

## **What Science, What Europe?**

Europe's foremost philosopher of science offers a devastating indictment of contemporary European science.

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As a philosopher, I can imagine no better keynote to strike than: what are you doing, what are you trying to do? Organizing a discussion on the European Research policy matters! It matters because it is both urgently needed and difficult.

How to read the seventh framework programme? The first point to note is that this programme does not really invite political debate. Indeed we do not dealing with choices that could be discussed but with what presents itself as the simple enactment of the "Lisbon agenda", fully endorsing its slogans, such as "knowledge society", "economy of knowledge", "knowledge and its exploitation" as "the key for economic growth" and "the competitiveness of enterprises." All this, leading, as we should trust, to employment, while maintaining and strengthening the so-called "European Model", and also providing an improvement of welfare and well-being, quality of life, health and the environment; for such improvements rely, as history has shown, on the progress of knowledge and its many applications.

In other words, what we are dealing with is an assemblage of what, in French, we call "*mots d'ordre*". *Mots d'ordre* are not made to induce thinking and debating but to produce agreement on consensual perception, putting on the defensive those who feel constrained to a "yes, but" Yes to employment, yes to the European model, yes to all those improvements, and certainly yes to the progress of knowledge. But The "but" is coming too late, after so many agreements, and it will be easy to fall into the trap, instead of addressing the means while ratifying the perceived consensual goals. It is the very functioning and aim of *mots d'ordre* to capture and inhibit the capacity to think, that is also the capacity to recall or keep in mind that there exists a world that demands thinking, that will not submit to wishful thinking.

What this conference is trying to do is thus as difficult as it is necessary both to resist the trap and to expose it as what it is. Otherwise, the danger is that the opposition against something everybody should agree upon will appear as sheer ideology. But whatever the difficulty, I would insist that this should be done. Indeed, the political point is not only what European money should support, which kind of scientific research it should privilege. It is also what kind of role is assigned to scientists and scientific research for problems that are first of all society problems, such as welfare and well-being, quality of life, health and the environment. And it is certainly what kind of scientists we need in order for this role, whatever it may be, and not to be diverted.

To give just an example, animal welfare has now entered European politics. This is not a result of the progress of scientific knowledge. On the contrary, many scientists have seen this concern as a manifestation of the irrational sensitivity of public opinion, and they demanded objective demonstration that animals such as cows, pigs or hens are able to

suffer. But as soon as there is money, even skeptical scientists become interested. One of the propositions stemming from the researchers of the French INRA (Institut National de la Recherche Agronomique) was indeed an achievement. If farm animals indeed do suffer, it is because they are stressed by the kind of quality of life imposed on them. Thus we should obtain less stressed animals, that is, select them in order to produce animals who would accept without stress the kind of life imposed on them. Selection, as usual, is the answer, an answer the great rational advantage of which is that it will not endanger the competitiveness of meat or milk production while answering the public concern.

Animals should thus be modified in such a way that they biologically fulfill not only the production criteria but also the competitiveness criteria that define as loss any money devoted to their well-being. They should only be defined as meat or milk production devices.

Such an answer to public concern does not identify science as intrinsically blind, calculating, and reductionist; because such an identification would exclude as scientists those ethologists concerned over the animals capacity to feel and suffer. It does reveal, however, that those INRA researchers using European money made available because of public pressure, were quite indifferent to the reasons why so many people had spent their time protesting and fighting against what they considered as a shame upon humanity. The way those researchers provided the answer would probably have cost them their very reputation if the public had their right to evaluate how the scientists met their concern. The researchers would have been found guilty on two counts: that they both felt free to propose such a research project to alleviate animal suffering, and also that they had nothing but contempt for the reason the question was posed.

What is striking in the FP7 is the very clear signal sent to researchers that whatever the babble around sustainable development or public participation, they do not need to listen and think too much. They may go on living with the fairy dreams that if what they propose may be of interest for the industry and its obsession with competitiveness, they are still addressing the challenges of the future in the best rational way. They may trust that they will be protected against the so-called irrationality of those who, as it has already been the case with the GMOs (genetically modified organisms), refuse to accept and say "yes" to the laws of the free market as the only road to progress. They may even feel that if scientists leave Europe because some public pressure complicate their collaboration with their industrial partners, that would slow down or put into question that which should really be motivating innovation and the transition to a knowledge economy.

Some sociologists tell us that the mode of production of science has been transformed from what they call an academically centred mode 1 that values scientific autonomy and peer evaluation, to a flexible mode 2 that deals with uncertainty, tying multiple transdisciplinary and participatory links, contributing to economical and social questions and adopting new norms of adaptability, accountability, openness and responsibility.

Today such a mode 2 production is but an apolitical dream-image, and a very tranquillizing and useful one. It is an image much beloved by European authorities, just like the "knowledge society", because it allows them to have the cake and eat it too. They are free to produce a list of problems that "flexible" scientists should be able to contribute to and avoid asking hard questions about the relevance and reliability of their answer, about how to enforce the so-called norms defining an accountable, open and responsible scientist; as that is said to be part of the contemporary mode 2 production of science.

It is very striking from this point of view that intellectual property rights are not mentioned once in the European document, nor is the matter of conflicts of interests or the freedom of scientists under private contract to play the role of whistleblower. There is no mention either of the need for the training of researchers to include relevant means of inducing and empowering sensitivity or a sense of responsibility in the face of public concern. Indeed the whole message is framed to reinforce the view that today, more than ever, lay persons must be kept at distance, must be kept in a position of trust and belief that this new science is the answer to their problems, that mobilisation in the economic war for competitiveness is the key to everything else. The public is asked to say "yes" to a Brave New World where all European stakeholders, as they are mobilised in this war, will contribute to the improvement of welfare and well-being, quality of life, health and the environment.

I am not sure at all that the kind of flexible scientists required by the new economy of knowledge will be able to fulfill their assigned role. I am personally impressed by the sadness and resignation of a great number of researchers I meet. When I tell them of what interests me in scientific practices, that are indeed specialized, but may be living, challenging and intense, they tell me it is a thing of the past.

Despairing scientists feel that what is coming under the charming features of the mode 2 production of science is a new mode of mobilization, which is a new mode of direct appropriation and evaluation of knowledge. They rightly feel that the so-called economy of knowledge asks for a new type of scientist who will accept being flexible, in the same way that workers today are asked to be flexible. They understand that they are told that scientific knowledge has become a much too serious business for scientists to keep what appears as outdated privileges; that they are told they must accept the common fate, that competitiveness is the general rule, even if it means relaxing the rules of sharing and collectively verifying knowledge in the scientific community when those rules impede the competition for and accumulation of intellectual property rights.

I think, however, that the great political challenge is to avoid any nostalgia for the famous mode 1 production, the Golden Age so many researchers are regretting. Indeed the so-called mode 1 was forged around 1870, a time characterized by intense relations with industrial production and coincided with the promotion of a new type of scientist, the specialized professionals, thinking away everything that does not contribute to the progress of their discipline and identifying the progress of their discipline with the only key to human and social progress. This is the "golden-eggs-hen-which-should-not-be-killed" model: society should feed research and respect its autonomy in exchange for the

fruitful applications that only a disinterested quest for knowledge will produce. This model was an apolitical model, since the golden eggs of science, as incubated by industry, were defined as serving humanity progress and well-being, transcending political conflicts. But those kinds of eggs are probably not what we need today in relation to what is now called sustainable development. What is such a development is still an unknown. What we know, however, is that, if it is not to remain sheer wishful thinking, and if science is to be able to contribute at all to what it demands, we need thinking scientists, not believers in the direct link between progress of knowledge and progress of humanity. Development, as linked to the mode 1 golden eggs, is unsustainable development.

We should thus be able to listen and amplify scientists' complaints but succeed in disentangling them from nostalgia, with the aim of inducing the scientists' appetites and imaginations for what is so very interesting in the present. In order to do so, I would propose to take seriously the idea of a knowledge society, but turn into examples of such a society the story of the GMO protest, the growing unrest and opposition of NGOs against intellectual property rights, the questioning of pesticides and the beginning concerns about nanotechnologies.

In all those cases, protests gain some general public approbation, however vague, as if, at last, good questions were produced. But what is politically relevant is the effective learning process that enables concerned people to penetrate questions they were not meant to approach. And what is remarkable is a very slow, very timid recognition by some scientists, that maybe the questions those outsiders have learned to ask are not so irrational, after all.

It seems to me that politics means constructing a position the first quality of which is not some adequacy to matter of facts, but the production of the sense of possibility and the appetite required to transform matters of fact. It may be interesting not to denounce the *mot d'ordre*, order-word, which Europe has to become a knowledge society, but to affirm as obvious that the true measure of this becoming is the ability of all the concerned people to produce and assemble knowledge as it is relevant for the issue which concerns them. And to affirm as obvious as well that this dynamics, which is the very challenge of democracy, is also the chance for scientists to escape flexible enslavement, and enter into new relations with people who learn to become as interested as they are themselves, in the reliability and relevance of their contributions. Such affirmations are a very small half of the truth indeed, but what matters is that it is the interesting, appetizing half, and that arising new appetites is the only way I can think of to escape the trap of *mots d'ordre*.

This article is an edited version of her keynote speech to the conference, What Science - What Europe, organized by the Greens in the European Parliament, 2 -3 May 2005, in order to launch a debate on FP7. Prof. Stengers is a signatory to the ISP Statement to the European Commission on FP7.