

Science and democracy.

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My thesis's purpose is to show how examination of citizens' opinion before deciding a scientific option have an impact on public trust on scientists, as debate recently done on genetically modified organisms.

More precisely, I work on the technical aspects of the organisation of citizens groups. It involves to study how equality may be installed, when people sepak, and when they finally decide something. I've opted for a comparison between french, danish, norvegian and swedish debates. This comparison gives us the opportunity to discover what are the common ways of doing and what are the main differences between different debates, in order to show what the main difficulties in the organisation of public debate are.

Consensus conferences aren't the only tools of participation of danish public in political decisions on scientific issues. But all the tools employed have the common aspect to be less normative, and open processes. That induces citizens may have a big role to play in deciding what's going to have a real impact in their own life. In Denmark, members of Parliament have just realised a little sooner than french does, that using this type of tools had the paradpxal effect to increase citizens' trust in expertise.

Rosenvallon, in « La démocratie inachevée », refers to Athens and an « ancient » democracy, in which citizens had to play an active role, a very collective, teinted one. On the contrary, contemporary citizen is isolated, its implication has the main aim to make him obtaining individual advantages. He's rarely a fervent political leader. Gyford (1) developed that by presenting 6 types of actors, distinguishing between Active/Passive actors:

/	<i>Passive</i>	<i>Active</i>
Economic	Tax Payer	Shareholder
Political	Voter	Citizen
Social	Client	Consumer

For each type, two reasons may push them to be involved in public debate on scientific ecological issues (2):

- œthe « nature centred » orientation characterized by the prevailing interest of the protection of nature, disregarding the problem of man;
- œthe « man centred » orientation characterized by constant involvements in mankind's approach to the problem of human beings in the use of nature.

In my own study, I will use these categories applied to public debate on options done in genetics.

In same document (2), a model differs between Active (ends over means)/Dominant and Passive (means over ends)/Subordinate. Pursuing the same idea, communication is one step behind participation which is one step behind consensus. In fact, we may also think in terms on collective behaviour facing scientific complexity. These mecanisms in Medicine gave birth to consensus conferences where victims, families and doctors are all implied in the medical care (Example: Genethon, Evry, France).

(1): GYFORD, J. : « citizens, consumers and councils », London, Mac Millan, 1991

(2): de LAET, C.: « public participation: six cases studies », UNESCO

In Denmark, two types of tool have been built:

œtechnical ones: role play, scenario workshop, perspective workshop, future search conference, voting conference, that means citizens' opinion is integrated to public decision;

œpolitical ones: hearings of citizens groups and hearings for Parliament; that means citizens' opinion is asked but generally after the decision has been taken.

A few others are built with both -consensus conferences.

A consensus conference is a few day public inquiry, at the centre of which is a group of 10-16 citizens who are charged with the assessment of a socially sensitive topic of science and technology

(3). Groups of experts, of lay people and of the public have to think about the consequences of a scientific option. For example, should we continue to work on the genetically modified organisms; if yes, may we commercialize them or just do research works on them ?

Different steps are necessary to solve a problem which is always a complex problem, with many decisions taken during a long period before being definitely solved.

œcitizens receive a brief note on the subject,

œtwo week-end courses of information for the citizen selected: on the first day, the experts make a presentation and on the second day, after clarification by experts, citizens' panel debate solely. At the end, a third day is totally given by citizens to write their report. At the very end, this report and remarks of the experts attached are given to the Parliament.

Since 1987, 22 consensus conferences have been organised by the Danish board and 5 since 1998 (3 in France). In France, a conference has been held on genetically modified organisms (GMO) in 1998. A directory committee decided to teach to citizens who have been selected in order to build a statistically representative population during two days and, after having debated during a day with each other, citizens wrote their reports on the subject. A few recommendations have been taken into account by a report done by the Parliamentary Office for Technological Choices (5).

Specially in Denmark, these processes have maintained the trust of citizens in the Parliament, in the Head of the State and also in the expertise's capabilities of scientists, where legislation in itself could not establish public trust (6). People in charge of organising public debates in Denmark study it as a problem in terms of regulation. Toft says « it provides a very flexible system, as regulators are able to ask all interested bodies for advice, while granting public access to every aspect of the regulatory discussion (...). Parliament decided to maintain openness and transparency for GMO releases (...). This is regarded as an important means to avoid a public image of secrecy ». The creation of a Board of Technology in Denmark, and in Norway, in charge of public debates, appears to be a success, recognised by left-wing and by conservative people's party (7). In France, it seems to be the same with National Commission for Public Debate. The Danish Technology Board has organised since 1982 have introduced deep debate on ethical dimensions of science as a way to prepare Members of Parliament's decisions. A member of a party, cited in JOSS, tells: « what I need is to talk to experts to get to know what is really happening and to discuss with lay people... ».

Conferences appear to become the way to find an equilibrium between scientists' wish to boost technical progress and people's wish to avoid bad consequences of scientific's experimentations. It's not incompatible with Parliamentary procedures, when it helps them to take short-term decisions by having a long-term view.

(3): JOSS, S.: « danish consensus conferences », science and public policy, volume 25, 1998.

(5): le DEAUT, J.Y.: « la place des biotechnologies en France et en Europe », 27 janvier 2005.

(6): TOFT, J.: « Denmark: seeking a broad-based consensus on gene technology », science and public policy, volume 23, 1996.

(7): JOSS, S.: « danish consensus conferences », science and public policy, volume 25, 1998.

« The difficulty with technology assessment is how to arrange it for members of Parliament. Members of Parliament have to deal with issues on a very limited time-scale -here and now- whereas technology assessment is something long-term » (7). So, consensus conferences build a favorable ground for a better communication between scientists and citizens, because roles need to be clear to be successfully played, so experts play a rôle of scientists, members of Parliament play a political rôle, while citizens involved in the conference play the rôle of the « external eyes », helping the two others to stay in their own roles. On human genome mapping, consensus conference was the inspiration for a new legislation: the lay panel urged legislation prohibiting the use of information from genomic research in connection with employment and pensions schemes (7).

In some cases, experts and citizens have a convergent interest; in that cases, consensus conferences, firstly may strenghtened links between them, and lastly the final decisions of the citizens' panel may approve and support experts' point of view. In some other cases, experts and citizens have divergent opinions.

Interviewed members of Parliement thought the conference played an important rôle in bringing about a situation in which the public were better informed and more critically aware of scientific developments than they were before the firts consensus conference was held (7).

In general, involvement of citizen in scientific subjects has increased.

The first step of a clever communication from scientists to citizens is, for the scientists, to hear the main needs of people. By refusing the GMO's entrance in Europe, french citizens express also a fear against a process they don't know, and a lack of trust for ex ministries who have been judged for their past involmment in many scandals concerning contaminated blood by HIV. Simultaneously, experts are generally too tightly involved in big industrial projects without the citizens' advice on the projects in which they are involved. So, there is no hope for scientists to obtain sustain. Citizens groups represent an artificial meeting place, but we have no other choice to make scientists and citizens have an exchange.

« How to make effective communication of science and technology » is the subject of our meeting; it's also one of the results of consensus conferences to give the opportunity for each to communicate.

But they must be held following several regulars:

- œan effective communication needs trust between actors and that trust can only be built after many conferences,
- œthey must be held with a mediation possibility in case of a conflict,
- œtopics selected only if having a current social relevance,
- œpresupposing experts contributions,
- œsubjects need to be possible to delimit but complex and controversial, and containing attitudinal issues,
- œcitizens participate in the choice of the experts,
- œfinal documents passed on to the Parliament,
- œdialogue between experts and lay people,
- œopen to the public.

Lastly, one of the main advantages of the conferences is to avoid medias' transcript of scientific issues but, on the contrary, instaure a direct dialogue between citizens and experts.

Conferences have already been held on genetics, electronic communication of data. It should constitute a progress when subjects as army, nuclear waste or nuclear programs would be open to the public and if consensus conferences would be held on these type of subjects. Another evolve should arrive when conferences will be open to lobbies, as it's already done in Norway, to NGO's and to independent experts, even if highly involved in social and technological movements. Facing decisions on complex scientific evolutions, experts, politicians and citizens may participate to the same projects in delimited process, during a « test period » of a few years, after which experts should decide to continue or to stop collaborating with public and the Parliament by participate to consensus conferences.