TWO DIFFERENT APPROACHES TO GENE TECHNOLOGY IN ANIMALS

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Gene technology on animals has increased enormously in Sweden during the 1990s. Most of it has to do with transgenic laboratory animals. Before this increase began, there was an official investigation of potential ethical problems of animal biotechnology, in which it was said: ‘We have the possibility to set the limits "from the beginning".’ And it also tried to do it.

This investigation was set up in 1989, when the Swedish government appointed a Principal Administrative Officer of the Ministry of Agriculture to make a so-called one-man investigation about gene technology used on animals and plants. A white paper from this investigation was published in February 1990 with the title Genteknik – växter och djur (Gene technology–plants and animals). In the following, this white paper is called ‘the first report’.

However, in March 1990, the same government decided to set up a new investigation, which was called ‘The Commission on Gene Technology’. This was a big, so-called parliamentary commission with several politicians and experts in it and led by a retired Vice-Chancellor of a prestigious university in Sweden. This commission publicized its white paper in September 1992 with the title Genteknik – en utmaning (Gene technology–a challenge). In the following, this white paper is called ‘the second report’.

The first investigation was commissioned by the Minister of Agriculture and the second by the Minister of Justice. It is unclear whether there had been any contact between the ministers about the issue. The existence of the first report is briefly mentioned in the second, but there are no real comments on it.

The Commission had a wider objective than the one-man investigation. However, the Commission decided in an early stage not to deal with gene technology on human beings, with the motivation that this subject had
already been treated by an earlier investigation that had published a white paper in 1984. The fact that a white paper on gene technology on animals and plants had been published much later, namely ‘the first report’, did not prevent the Commission from dealing with the report. Whether this is a deliberate shift of policy from the government is unclear. One could easily interpret the creating of the Commission as a rejection of the first report, but knowing about the long procedures before a Commission is set up I would hardly thing that this is a probable explanation. Rather, the cause seems to have been ignorance about the investigation that was already done. Also, the Principal Administrative Officer who made the first investigation was appointed as one of the experts on the Commission.

The first report stated several restriction, while the second report was rather liberal towards the use of gene technology. Some examples of considerations and suggestions in the first report are these:

- Gene technology used on animals is discussed mainly from an ethical point of view. In contrast, gene technology used on plants and micro organisms is discussed from the perspective of potential risks. The reason for this distinction of perspectives is that animals have moral standing, while plants and micro organisms with these things have not.

- Generally, it is said that a Swedish prohibition or moratorium for research in gene technology would be both unwise and unrealistic. It would affect Sweden very negatively.

- Animal experiments are examined by ethics committees in Sweden. The first report points out that the considerations of these committees are limited to aspects concerning the treatment of the animals and the question whether the experiment has to be performed on animals. The ethics committees do not pay any attention to possible consequences of the research, for example if the gene technology research will result in products that are not desirable for ethical reasons. The first report says that research with gene technology on animals should be reported and examined from an ‘extended ethical point of view’. This should be done
by a suggested Gene Technology Advisory Board. According to the report:

– Research with gene technology on food-producing animals with the goal of increasing the growth or production shall always be disapproved.

– Research with gene technology on food-producing animals or pets shall always be disapproved if a gene from a different species, including human beings, is brought into the animal.

– When animals modified with gene technology are ready to be let out in the environment or in production, the advisory ethical decisions will be insufficient. The existing animal ethics committees decide to approve or disapprove single applications (or protocols) concerning experiments on animals. However, this decision is only an advice to the scientist. He doesn’t have to follow the decision. He can perform an experiment even if the application has been disapproved. What is needed however is a binding regulation.

The considerations of the second report are more vague and metaphysical. Two questions occur time and again:

(1) Does nature have an intrinsic value and, if so, in what sense?
(2) Do humans have the right to alter nature and, if so, is there a limit to this right?

The second report presents a value basis with the following ingredients:

– The existence of an intrinsic value in nature.

– The Reverence for life principle (taken from Albert Schweitzer, of course).

– The doctrine of environmental protection, which means that one should ‘prevent serious and irreversible disturbances in the fundamental functions of natural ecosystems’.
– A Kantian view on nonhuman nature, including animals.

– Animal well-being shall be the main basis for the assessment of gene technology used on animals.

Some more practical suggestions in the second report were the following:

– It shall be permitted that plants, animals and micro organisms be altered for ‘important purposes’.

– It shall be permitted that patents on living matter, including animals, be granted.

– It shall be permitted that all kinds of transgenic animals be constructed.

– It shall be permitted that chimeric animals be constructed for research purposes.

– No general prohibitions should be included in the law.

Clearly, there is an inconsistency both between the value basis and the practical suggestions and internally in the value basis itself. The first report draws a line between animals on one side and nature in general on the other. In this report, animals are regarded as individuals. In contrast, the second report is more ‘holistic’ and regards nature as a whole. The second report does not make any distinction between animals and other natural objects as potential possessors of moral standing. This confusion entails that the suggestions of this report are either vague or inconsistent with some items in the chosen value basis. There are also details in some statements of the experts in the Commission that simply clash with suggestions in the first report. One example is when the theological expert of the Commission says that he can see no ethical problems in connection with transferring human genes into animals used for food.

One can ask how it can be that two official investigations, set up by the same Swedish government, within the period of a couple of years could reach such deviating conclusions. And one can ask why this fact has not
been regarded and discussed. Why was the first report suddenly forgotten, as soon as the Commission had been set up? Why did the different ministers of the government and their staff not communicate with each other – there are no signs of such a communication?

I have no definite answers to these questions, but there are some possible explanations: The commitment of the persons involved varied and was also different in direction. The Minister of Agriculture was the one who had forced through the bill of the internationally well-known animal protection law in 1988. The Principal Administrative Officer, who made the first investigation, was a close staff member who had done much of the preparatory work for this law. The Ministry of Justice had no commitment to animal welfare. They probably regarded it necessary to set up a commission for harmonizing the Swedish law on gene technology with the European Union, in which Sweden some years later became a member state.

The first report is not hostile to science, but it draws some limits for the treatment of animals in the gene technology context. The second report gives power to the scientific community to form their own practices. The practical and legal consequences in the Swedish society have been more in accordance with the second report than with the first one. However, there were some parliamentary decisions made that from the beginning upset the scientific community. One of these decisions was the forming of a new agency for gene technology, which in fact only constituted a reorganization of an agency that had been existing since 1980. Also, the lamentations from scientists soon abated.

One cannot say that there is any difference in the treatment of animal ethics in Sweden as a consequence of the first or the second report. However, the quantity of experiments with animals modified by gene technology has increased considerably.³

Notes

**Biography**

Birgitta Forsman holds a research position with the Department of Medical Ethics at the University of Lund, Sweden. She has published extensively in the fields of animal ethics and medical ethics.