

**Parallel Session 19 Scientists and science institutions as PCST agents:
experiences.**

**ARGENTINA'S SELLING OF A NUCLEAR REACTOR TO AUSTRALIA.
SCIENTIFIC INFORMATION AND PERCEPTION OF RISK**

Leonardo Vaccarezza¹, Carmelo Polino² and María Eugenia Fazio³

¹ *Grupo REDES, Mansilla 2698, 2° piso, C1425BPD, Buenos Aires, Argentina.
Tel./Fax: 54-11-963-8811/7878, E-mail: vaccarez@mail.retina.ar*

² *Centro de Estudios sobre Ciencia, Desarrollo y Educación Superior (REDES),
Mansilla 2698, 2° piso, C1425BPD, Buenos Aires, Argentina. Tel./Fax: 54-11-
963-8811/7878, E-mail: cpolino@ricyt.edu.ar*

³ *Centro de Estudios sobre Ciencia, Desarrollo y Educación Superior (REDES),
Mansilla 2698, 2° piso, C1425BPD, Buenos Aires, Argentina. Tel./Fax: 54-11-
963-8811/7878, E-mail: mefazio@ricyt.edu.ar*

Abstract

This paper focuses on analyzing a public controversy started in 2001, when INVAP –an Argentinean firm belonging to a provincial state- obtained an international tender to build a nuclear reactor in Australia. This case allows both a review about social perception of technological risks and limits, and conditions of the citizen participation in science & technology sphere. Furthermore, to promote this kind of public appropriation is useful to consider other approaches toward the idea of the scientific culture in society.

Key words: citizen participation, public perception of risks, public information.

Text

Context

Different surveys around the world support that most of the society trusts on the ability of science both to solve problems and improve the quality of life. Sometimes, however, the confidence diminishes when controversial ideas about risks that arise from technological development appear in public opinion. In some cases, these situations mobilize citizen participation.

The intersection between science & technology, risks, and citizen participation in a social controversial context was described in a joint investigation of RICYT/CYTED and OEI. As a part of that research, six Argentinean cases of

“citizen participation” were characterized in order to analyze techno science and social processes. One of the main goals of the project was to include citizen participation in public policies agenda of science & technology in Latin American countries. There are at least two arguments to point out in that direction: one of them, the public culture of participation in S&T is poorly installed. A regional pilot survey also carried out by RICYT and OEI in cities of Argentina, Brazil, Spain and Uruguay showed that less than 10% of the persons interviewed had been actively involved in some activities of citizen participation.¹ The second one, to understand this type of social processes is important because of public institutions admits the relevance of citizen participation but there are not public institutionalized structures to support it. In addition, to continue systematic investigations about citizen participation could facilitate the clarification of this incipient social research concept.

Results

Argentina has a strong tradition in nuclear research. Generally, nuclear research and civil Argentine society have had a pacific coexistence. Nevertheless, at the middle of 2001, when the Argentinean enterprise INVAP won an international tender to build a low power nuclear reactor in Australia, a controversy was installed in public opinion. As a backing for the contract an agreement was signed between the states that included a clause which unleashed the controversy: in case that Australia requested it, Argentina should recycle the combustible used by the reactor.

Five social actors were directly involved. Their positions were the following:

- Ⓜ Environmental organizations (*Greenpeace* and *Amigos de la Tierra* in particular), stated that this contract would turn the country into a “nuclear waste disposal”. From the beginning, these actors installed an effective media campaign: the general tonic was apocalyptic images about nuclear dangerous consequences for environment and health.
- Ⓜ Most of the scientific community rejected the condemnations and emphasized technological and commercial success. Furthermore, scientists accused environmental organizations: they said that, eventually, there would no be “nuclear waste” but used up fuel from the reactor. However, they reacted later, even not clearly, and lost “the battle” in the media.
- Ⓜ Government’s authorities supported scientific community’s arguments.
- Ⓜ The media system was the principal scenario where the actors showed their points of view. However, the environmentalist influence predominated in the media.
- Ⓜ The society. First, people who lives close to the place where the used up fuel from the reactor should be treated. This people relied environmentalist’s

arguments; in particular, a group called *Asamblea Barrial de Ezeiza*.
Second, media readers and viewers in general.

In a few months, the controversy disappeared as a new in the journals. Yet, public exposition avoided, at least for the moment, that the National Congress endorse the bilateral agreement. Even though, INVAP goes on building up the reactor as it was planned. The controversy remains latent. The conflict will become public once again.

Conclusions

The citizens' participation implies the existence of opportunities to accede to and appropriate of scientific contents and reliable information, as well as the involvement in the decision-making on public policies and in the social debates on these subjects. The "scientific culture", so understood, supposes a kind of conscience acquired by citizens. This case shows that effectively existed some kind of citizens' participation. But, can be said that the involved actors have fostered a democratic participation in the terms above described? Probably no. Participation was restricted to a dispute of interests that weakened the possibility of a social learning. In this sense,

- ® Greenpeace attempted to mobilize population from fear, appealing to the usual phantoms about nuclear power. The style of the protest reduced the possibility of a democratic debate.
- ® Scientific community holds a basically defensive attitude, with an ineffective communication policy, and could not give an answer to the subjective perception of risk experienced by the public, an issue that environmentalists knew how to appropriately exploit. That is an evidence of the lack, into the scientific system, of practitioners capable to articulate with the rest of society.
- ® Government did not assume a role as articulator. This reveals the lack of permanent policies and structures capable to answer the citizen's participation.
- ® Media privileged spectacular information and not the research journalism.

These results are important data for the public policies aimed to put in touch science and society. The pointed deficiencies allow to suppose that the existence of spaces for debate or the circulation of information don't guarantee by themselves an effective participation. The public was caught into a crossed - interests logic and stood outside of a fundamental discussion: the future of the management of radioactive waste in the country and, largely, of the nuclear policy.

¹ This comparative methodological non-statistical survey was answered by 300 people in Buenos Aires (Argentina) and 150 in Campinas (Brazil), Salamanca y Valladolid (Spain), and Montevideo (Uruguay).