



VNIVERSITAT DE VALÈNCIA

Investidura com a "Honoris Causa" per
la Universitat de València a Robert
Geoffrey Edwards

Discurs d'acceptació

València, 11 de març de 1994

On behalf of Dr and myself it is an honour and a pleasure to come to Valencia today to receive the Doctor Honoris Causa. We are both deeply grateful to the University for their award of the highest accolade in science, and to our sponsors who have worked on our behalf to achieve this wonderful result. For us, this recognition by our colleagues in this University of our work is among the finest of tributes to our careers in science. To be recognised in this way is always very special, for those who judge us are themselves the keenest of our critics and admirers. We have thus been honoured by those who know most about us, and there can be no finer form of recognition.

It is also an especial pleasure to come to such a distinguished investiture, especially where so many young graduates have now entered on their chosen profession. Dr and I wish our young colleagues sitting before us all success in their careers, confident that they will always remember with deep affection their years of training in this University. The opportunities for their work are immense in the modern world, far greater than ever before, and we have no doubt that they will contribute to the values of their own and to a wider society.

Such a lovely occasion as this leads Dr and I to remember our beginnings, as we graduated years ago. We have seen many changes in our own profession of science, which has grown at an immense rate and now offers untold benefits and challenges to society. These striking changes include a much greater involvement in the ethical and moral values of our nations.

In today's society, scientists have to deal not only with their laboratory research, but also with the close attention of society to the ethical and other implications of their research. In many ways, physics taught us this lesson in the debates over the H bomb, especially those occurring between Oppenheimer and Teller. The moral problems they faced then still faces physicists today, as nations develop their own concepts of national defense. Perhaps those early debates which began among scientists helped to crystallise the attitudes of politicians and others to this dreadful problem facing mankind, and so indirectly contributed to the fortunate absence of any atomic warfare since then.

Biologists face a different form of ethics. Their research is often much more personal, especially when it enters medicine. New advances in fundamental knowledge open horizons that impact directly into the most intimate and personal details of life, and may hardly have been debated previously, except in fiction. Some of these new applications progress slowly, so that a series of small advances can be easily absorbed into the framework of clinical practice and into professional and national ethics. The introduction of many drugs and other pharmaceutical agents thus follows well-established regulatory practices, and so seldom raises under alarm unless of course, the trials are inadequate or mistakes are made.

In my own field, the opposite situation arose. Some years ago, nobody seemed to expect that human babies would be conceived in a culture dish. This lack of awareness was remarkable, since many scientists were engaged in this work in animals. Nevertheless, a series of advances in achieving fertilization in vitro, the first human embryos in vitro, the initial steps in initiating the control of sex ratios, and the first birth came as a series of scientific advances associated with ethical arguments on a

national scale. There had to be public discussion on these points, since such explosive changes in the conception of children were obviously of immense social concern. Yet the complete unexpectedness of the scientific discoveries, the absence of any national regulatory bodies, and the previous conditioning of society by *Brave New World* and other books led to immense social pressures on Patrick Steptoe and myself, just as they did to those early physicists, and as they do today to the geneticists. Indeed, the ethical debates over work on human conception in vitro have never subsided for we have all witnessed the endless series of national and international debates on matters such as surrogate mothers, embryo donation, cloning, mothers of 50-60 years of age and the use of fetal tissue to repair the organs of other fetuses or adults. These topics are seldom out of the news today.

Scientists today must therefore accept that his or her work can have immense consequences in society. They face a double duty, to conduct their research with imagination, dedication and responsibility, and to relate their work to the ethical standards of their society. This ethical duty is not easy to deal with and it takes an enormous amount of time.

Yet it must be done even for the sake of a freedom to carry out research in science itself. And if this ethical duty is practised properly, then it is almost certain that a sympathetic response will be obtained from those politicians who decide national ethical standards today. Many nations have passed legislation on human conception in vitro yet I am deeply aware that the first liberal Parliamentary Act on this topic was passed in Spain. The passing of this Act reflected enormous credit on the government, and on those Spanish scientists, doctors and others who took especial care to give very wise advice on their subject. It showed how new scientific advances could be encompassed into a society and related harmoniously to national ethical standards, for the benefit of science and medicine.

To our fellow graduates in the audience today, Dr and I hope that each of you will enjoy your careers as much as we have. An academic career offers an excellent pathway to a most rewarding way of life, to novelty and responsibility. It enables a dispassionate analysis of the most intractable or personal problems and contributes an enormous increase to the standards and beliefs in a society. And to our fellow Academicians, may we salute this illustrious University and its Chancellor.