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Ethics and animal production

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ABSTRACT

Recent advances in the genetic manipulation of animals have raised some familiar and some less familiar ethical issues. The obligation to safeguard the welfare of animals must be extended to include the production of transgenic animals, to ensure that the wellbeing of such "products" takes precedence over profitability. Human welfare must also be safeguarded especially in relation to the equitable distribution of the benefits from genetic engineering and the protection of the environment. The change in the relationship between human and non-human animals, exemplified in the patenting of genetically modified animals, has serious implications for the integrity of animal science.

Keywords Ethics; animal rights; animal welfare; equity; ecology; philosophy of science.

INTRODUCTION

Let me begin with a declaration of the assumptions with which this paper begins. The first assumption is that it is ethically acceptable to treat animals in a purely functional manner with a view to fulfilling human purposes. Animals may be used as means to our ends. This may appear self-evident to an Animal Production Society, but it is an assumption which is now being fundamentally challenged by a literature devoted to the notion of animal 'rights' (Regan, 1983; Rollin, 1981). I do not propose to enter into the details of this debate in this paper, but will simply state the view that, although we can act in moral praiseworthy or blameworthy ways toward animals, animals are not the possessors of rights in any meaningful way. This view is based on the conviction that a language of reciprocal rights and duties can be applied only to humans. Moral agency (as the philosopher Immanuel Kant observed) depends on the capacity to act out of a sense of duty, and this in turn depends on the capacity to perceive the applicability of universal moral principles. We have no evidence that any animals other than humans have such a capacity.

A second assumption of this paper - and again this might be challenged - is that the recent advances in molecular biology which have made possible the numerous genetic manipulations described in this session, represent a dramatic increase in the speed of change

now possible in animal breeding, but are not in principle different from what has always been attempted by the slower animal production methods of the past. In particular, phrases like "playing God" or "cracking the secrets of life" (so beloved of journalists) are quite inaccurate descriptions of what is happening. Humans, from the earliest examples of agriculture or the domestication of animals, have been manipulators and modifiers of the living environment around them. Certainly, the biotechnology now available to us makes such manipulations much more immediately available and much greater in their effects - but these are differences in degree, not in kind. We are no more "gods" now than we were when Adam, expelled from Eden was required to till the soil by the sweat of his brow.

If such are my starting points for this paper, have I left any room for ethical uncertainty in these new developments in animal production? I believe that important issues do remain. One set of issues relates to animal welfare; a second set relates to human welfare; and finally there are broader - and perhaps more metaphysical issues - related to the interaction between humans and animals.

ANIMAL WELFARE

It is a widely accepted moral assumption that, we have at least one fundamental duty toward animals - the

avoidance of unnecessary pain and distress. We find this assumption enshrined in animal welfare legislation and in governmental control of animal research and farming practices. The dramatic increase in technological sophistication in animal production presents fresh problems for an ethic concerned with animal welfare. The kind of issues raised by methods of intensive factory farming re-appear in a new form when we consider the development of the "super-pig" or of other animals genetically manipulated to maximise productivity. Of course, one can be a naive sentimentalist with a pastoral image of nature which owes more to Beatrix Potter than to farming reality. But an opposite extreme is one which makes animals into meat machines without any regard to their nature as living creatures. The kind of sensitivity toward natural habitat which has transformed policies in zoos needs to be evident in animal production also.

Clearly animal welfare is much broader than simply the avoidance of infliction of physical pain (Rollin, 1989). It must include the avoidance of persistent discomfort and distress, both of which are easily observable in higher animals. Thus we are left with the first moral questions posed by this paper: Will welfare factors be kept at all in the equation when the dramatic profitability of genetically modified animals becomes evident? Who will ensure that such factors are considered when genetically modified or transgenic animals are being developed by animal scientists? Should the scientific community itself be developing a code of practice?

HUMAN WELFARE

A second set of issues appears when we consider possible effects of biotechnology on human life. Biotechnology is "big business", and few can doubt that the pace of new developments will be maintained or accelerated by commercial investment on a multinational scale. We shall have certainly rapid change, but will we have "progress"? Progress, in a moral sense, can be described in terms of both an increase in overall human welfare and an equitable distribution of the benefits gained. There are reasons to doubt whether either of these will be the outcome of a commercially driven biotechnological revolution. For example, will the health of populations be improved by an increas-

ingly genetically engineered animal production system? That is a possibility, certainly, as current research into reducing the fat content of meat demonstrates. Consumer demand however may well drive the research in different directions. Ultimately it is profit, not human wellbeing, which will steer biotechnology. Even if human welfare is promoted, will it be equitably distributed? As the World Council of Churches has pointed out in its recent report on biotechnology (World Council Churches, 1989), improvements in agriculture and animal farming, which might have been thought to improve the prospects of the poorest nations, tend instead to increase the profits of the richer, since they have the capacity to exploit them fully. Thus, scientific advance actually increases poverty.

Such moral issues are not, of course, specific to the application of biotechnology to animal production. They are problems of social injustice endemic to the modern world. But no science, is morally neutral. "Pure" research and its applications in the real world are totally interdependent in our age. It follows that all scientists have an opportunity (perhaps an obligation) to consider the social implications of their work. Is it too fanciful to suggest that animal scientists may hold within their grasp a chance to adopt a sense of social responsibility parallel to that of their colleagues in nuclear physics, a chance to avert catastrophe and promote human wellbeing? Those who have the scientific knowledge are the best qualified of all to ask (in an international arena) to what ends the biotechnological advance will be devoted.

HUMAN/NON-HUMAN INTERACTION

The final set of issues concerns our rapidly evolving relationship to other species consequent on the sudden increase in our ability to modify and control their development. This is in part an ecological concern - that we are about to introduce a series of rapid changes in the animal kingdom with no real understanding of possible effects on the environment. In addition, however, there is a change in attitude toward other living creatures emerging from our increased power over them. This is well illustrated by the debate in the USA concerning the patenting of genetically engineered living organisms. During the 1980's the situation changed in the interpretation of US Patent Law from a prohibition against the

patenting of living organisms to the granting of a patent first for a genetically modified micro-organism useful in dispersing oil spills, then for a polyploid oyster and finally for a mouse genetically modified to make it susceptible to carcinogens (the Harvard 'onco-mouse'). The basis for this change was a ruling by the US Supreme Court in the Chakrabarty case which stated that a distinction was to be drawn, not between living and inanimate things, but between products of nature and "anything under the sun that is made by man" (US Congress, 1989). (It is notable that the European Patent Office has rejected an application for a patent on the "onco-mouse" on the grounds that the European Patent Convention (1973) rules out all patents on plant and animal varieties, whether produced by normal breeding methods or by genetic manipulation.)

To what extent is this extension of patent law to nonhuman living organisms morally significant? An answer to this question must depend on some overall philosophy, whether based on religion or not, which regards non-human life as having its own integrity, independent of human ingenuity. An argument of this type was put forward by the U.S. National Council of Churches, in association with other bodies, when they deplored the patenting of animal life forms because: "It portends fundamental changes in the public's perception of and attitude towards animals, which would be regarded as human creations, inventions and commodities, rather than as God's creation and subjects of nature" (quoted in U.S. Congress, 1989). It may be that hesitations of this type depend on a religious belief in a creator God, who is the originator of a particular natural order. Yet, from a humanistic perspective also, one may feel some unease at describing any living organism, however produced, as a human "invention". Is there not some supreme arrogance in this, an assertion of human supremacy far removed from the more respectful attitude of modern science to that which is being investigated and manipulated? (Kass, 1985). It is a feature of modern science as it has developed over the past few decades that, as its ability to discover increases, there has been an increased rather than a decreased sense of uncertainty, even of mystery. The naive scientism of the past is just poor science.

Perhaps, then, the final ethical question concerns the relationship between science and its technological application. Technology is focussed on that

which can be done. It emphasises human achievement and is measured by its practical results. But science is concerned with that which is not yet fully understood, with the probable and with the falsifiable, with shifting paradigms and imaginative hypotheses. It is important for animal science, as for all other science, that the "technological imperative" is kept within bounds. Non-human animals - genetically engineered or not - are our discoveries not our inventions. And it will be a better science which holds on to the wisdom of Socrates - a wisdom which knows that eventually one is wise in one's admission of ignorance.

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