

## GENETIC ENGINEERING AND BIOETHICS

Genetic engineering had been with us for a very long time. Scientists over many years have developed novel methods of breeding that has enhanced the quality and economic value of both plants and animals. Plant and animal husbandry have markedly increased the amount of food and fibre farmers produce to sustain an increasing world population, as well as contributing to its health and longevity. Recent developments in genetic engineering and gene manipulation have added to these successes, but they have also brought us to a new level of concern. This technology has advanced to the point where it is now possible to change not only the biological world in which we live, but also to bring about physically changes to ourselves as well. This has raised a myriad of new ethical and theological issues that must be dealt with. In cooperation with the College of Preachers and the Anglican Theological Review, Frank Griswold, our Presiding Bishop and Primate of the Episcopal Church, sponsored a consultation on Genetic Engineering and Bioethics, June 8-9 in Washington, D.C. The Bishop brought us together to explore the moral and theological questions being raised by Episcopalians and other religious groups troubled by these activities. As a member of the Steering Committee for the Working Group on Science, Technology, & Faith, I was able to participate in these deliberations. Our attendees represented a broad spectrum of interests among Episcopalians, who came together to examine and discuss the current scientific advances in genetic manipulation. We are concerned with their implications on our understanding of the human nature in Christ and the relationship of this work to the Natural order and God as creator and fulfiller of all things. Holy Scripture tells us God created us in his image so that together we can make more use of and enhance his creation, by using our human capacity to explore and to question why the world is the way it is. We have developed science [‘knowledge’] as a means of understanding how the natural world works. Such knowledge has no ethical values attached to it. It is only when this work is turned into useful technology that it becomes subject to economic, cultural, and political pressure that the benefits and hazards must be weighed and ethical problems faced. Scientists, theologians, business leaders and politicians need to work together because they all have a moral obligation to spell out and evaluate what the implications of exploiting new discoveries may be. Because we have failed to pool our intellectual assets in a joint partnership society is over reacting with good cause by trying to prevent new scientific work, on the grounds that scientists are ‘playing God’. If this was taken seriously in earlier times, and this attitude would have prevented much of the agricultural and biomedical progress we enjoy today, and our dreamers would never have learned to fly. We are not bound to accept uncritically whatever gifts science and technology offer; we must, however, through necessity make critical choices. In a democratic society, people are entitled to live their own lives according to how they evaluate the risks and benefits to themselves, and make their own choices. But for humanity as a whole, when indulging in a broad range of scientific explorations, such evaluation is an ethical question to be face objectively and seriously by society. Self-interest must not stand in the way of making the world a better place for all, including future generations that will be affected by what we do today. What is known cannot be unknown, and this places a moral responsibility squarely on the shoulders of our scientific and business communities, ecumenical councils and lawmakers. The public is right to be concerned about the potential and novel hazards of modern food production and medical technology on human life. There is a need to finds ways of facilitating public access of credible scientific information and in communicating in responsible form both the significance and limitations of scientific research. Too much information is tainted by its deliberate use by those on both sides of the question, in what can be seen as little more than a propaganda war. As a case in point, the current debate on the labelling of genetically altered food. If labelling all foods produced using gene modification techniques, as many argue, turns out to be a necessary step in regaining trust on both sides of that issue, it would be a small price to pay. As some delegates to a recent Biovision conference pointed out, the need for ‘honest brokers’ is of paramount importance. [see Nature 398, 369, 1999] The Presiding Bishop’s hope is that together we may begin to formulate and develop those questions which the Episcopal Church, along with other

religious groups, must address at these scientific advances continue: At what point do science and technology pass over the line from healing human beings to radically changing them? Does the fact that something can be done mean that it ought to be done? What are the responsibilities and the role of religious institutions in making legal decisions about genetic manipulation and other medical and scientific advances? What might be the implications of such scientific and medical advances in medicine for pastoral care? What are the implications of such advances for traditional Christian theology and morality, e.g., the doctrine of creation, Christology, and the nature of the human person? In a letter [circa, 1871] Thomas H. Huxley, the famous biologist and educator wrote a letter to Charles Kingsley, the author and Evangelical clergyman, in which he pointed to the need for humility in all our endeavours, which continues to hold true for us today as it did then.

*"Science seems to me to teach in the highest and strongest manner the great truth, which is embodied in the Christian conception of entire surrender to the will of God. Sit down before the fact as a little child, be prepared to give up every preconceived notion, follow humbly wherever and whatever abysses Nature leads, or you will learn nothing. I have only begun to learn content and peace of mind since I resolved at all risks to do this."*

From *DNA to Dean* Rev. Dr. Arthur Peacocke, S.O.Sc., p212-13

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