NERE’s research activities have always been in response to the demands of workers and educators, recent experiences have taken a step forward by actively involving the target population in the research process. In this paper we will offer a brief overview of a research project underway since October 2001, in which workers from the Getúlio Vargas oil refinery, belonging to the state-owned corporation Petrobrás, were involved in devising a system for training, evaluating, and certifying professional competences.

The University was called on to participate in this process at a time of: (a) pronounced differences between the company and its employees regarding worker evaluations, an issue directly related to professional development and the wage scale, and (b) an accident that had a serious environmental impact and revealed a series of shortcomings in the company’s training systems at a time it was pursuing an accelerated process of technological modernization.

The research project and the implementation of its results took place with broad autonomy from the company’s management, even though it was the company that first contacted the NERE. A Competence Certification Committee (CCC) was set up, comprising the university researchers and four workers, representing the four production areas, whose suitability was acknowledged by the other employees. The four workers were relieved of all their production duties and they dedicated themselves on a full-time basis to the research effort. Worker participation, however, was not restricted to this committee: there were also other channels, as will be described below.

The first question addressed was exactly what definition of professional competence would be used. This was not a trivial matter, since the notion of competences is a matter of fierce debate in Brazil, in both the field of education and the professional training arena. It was then necessary to research the best way and the best tools for evaluating workers’ competences. Traditionally, the company had chosen to assess workers’ skills by testing their knowledge. The workers disagreed strongly with that approach, claiming that it did not reflect the various cognitive, practical, and even emotional dimensions involved in petrochemical work, a very complex and high-risky one. They would frequently point out that there were several workers with “A grades in theory” who were, however, incapable of remaining calm or correctly resolving an anomalous situation.

The research began by investigating what the workers themselves considered a “competent worker.” The first stage was to interview the plant’s 148 workers. Then, a series of meetings were held with working teams to discuss the matter. At the same time, the university team spent a lengthy period closely observing the work process. The result was the defining of a concept of competence understood as the ability to act in unforeseen situations and unforeseen circumstances (abnormal situations and emergencies), supported by knowledge and experience, taking into account the security of the individuals present, the installations, and the environment. Various levels of competence were differentiated, beginning with the simplest procedures under normal working conditions and moving on through progressively more complex situations to reach actual emergencies (Invernizzi, 2002; Kuenzer, 2003a).

The way in which each level of competence would be assessed and certified was also arrived at through the collective research. In accordance with the adopted approach to competences, it was decided that the best way to assess them was using specific on-the-job situations. The goal was not, however, to prepare a practical test, but rather to generate, based on practice, an inquiry on the theoretical basis for those practical actions (process theory and knowledge about equipment), and on the requirements for and possible implications of a given action in terms of safety and environment. Different evaluation instruments were tested by various worker volunteers, who then discussed, with the CCC members, the pros and cons of the evaluations until a final instrument was arrived at. This procedure was followed for each competence level in the four productive areas, and it required a considerable amount of discussion and experimentation time. Simulators were used to assess the abnormal and emergency situations, and these were programmed collaboratively by the plant workers and the university researchers.

At the end of this first stage, the professional competences of all the workers began to be evaluated and certified by means of a process...
that was deemed legitimate by workers and management alike. Meanwhile, the second phase of the project began. This stage, which is still ongoing, entailed the development of training programs—both refresher courses and training for newly hired workers. It was, of course, developed from a pedagogical perspective that paid due attention to the concept of competence as developed in the first phase. This implied major methodological challenges in interconnecting theory and practice in the training process. In this case too, the pedagogical proposal was made and the continuing evaluation of the training programs was carried out in conjunction by the university researchers and the workers. A provisional evaluation of this process can be seen in Kuenzer (2002b).

This research project has yielded different fruits. One of these is the establishment of clear rules, arrived on through consensus and with broad worker participation, for evaluating their professional competences. Another is the joint learning that took place in the workplace during more than two years of common efforts by the workers and the researchers. Existing knowledge was disseminated, and some perspectives were questioned. New knowledge was also created by devising original approaches to evaluation and training. The experience also provided an opportunity to put into practice a highly polemical concept, that of competence, and to successfully develop, with worker participation, an approach to it that acknowledges and appreciates their professional skills and know-how. «

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References

Berlin, D

Computers going Green

... by re-use Computers

by Kirsten von der Heiden
Science Shop ‘kubus’, Berlin

The Science Shop kubus – Technical University Berlin (TUB), Germany, has successfully run a one-day symposium on ‘networks for living sustainability strategies’ at March 31st, 2004.

Aiming at presenting the results of the research and co-operation project ‘Regional net(work)s for the re-use and further use of electrical and electronic equipment’, short named ‘re-use computers’ by an interactive manner, the symposium has won 130 active participants of several organisation types. By means of speeches including questions by the auditorium and the speakers themselves to be answered, thematic panels and interactive workshops each participant has chosen his/her preferred part of the dissemination event. The tools bazaar and market place made the project and networking subject ‘re-use computers’ visible and touchable and has given the opportunity for spontaneous communication and starting co-operations. The ‘re-use computers’ project, funded by the German Federal Ministry of Education and Research - bmb+f, has increased a user-orientated technology development and environmental awareness of local enterprises. Aiming at ecological contributions to save resources and reduce computer scrap, it will be followed up by the new founded ‘re-use computers association’, a regional Berlin-wide network of small and medium sized enterprises (SMEs) for the re-use of computers, willing to expand. The tested and applied project know-how, such as the certified logo ‘re-use computers’ including quality criteria for the further use of electronic equipment as new standards, is the potential starting point of this association. The regional network and the project and association follow up is co-ordinated by the Science Shop kubus TUB.

The re-use computer association is characterised by its ecological orientation. The SMEs involved are active in the fields of wholesale trade, retail trade, waste management, component trade, software support, laptop hire and training courses. Network and association provide specialists to support private customers and beginners as well as firm networks and data processing networks. Trade takes place by means of shops as well as the internet (www.reuse-computer.de and www.reuse-computer.org). The strategy of re-using and further using of computers also has social advantages. The sale of good-quality second hand computers enables the socially disadvantaged to enter the digital world quite cheaply. The association as network thus helps to bridge the technology gap in society.

The political aspect of re-use computers is promoting local and regional solutions concerning the regulation WEEE (waste electrical and electronic equipment), recently to be introduced in Germany. Co-operative efforts are necessary to cope with political challenges and in order to realise the re-use and further use of electrical and electronic equipment successfully. Re-use computers, as a co-operative network itself is one example to do so! «

Documentation of the symposium in German language (as pdf-file) and further information: Science Shop ‘kubus’, Co-operation and Consulting for Environmental Questions, Centre for Co-operation (ZEK), Technical University Berlin, ReUse computers, for the attention of: Mrs. Kirsten von der Heiden & Mr. Frank Becker, Steinplatz 1, D-10623 Berlin, Germany. Phone: (+49 30) 314-26396, -26056, Fax: (+49 30) 314-24 276, kheiden@zek.tu berlin.de, becker.reuse@zek.tu berlin.de, www.tu-berlin.de/ziek/kubus/Reuse/reuse.html, www.reuse-computer.de and www.reuse-computer.org.
In the past decades a lot of organisations have come into existence that claim to mediate between science and society: Science Shops, technology assessment organisations, science communication groups etc. etc. All have a common starting point: developments in science and technology are relevant for society. And all of them have their own subfield: citizens should be aware of the possible consequences of new scientific developments; consumers should make responsible choices; patients should collaborate with researchers in promoting new technologies; scientists should present their results in understandable language and last but not least politicians should make the right decisions in the S&T field.

Everybody and every organisation should do something. But why? And what are the right things to do? The whole “science and society” world seems to reconsider its position. All of us seem looking for new tasks, new ways of co-operation, new mission statements. If you want to do so, you can spend twelve months a year visiting conferences and workshops on new or renewed visions and policies on relations between science and society, and why everything should change. And do not let me be misunderstood.

Many of these conferences are useful in providing new knowledge, in developing new methodologies, in stimulating new ways of co-operation, in bringing together experts from different backgrounds. Because of all these reasons I can recommend the readers of Living Knowledge to visit the conference “New Interactions between Science and Society”, organised by the Rathenau Institute on 6 and 7 December in Amsterdam (www.imag esofscience.com).

But there is another side of the coin. Do all these international activities and projects not distract us too much from our core business? Do we still do enough the things that we were created for? Are the clients of the Science Shops still their most important frame of reference? Do science communication organisations communicate about science or about “communication about science”? And is doing (parliamentary) technology assessment still the number one activity of Rathenau Institute and its sister organisations? My organisation, Rathenau Institute, was set up to “support social and political opinion making on issues arising from technological and scientific developments”. That is what we should do – and most of the time we still do.

I see a risk that all kinds of co-operation – often stimulated by attractive European financial arrangements – can lead to a new international melting pot of different “science and society” organisations that no longer pay enough attention to their own identity or original core business. And this could lead to the situation that the same politicians, who perhaps seduced us by promising that we are entering the promised land of milk and honey, will decide that these “science and society” organisations are more of the same and that there are too many of them. And do not think that this will not happen: the history of a famous organisation as the former American Office for Technology Assessment (OTA) shows the opposite.

So, let us co-operate and interact when necessary, but let us never forget our core business.

Koos van der Bruggen

The first National Science Shop Conference, INRO 2004, took place between 9 and 11 June 2004 at the Transilvania University of Brasov, Romania, being organised by the Association INTERMEDIUNET Romania with the financial support of the Dutch Ministry of Foreign Affairs.

Eight Science Shops have been established at Romanian universities through the MATRA program in two stages: four since 1998 and four starting with 2002; in this respect, Romania is the first country in the Central and Eastern Europe having implemented this concept. Until now, Romanian Science Shops focused on environmental issues and thus, they are called INTERMEDIA. A non-profit association, INTERMEDIUNET ROMANIA (INRO) was founded in 2003.

The Conference gathered 67 participants from different countries, i.e. Romania, The Netherlands, Denmark, Germany, Japan, Greece and Republic of Moldova. Representatives of different target groups, such as universities (staff and students), NGOs, Science Shops, governmental organisations and policy makers from the Ministry of Education or financing agencies participated actively in the conference.

The INRO 2004 conference objectives were devoted to the presentation of achievements of Romanian Science Shops taking into consideration the national and international context, the importance of enlarging the Science Shop network and the creation of other Science Shops in Romania. The benefits of Science Shop projects to universities were highlighted in various presentations. Former biology student Hermes Clipa explained how his experience from the Science Shop at Cuza University Iasi now got him a good job at the Romanian Water Agency. Dutch student Erwin Ten Meer showed how he had worked with 25 Romanian students from 5 departments in a project on sustainable energy use in...
Brasov. Other presentations showed how projects were placed in regular curricula and how a distance learning Master of Science on environmental management was organised by the Science Shop. The benefits of Science Shops and project based learning for technical universities were also outlined by Prof. dr. Napoleon Antonescu from the Petroleum-Gas University of Ploieşti, member of the Romanian Parliament.

Various “clients” told about the value of Science Shop work for society groups. Daniel Lazar, chief-editor of regional newspaper Informatia Prahova in Ploieşti has received a lot of support to train his journalists in writing on environmental issues. Liliana Barbu, counselor of the Regional Environmental Inspectorate Prahova said that Science Shops help her in obtaining the right information in the right form. Other presentations showed the value of Science Shops for schools, water management and public health issues.

A forum discussion focussed on the policy makers’ views on the further development of Science Shops activities and addressed the main challenges concerning the support and sustainability of Romanian Science Shops. Issues such as recognition of this activity by the Universities and Ministry of Education (with allocation of credit points for students and staff time for supervision), the necessity to allocate adequate funding and support for such entities, as well as the social relevance of Science Shop work were subjects for debate. The national and international linkages through projects that originate in the Science Shops should be also a point of interest for the creation of these sustainable partnerships between universities and civil society groups, with the condition that effective legislation at national and regional level is also supportive.

After the conference, the University of Pitesti joined the network with their Advisory Centre, and also universities from Timisoara and Baia Mare expressed their interest to start a Science Shop.

A follow up session will take place at a workshop to be held at the 2nd International Conference in Environmental Engineering and Management ICEEM 02 from 23-26 september 2004, Iasi, Romania (see http://omicron.ch.tuiasi.ro/iceem02/).

For more information about the INRO conference and its sections please visit: http://conference.intermediu.ro.

Prof. Dr. Eng. Carmen Teodosia, “Ch. Asachi” Technical University Iasi, President INTERMEDIUNET ROMÂNIA, inmediu@ch.tuiasi.ro, www.intermediu.ro

Dr. Henk Mulder, University of Groningen, MATRA Project Coordinator “Problem-based learning through Science Shops in Romania”, h.a.j.mulder@chem.rug.nl.

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**Advancing Science and Society Interactions**

Seville, 3-5 February 2005

The 2nd “Living Knowledge” Conference will be hosted by the University of Seville, Spain, from February 3rd to 5th, 2005. Titled “Advancing Science and Society Interactions”, this conference is organised by the International Science Shop Network Living Knowledge and supported by the European Commission under its Science and Society Programme. It will provide a forum where information on community based research, carried out in both community and academic settings, can be shared and developed. The conference will reflect the social impact and scientific and democratic value of research from a range of disciplines including social, natural, physical and technological sciences. It will be of interest to people who are active in, or interested in, the field of community-based research. Practitioners from non-governmental organisations (NGOs), research institutes, universities (both academics/faculty and students) and science and society policy makers are invited to share their experiences.

The conference aims to:
- Build equitable and supportive research partnerships
- Develop concepts and tools for community based and participatory action research
- Enhance academics’ and policy makers’ capacity to work with and for citizens

The conference themes will include:
- The impact of communities on the research and policy agenda
- Citizen participation in research and policy making
- Development of infrastructures for mediation and communication of community based research
- Local and global demands for access to research, science, education and technology

Conference Activities
The Conference will include plenary sessions, oral presentations, workshops, poster sessions, exhibitions and a marketplace. The official languages of the conference will be English and Spanish. Translation will be available throughout the conference.

There will be opportunities for field trips, excursions and networking. Childcare will be offered during the conference.

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Call for Contributions
You are invited to send a short abstract or workshop proposal (maximum one page) related to a theme to papers@paxmediterranea.com. Abstracts must be submitted before 15 October 2004. Accepted abstracts will be published.

Fees, program and registration Registration fees will be from 25 € for Students to 100 € for NGOs and universities and 200 € for policy-makers / others. After November 30th 2004 fees will increase by 20%. For the preliminary program and online registration, please visit the website www.cienciaysociedadsevilla.org. To register by mail, and further information on scholarships and bursaries please contact the Conference Secretariat to Pax Mediterranea, Plaza Pelicano 4 (taller 27). 41003 Seville, Spain, conference@paxmediterranea.com.

This Conference will be organised as part of the ISSNET Project ‘Improving Science Shop Networking’, which has been awarded financial support by the European Commission, contract HPRP-CT-2002-0001.
Images of Science
New Interactions between Science and Society, Amsterdam, the Netherlands, 6-7 December 2004
All of us hold images of science. But not all of us hold the same images of science. Some of us still treasure the notion of scientists in their ivory tower, hardly aware of the social questions their work arouses. This conference is intended for scientists, politicians, policymakers and others interested from European Union states. In plenary sessions and workshops participants will receive an overview of developments over the past 15 years and a fresh look direction future. Attention will be dedicated to experts’ ideas, but (relative) outsiders too will be able to contribute their opinions.

Please Contribute
Making a magazine requires participation. Living Knowledge - International Journal of Community Based Research is published every four months. The next issue will be published in November 2004. The general topic will be “Advancing Science and Society Interactions”. The deadline for submitting contributions is October, 4th 2004. The conference welcomes contributions such as reports, articles, news stories, press releases and clippings, letters, contribution to discussions, job offers, internships, etc. Reports and detailed articles should follow the editorial guidelines. Information about the magazine and the editorial guidelines can be found at the homepage of the Science Shop Network (www.scienceshops.org). Please feel free to contact the editors for questions and assistance.

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 in formation from the Living Knowledge discussion list, the bimonthly newsletter or this magazine, which provide users with resources and tools related to community-based research.

7th Annual Community Research Network Conference
The Community Research Network (CRN) of the Loka Institute is planning its 7th Annual Conference. A cross-section conference planning team has come together to organize the conference to be held in Providence, RI on November 4th, 2004. The annual CRN conferences are held to provide an interactive forum for local, regional and international networks, grassroots organizers, researchers, practitioners, students, funders, and public institutions to move still closer to the ideals of community-based research. Further details including the call for proposals and other logistical information will be posted on the Loka Institute website www.loka.org.

Repubulished Call for Proposals
The European Commission has re-published it’s calls for proposals related to “women and science” and “ethics”. The calls were first published on 26 May under the Science and Society priority of the Sixth Framework Programme. Now the closure date for receipt of tender documents is extended to 15 October 2004. The scope of the call for “women and science” now covers:
- empowerment of women scientists, and public debate (area 4.3.5.1 (a));
- ambassadors for women and science (area 4.3.5.1 (b));
- gender research (area 4.3.5.2);
- practical tools for mainstreaming (area 4.3.5.3 of the work programme).
The scope of the call for research into “ethics” now covers:
- ethics: networking and dialogue (area 4.3.2.1 (a0), (b));
- ethics: emerging issues, and the international dimension (area 4.3.2.3 (a), (b) of the work programme).
The total indicative budget for the “women and science” call is 6.4 million euro. The budget for the “ethics” call is 5.4 million euro.

Difficult Questions
“Good science consists of designing an experiment that will demonstrate that a theory is wrong - if it is. So large part of the scientist’s job is not ‘establishing truths’, it is trying to shoot down the scientist’s own ideas. And those of other scientists. ... Science tries to protect us against believing what we want to be true, or what authority tells us is true. It doesn’t always succeed, but that at least is the aim.”


Science Shop Brochure
In March 2004, 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,
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