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Debates and participatory processes: lessons from the European experience

1. Knowledge-base Society, Public debate and participatory processes: Towards a scientific citizenship?

The enhancement of scientific citizenship is one of the major challenges of the construction of the "Knowledge-base Society". Scientific citizenship implies a more active role of citizens and stakeholders in the various steps of the research and development process, in order to improve both democracy and innovation. To this aim, public debates on science and technology as well as the various forms of participatory technology assessment (pTA) appear to be instrumental.

This is the first key idea which we have to bear in mind when looking at the various experiences presented in the showcases on "debates and participatory processes". These showcases are very helpful for catching the singularity of "public participation" in science and technology in a very concrete way. Indeed, this Forum gives a unique opportunity to directly interact with a number of experts who have a long experience of participatory processes. We also have to add that, although playing a key role in this Forum, these showcases are just the top of a very big iceberg! The aim of my presentation will be to talk of the whole iceberg. I shall present a biggest frame which, I hope, will help to have a good appraisal of the importance of the experiences presented here.

2. What is public participation? Why is it necessary?

Experiences of public participation in science and technology are flowering throughout Europe. For instance, in the medical and health sector, a lot of patients associations are set up; they intervene in various ways in research: they raise funds, they debate research orientations, they negotiate research protocols, etc. (See the AMRC showcase). In a way, such organisations are co-producers of science and technology. A second example may be taken from the recent evolution of information technologies: "creative communities" emerge, where users and producers of technology directly interact and produce new tools, as exemplified by the growing importance of the open source software. These examples remind that we, as scientists or policy makers, do not have the monopoly of intelligence and reason. A "knowledge-base society" is also a society of "distributed intelligence". This is a good reason to foster public participation.

Public participation is not only about “co-production”. The two definitions of participation given in box 1 help to catch both the singularity of participation (as opposed to one way communication) and the variety of modes of participation (as illustrated by the concept of “ladder of participation”). The showcases illustrate nearly all the steps of the ladder (Table 1).

When defined broadly, the benefits expected from public participation are the following:

(i) the expertise related to the experience of lay people and stakeholders can improve the innovation process;

(ii) participation improves democracy and enhances citizenship;

(iii) time taken for opening the process may improve the conditions of implementation since it fosters the appropriation processes

The showcases clearly illustrate these three potential benefits. For instance, the Node project (“Democracy on the Move”) shows how creative games may be used as a source of collective intelligence and a way to foster citizenship.

Box 1

“According to Smith (1983), “public participation” encompasses a group of procedures designed to consult, involve, and inform the public to allow those affected by a decision to have an input into that decision. In this analysis, ‘input’ is the key phrase, differentiating participation methods from other communication strategies.”
(Rowe and Frewer, 2000)

“The notion of civil society participation is used in different contexts, of which civil society participation in science and technology based policy making is one. Different degrees of participation are distinguished. The spectrum of possible degrees of participation is illustrated by the so called “ladder of citizen participation”. The Danish Board of Technology for instance differentiates between:
. providing information (for example pamphlets)
. taking feedback (for example Eurobarometer)
. getting into dialogue (for example citizen hearings)
. supporting articulation (for example consensus conference)
. giving influence (for example mediation)
. giving power (for example direct democracy)”
(IFOK, 2003)

Table 1. Showcases on debates and participatory processes

Title	Initiator	Target Audience	Objectives
PPGI: Public Participation and Governance of Innovation	Lombardia Region, IRER, Bassetti Foundation	Citizens, Stakeholders, Politicians, Scientists	To test out – for the very first time in Italy - new methods of citizen participation to policy processes regarding complex technoscientific issues (GMO'sfield trials).
Climax - Interactive exhibition on global warming	Cité des sciences et de l'industrie, Paris	All publics and teennagers/young adults in particular	Arise public consciousness about global warming and inform possible solutions
Democracy on the move	Federal Ministry of Education, Science and Culture – Austria	Researchers, stakeholders, interested public	Encourage discussion of internationally relevant issues Stimulate innovative research and research processes Promote national and international project cooperation and networking
NANOFORUM	The Institute of Nanotechnology, Glasgow and European partners	Primarily the nanotechnology community	Inform and network the nanotechnology community across Europe and across different scientific and technology disciplines
NANO DIALOGUE	Fondazione IDIS - Città della Scienza, IT (coordinator); and European partners	Citizens and the general public, stakeholders in nanotechnologies and nanosciences	Establishment of an integrated process of communication concerning nanotechnologies (providing information, raising awareness and implementing social dialogue between the research community and citizens)
TRUSTNET – Improving governance of hazardous activities	Mutadis Consultants, Paris / European Commission	Public institutions, experts, decision makers, NGOs, lay citizens	Improve decision-making processes in the field of hazardous activities
Technology foresight in Greece	National Technical University, Economic University Athens, Higher School of Public Health, Athens	General public, Professional Associations, Researchers, Policy Makers	Recommendations to the Greek Policy Decision Makers (Political leadership) about planning and implementing new plans for the Knowledge Society of the future
AMRC - Messanger Role of Medical Research Charities	AMRC, UK	Patients, decision makers, media, public	To engage key audiences in medical research issues Impact on legislation, public opinion

3. The challenges of public participation

Indeed, public participation is a key component of the science-society interactions. But it is also a quite challenging objective.
It first requires to get rid of common beliefs on the public misunderstanding of science; we, as scientists or policy makers, do not have the monopoly of intelligence and reason! Secondly, we have to design new forms of deliberations, where scientists and citizens may productively interact and co-produce knowledge and innovations. Thirdly, it is necessary to think how our traditional, top-down institutions may adapt to these new modes of governance.

3.1. Get rid of common beliefs on misunderstanding of science

Very often, when ordinary citizens disagree with experts about innovation and risks, one considers that it is because they are irrational and/or because they lack the knowledge and the basic information required. This "idée reçue" is referred to in the academic literature as the "deficit model". Social scientists have shown that the deficit model is not supported by empirical evidence. The disagreements between experts and lay people generally result from different ways to frame a single issue, i.e. to define the problems at stake and the set of potential solutions. Furthermore, when it feeds and structures institutional communication, the deficit model may reinforce mutual misunderstandings.

The results of the European project PABE (Public Attitude towards Biotechnology in Europe) clearly show that an institutional behaviour based on the deficit model is one of the sources of the GM opposition:

- Experts construct & project models of public into public arena
- These do not correspond with public realities
- Public opposition to GM more based on expert misunderstandings of publics than public misunderstandings of risk
- public opposition to GM conditional and ambivalent, not fixed and absolute
- public responds mainly to institutional behaviour, not just 'risk'
- institutional use of 'risk assessment' as reassurance is seen as institutional denial of limits of scientific knowledge ('arrogance')

The lessons raised may be of key importance for nanotechnologies and they inspire several projects (of which Nanoforum and Nanodialogue presented here).

The issue is to move from a public acceptance, top down, paradigm towards a paradigm of public participation, where institutions learn to listen to civic society and take advantage of the diversity of worldviews and the diversity of knowledge and cultures.

3.2. Design new spaces for "hybrid" deliberations

Beyond this cognitive challenge, we also face an organisational one. The problem is to design spaces where scientists and citizens may productively interact and co-produce knowledge and

innovations. To this respect, the experience which has taken place in the last 20 years all over Europe (and beyond) is a key resource.

The toolbox of civic society participation has been discussed at the June 2003 International Conference "Governance of the European Area: The Role of Civic Society". Indeed, we benefit from a diversity of tools adapted to a diversity of objectives (types of participation) and situations, related to the policy cycle and the innovation process (Box 2).

Box 2. Tool box of civic society participation

Advisory committees
Citizen's advisory councils
Citizen's jury (including planning cells, etc.)
Consensus conference
Focus groups
Future Workshops
Mediation
Negotiated rule making
Planning for real
Public hearings
Public survey
Referendum
Scenario Workshops

(Ifok, 2003)

The showcases presented here illustrate some of these tools. For instance, the Greek Foresight exercise is a very good example of how the construction of technological scenarios may create a space of debate on the ways scientific policy determines the futures of the Nation. It is a good base to foster interactions between scientists, policy makers and civic society. Many foresight initiatives are on the way and there is a strong consensus on the necessity to associate the construction of scenarios and participatory methods (such as in Scenario Workshops, for instance).

Two cases refer to consensus conferences. Note that these cases do not come from the traditional "champion" of consensus conferences, namely the Denmark, where such devices where invented and are frequently used (Box 3). They come from two countries where public participation is not embedded in the political culture: Italy (PPGI: consensus conference on GM Field Trials) and France (Climax: a consensus conference on climate change was organised before the exhibition).

I also have to mention a family of initiatives which are not presented here, but which are very important in some specific countries. In the Netherlands, for instance, there is now an important experience of constructive and interactive technology assessment (cTA and iTA) where participatory methods are used in order to feed and structure the innovation process.

This leads to the underline the importance of country specificities. Europe is characterised by a diversity of political cultures which partly explains a strong differences in terms of participatory experiences.

Box 3. List of consensus conferences organised in Danemark (1987-2002)

- Testing our Genes (2002)
- Roadpricing (2001)
- Electronic Surveillance (2000)
- Noise and Technology (2000)
- Genetically modified Food (1999)
- Teleworking (1997)
- The Consumption and Environment of the future (1996)
- The Future of Fishing (1996)
- Gene Therapy (1995)
- Where is the Limit? – chemical substances in food and the environment (1995)
- Information Technology in Transportation (1994)
- A Light-green Agricultural Sector (1994)
- Electronic Identity Cards (1994)
- Infertility (1993)
- The Future of Private Automobiles (1993)
- Technological Animals (1992)
- Educational Technology (1991)
- Air Pollution (1990)
- Food Irradiation (1989)
- Human Genome Mapping (1989)
- The Citizen and dangerous Production (1988)
- Gene Technology in Industry and Agriculture (1987)

Box 4. List of consensus conferences organised elsewhere

ARGENTINA Genetically modified foods (2000); human genome project (2001).
AUSTRALIA Gene technology in the food chain (1999)
AUSTRIA Ozone in the upper atmosphere (1997)
CANADA food biotechnology (Western Canada, 1999); municipal waste management (Hamilton City/Region, 2000)
FRANCE Genetically modified foods (1998), Climate Change (2001), Domestic wastes (2004), Nuclear wastes (2005)
GERMANY Citizens' Conference on Genetic Testing, (2001 Deutsches Hygiene-Museum)
ITALY Consensus Conference on GMO's
ISRAEL Future of transportation (2000)
JAPAN Gene therapy (1998); high information society (1999); genetically modified food (2000)
NETHERLANDS Genetically modified animals (1993); human genetics research (1995)
NEW ZEALANDS Plant biotechnology (1996); plant biotechnology 2 (May 1999); biotechnological pest control (Sept. 1999)
NORWAY Genetically modified foods (1996); smart-house technology for nursing homes (2000)
SOUTH KOREA Safety & ethics of genetically modified foods (1998); cloning(Sept. 1999)
SWITZERLAND National electricity policy (1998--conducted in 3 languages with simultaneous translation); genetic engineering and food (June 1999); transplantation medicine (Nov. 2000)
U.K. Genetically modified foods (1994); radioactive waste management (May 1999)

We have to take into account this diversity as a source of richness. We also have to recognise that because of technological evolution, European integration, globalisation, etc. some common trends are operating. Let me just take the example of France, which has a strong tradition of technocratic governance (well embedded in the republican national state). Despite this political culture, "Public debate" and pTA are currently at stake: lots of initiatives show that we have now to move towards more participatory modes of governance to adapt to a changing society. Therefore, it is very important to organise the sharing of experience on participation at the European level.

I have to conclude this section by two remarks:

1. Although "consensus conferences" are now a well known model of public participation, it is not the only one. We thus have to highlight the diversity of the toolbox. Moreover, these tools are complementary and it may be relevant to mix them in order to create innovative forms of governance. To this respect, the Trustnet project is quite interesting. Trustnet uses a set of participatory and mediation tools in order to foster the articulation of the available scientific knowledge and the involvement of concerned individuals and organisations in order to generate robust ways to manage hazardous installations. The aim is to design and promote what they call "inclusive governance";

2. There is a real danger to ruin participation and public debate if the rationales and the objectives remain unclear. As we observed, participation promotes citizenship through the enhancement of a sense of individual responsibility for public decisions. Therefore, it may be highly deceiving if participants realise that their voice is not taken into account as they might expect (for example, if they have the feeling to legitimize already made decisions). The experience of participatory processes has thus shown that it is necessary to organise the experiences according to general principles of fairness and competence. Progressively, a set of rules or organisation emerge as a consensus amongst experts in participation:

. Implication of stakeholders
. Rules of fair deliberations
. Clear commitment of the commissioner
. Independent assessment

3. Where to go from here now?

In conclusion, I wish to focus on two stakes related to the current state of participatory processes in Europe:

1. First, it is necessary to build a bridge between participatory evaluation and scientific culture. "Scientific culture" is traditionally conceived as "vulgarisation" or public enlightenment, as a way to diffuse Scientific Knowledge. On the other hand, participation is about interaction, opening the frames, controversies, and discussion of research options. However, participatory processes have a main shortcoming: they generally involve a very limited number of participants and do not reach the wider public. Therefore, it is necessary to design new bridges between both sides. Nanoforum is one example where a website is designed to provide information, but also promote dialogue and interactions. Nanodialogue and Climax are two other

examples where participatory processes (consensus conference, scenario workshops, etc.) are used in order to design interactive exhibitions which allow to get the feedback and inputs on technological innovations. We have to draw the lessons from these pioneering projects.

2. Second, learning and sharing experience is vital: to this respect, the role of the Commission and its Action Plan is instrumental through the support of various networks and research projects or the organisation of Conferences such as the present one. A further step could be the creation of a “European Academy on Scientific Citizenship” which role would be to involve practitioners and academics, to share experience, organise teaching sessions, support civic society initiatives, etc.