Ethical and Cultural Issues in Europe : Andrei Sakharov and his Legacy

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ABSTRACT : *The long, rich and troubled history of our Continent provides instructive lessons about the impact of individuals and the role of institutions, in the advent of intellectual and moral advances. Among others, the names of Albert Einstein, Joseph Rotblat, Andrei Sakharov stand as illustrative examples. The 1955 Russell-Einstein Manifesto would not have achieved lasting influence, had it not given birth to the Pugwash Conferences on Science and World Affairs, to which Jo Rotblat devoted his life. If the lonely voice of Andrei Sakharov, advocating convergence between freedom and justice, emphasizing respect for human rights and international law, had been adequately upheld by alert civil society organizations, East and West, we would clearly be all better off nowadays. Scientific societies and professional associations have much to contribute for the success of our ambitious European project: replacement of war by law, emergence of a culture of fair-play and reciprocity. There is plenty of room and work for every European scientist, in order to ensure that our national and continental institutions become as alert and vibrant as required to face a most challenging agenda.* (1)

A preamble and some background

In 1988, the European Parliament took a very original initiative. That came thus the year before 1989, which saw the death of the Russian physicist Andrei Sakharov and, later on, the fall of the Berlin Wall. The initiative consisted in the setting-up of an annual Sakharov Prize for Freedom of Thought, a high distinction whose aim is (I quote) : *in the spirit of Andrei Sakharov … to honour individuals or organizations who have devoted themselves to the defense of human rights and fundamental freedoms and to the struggle against oppression and injustice.*

This initiative was a remarkable ethical and cultural innovation, taken by a young institution : the European Parliament, in recognition for a far-sighted and brave scientist, in spite of the fact that Sakharov was not himself a citizen from the smaller Europe.

As such, this historical fact provides an outstanding example of interplay between one individual (our colleague Andrei Sakharov) and a major institution (the European Parliament).

After this reminder of a symbolic event, some more background.

During the last twelve years, ever since I became involved in various newly created ethics committees of scientific institutions, the duality and complementarity between individual and collective responsibilities has appeared to me as a key issue for reflection.

Skipping some earlier steps, let me mention that at the first ESOF meeting, two years ago in Stockholm, a session on *the social responsibilities of scientific institutions* was organized by Kathinka Evers, John Finney and Lydie Koch-Miramond, head of the Euroscience working group on ethics in science.

In addition, let me draw attention to an important paper (2) of the Swiss chemist, Nobel laureate, Richard Ernst (ETH, Zurich). Entitled *The responsibility of scientists, a European View,* this article offers useful insights on ways of enlarging and improving the scope and relevance of our universities.

I will now address three main issues :

1) protection of whistleblowers,
2) ethical, legal, social and cultural issues in science and technology,
3) awareness of realities, consciousness of responsibilities.

Protection of whistleblowers

During their lifetimes, the mathematician-philosopher Bertrand Russell and the physicist Albert Einstein gave several examples of whistleblowing on issues of war and peace.

In 1955, the Russell-Einstein Manifesto, alerting to the apocalyptic danger of a thermonuclear war, and calling for the replacement of war by law, would not have achieved lasting influence, had it not given birth to the Pugwash Conferences on Science and World Affairs, a quite original international NGO, to which Joseph Rotblat (British physicist of Polish origin) devoted his life. In contrast, Andrei Sakharov remained for twenty years a sort of *vox clamans in deserto,* within the Soviet Union. Part of his inspiration had come from readings of Einstein, Schweitzer, Szilard, Pauling and Bohr. In his country, Sakharov was not adequately protected by the Soviet Academy of Sciences, and he was even subjected to harsh attacks and slander from groups of influential scientists and artists.

Born in 1997, Euroscience did not yet exist !

And nowadays we have ground for hope that similar historical failures will no longer happen on our continent. *Whistleblowing should become part of the scientist's ethos,* said Rotblat in his Nobel Peace Lecture (1995), a sentence greeted with vigorous applause in Oslo.

Ethics of science and technology

Along the last thirty years, collective ethical reflection about science and technology issues has been getting wider emphasis, with the merging of three streams :

- war and peace (replacement of war by law), already mentioned,
- sustainable development (health of the planet, care for future generations),
- and bioethics, of course.

During the last decade, attention has been enlarged to ELSA studies, namely ethical, legal and social aspects of science and technology. And nowadays I am suggesting to further extend the scope to ELSCA studies, i.e. ethical, legal, social and cultural aspects of science and technology. Why this extension ?

For two reasons :

- in Europe, we need to invent a common cultural core of values, references and practices, while maintaining the rich texture of our cultural diversity ;
- moreover, we need to elaborate a culture of innovation, not only techno-scientific innovation, but also democratic innovation at regional, national and European levels, including practices of participatory democracy (such as citizens' conferences, public debates) allowing for adequate social construction of technologies.

In this regard, UNESCO (whose seat is in Paris) may play a helpful role, in partnership with the National Commissions for Unesco, within the various European countries and worldwide.

Awareness of the realities about the formidable march of technology, and consciousness of our responsibilities

If one extrapolates various present trends in economy and ecology, in demography, in science and technology, there are many causes for deep concerns.

Already in 1961, Eisenhower's swansong as retiring US president drew attention to the grave danger, to be taken seriously, due to the rise of a military-industrial complex. Today we are faced with the ominous reality of global domination by a huge military-industrial-scientific complex.

In a recent book (3), entitled *L'engrenage de la technique* (the gearing of technology), the French scientist André Lebeau has this sentence : *Technology is the weapon of the rich, demography that of the poor*. (4)

A few weeks ago, Sir Martin Rees, president of The Royal Society, noted *the ever-widening gap between what science allows, and what we should actually do*.

With nanotechnologies, we are reaching the bottom (of relevant length scales) and we touch the foundations (of everything that deserves respect in life forms, including human mind and human dignity). Meanwhile, we are shifting from the vision of an ocean of bounty with a few reefs to avoid, to the vision of an ocean of peril with a few safe havens and dream islands.

Against this backdrop, encouraging long-term processes of moral revaluations may be observed, such as : abolition of slavery, liberation of women, decolonisation, European construction, ethical movement in the sciences. The common feature within these processes is a rise in consciousness, leading from domination to reciprocity and respect. Reciprocity between alive human beings. Respect for past and future generations, for life, for nature.

Thus two different types of dynamics are present, and their interactions may take form of conjunction or opposition: technological-unfolding versus consciousness-raising.

Indeed there is no supreme technological determinism. And scientific institutions should promote resistance to conformity and fatalism. *The only thing that could be fatal to mankind, would be to believe in fatality* (Martin Buber).

The reality to be faced is that maximization of the rate of acquisition of new knowledge is, all too often, escorted by maximal rate of irreversible loss of traditional knowledge (e.g. linguistic diversity). Because economic growth and techno-scientific progress tend to be processes of destructive creation.

Conclusions

Let me end with one quotation, one remark and one hope.

The quotation is a sentence from Andrei Sakharov : *Every true scientist should undoubtedly muster sufficient courage and integrity to resist the temptation and the habit of conformity*.

The remark is about a strong, firm link between science and ethics, that is between truth and reciprocity. Everyone can admit truth, without feeling deceived. Anyone can accept reciprocity, without feeling cheated.

And my concluding hope is that our scientific institutions will actively contribute to the construction of a European space of good faith and good will, in a spirit of fair-play between disciplines, regions, cultures, genders and generations.

References

1. This abstract was first published in Euroscience News 35 (Summer 2006, page 6)) as a preview for the session on *The scientists' Europe : societies and professional associations – what are they up to ?* held during ESOF2006 (Munich, 15-19 July) where this talk was presented.
2. Ernst, R. (2003) The Responsibility of Scientists, a European View, *Angew. Chem. Int. Ed.* **42** : 4434-4439.
3. Lebeau, A. (2005) *L'engrenage de la technique. Essai sur une menace planétaire*. Gallimard, Paris.
4. The history of mankind is too complex, and too open, to be encapsulated within a single sentence. Nevertheless, Lebeau's statement offers a strikingly lucid insight into the inner dynamics of our global ticking bomb, notably during the last two centuries.