480

NATIONAL SCIENCE FORUM

SPECIAL CHRISTMAS LUNCHEON, 8 DECEMBER 1983

CONFERENCE CENTRE, CSIRO, CANBERRA

SCIENCE AND LAW - THE DIALOGUE CONTINUES

December 1983

NATIONAL SCIENCE FORUM

SPECIAL CHRISTMAS LUNCHEON, 8 DECEMBER 1983

CONFERENCE CENTRE, CSIRO, CANBERRA

SCIENCE AND LAW — THE DIALOGUE CONTINUES

Hon Justice M D Kirby CMG
Chairman of the Australian Law Reform Commission

JOURNEYS I HAVE MADE

I was tempted to title this talk 'Journeys I Have Lately Made'. Yesterday, I returned from a 3-week visit to Europe. One of my duties included participation in a major symposium of the Organisation for Economic Co-operation and Development. The symposium addressed some of the issues of trans border data flows : computers talking to each other in different countries and across the world. During the same period in Europe I attended the 22nd General Session of UNESCO - the United Nations Educational, Scientific and Cultural Organisation. To the traditional concerns of UNESCO has now been added 'communications'. It is plain that the Organisation is now alert to and increasingly concerned with the social implications of communication technology.

A few weeks ago, in a separate round of engagements, I took part in conferences in Hong Kong and London addressing yet another realm of scientific and technological developments, namely that of bioethics. At the Commonwealth Law Conference in Hong Kong I debated the legal and social implications of the right to live and the right to die. At a following session in London I participated with Doctors Edwards and Steptoe in consideration of the social and legal implications of in vitro fertilisation.

My purpose in telling you this is not to offer a travelogue. I have no slides to show you. It is to indicate, once again, the range and difficulty of the issues being posed for our society by scientific and technological developments. I ask a simple question. Do we have the institutions and the means, as a society, to cope with the number of

questions that are being posed and the complexity and controversy of those questions? The two circuits that have involved me in overseas meetings touch two only of the principal technological developments of our time : computications and biotechnology. I have noted that, since my absence, the past Ambassador to UNESCO, Professor Ralph Slatyer, has been called in by the government, with the Australian Science and Technology Council, to conduct an inquiry into Australia's role in the nuclear fuel cycle. That inquiry will tax the intellectual and diplomatic skills for which Professor Slatyer is rightly celebrated. Certainly, throughout Europe, there is a widespread and understandable concern about aspects of nuclear technology. The recent deployment of new missile systems on both sides of the 'Iron Curtain' has heightened the anxiety in Europe about the need for a human response to this particular triumph of 20th century physics. The prospect of George Orwell's 1984 year arriving at last has also concentrated community attention on the social implications of the microchip. The public discussion about in vitro fertilisation has taken many intelligent laymen back to Aldous Huxley's 'Brave New World'.

TRANS BORDER DATA FLOWS

Let me start by saying something of the OECD symposium on trans border data flows. To some it may seem an eye-glazing topic. Yet it soon emerged in the London symposium that it is a topic of very considerable interest to policymakers and lawmakers brought up in the traditions of the sovereign state. Put shortly, the instantaneous technology of computers linked by telecommunications challenges the notion of an autonomous sovereign country-state, with its independent institutions of law-making, law enforcement and law interpretation. Where data can quite readily be stored in far-away places, retrievable at the touch of a finger on a keyboard, the power of sovereign countries to protect the privacy of their citizens and to control information vital to the economy, defence and culture of their community, is, to put it mildly, severely limited.

It was interesting, as an Australian, to observe the debate amongst the member countries of the OECD gathered at the symposium, taking place near Westminster Abbey in London. I reflected upon the ebb and flow of English history in the mile or so surrounding our meeting place. Across Dean's Yard stood the gloomy edifice of Westminster Abbey. Into that Abbey in the year 1265 rode Simon de Monfort. He threw down his gauntlet to challenge the absolute power of King Henry III. He insisted on the rights of the nobles and burgers to advise and control the King. This was the beginning of the long process of democratic rule in England that has so profoundly affected Western countries and indeed the entire world. As the speakers recounted the problems and achievements of trans border data flows, I wondered if there was a modern Simon de Monfort, who could so easily challenge, in our time, King Science.

One by one, the speakers, particularly in the session I chaired on the legal issues of trans border data flows, pointed to the changes that would be needed in domestic and international law to cope with the reality of trans border data flows.

- From Sweden came the suggestion that copyright laws would need to change once valuable original material was released from physical objects and was available to many in different lands by the procedures of lined computers.
- From France came insistence on the need for major changes in contract law and customs practices as the documentation of the bygone technology was replaced by computerised messages.
- From Norway came the insistence on the need for improving enforceable protections for individual privacy — so that local laws for data protection and data security are not put at nought by the simple expedient of keeping personal data on citizens out of the jurisdiction and thereby beyond the control of national laws.
- From the Netherlands came the suggestion that privacy laws should not be expanded to protect small businesses and firms but should be confined to natural persons. But Ireland asked where the line should be drawn between natural and artificial persons in, say, the case of a family company or firm.
- From the United States came expressions of concern that privatisation of telecommunications might remove the protections which monopoly telecommunications agencies have enjoyed, for loss and error.
- From Canada, conscious of the massive trans border data flows between that country and its great neighbour, came the insistence of the need for study of the impact of trans border flows of data upon national sovereignty. To what extent should the free flow of information be permitted to proceed unrestricted? To what extent is a country entitled to insist upon control by its elected legislature over data vital to national security, national defence, economic self-sufficiency and so on?
- Also from Canada came the point that trans border data flows raised the necessity of determining whose legal regime will govern a transaction having links with many jurisdictions. If a message originates in one country and is switched in another and transmitted over others, causing damage or loss in yet another country, whose laws will govern the resulting operations? Will our criminal laws, our police services and our methods of proof in courts of law, be competent to tackle the rapidly expanding field of transactions having numerous and perhaps instantaneous connections with many legal jurisdictions — the borders of which were settled long before the remarkable technology of informatics made borders at least partly irrelevant.

In addition to the OECD, numerous international bodies are now looking at aspects of the legal and social impact of information technology. There is a veritable cacophony of achronyms in the literature on this subject. UNESCO, UNCITRAL, WIPO, INTUG, GATT and other agencies are examining, with a growing sense of urgency, the interaction of the new technology on the laws and practices of member countries. Some participants in the London symposium urged that any new legal framework could be harmful. There was expression, in the politest possible terms, of the reservations of the businessman and the scientist to lawyers getting in on the act. On the other hand, everyone agreed that 'rules of the road' were necessary. A spokesman for one large multinational corporation put it thus. Regulations were needed but not direct or indirect restrictions. Regulations, it seems, are legal rules that we like. Restrictions are legal rules that we do not like.

As I sat and listened to the range and complexity of the problem being identified in the contect of this new technology, I reflected upon how apt it was that this symposium should meet within a mile of Westminster Hall where the English law was developed and the Houses of Parliament where a virtually unbroken chain of elected representatives have been tackling the challenges to society over eight centuries. Today, the challenges are more complicated and puzzling. The issue is posed whether our institutions : whether in the Parliament, the Executive Government or the Courts can cope with the pace and variety of the problems being presented.

BIOETHICS AND LAW

If business is, so far, by and large, getting by without too many legal rules on informatics, the same cannot now be said of the field of biotechnology. In the midst of crowded court dockets, judges of our legal tradition — successors to the judges of Westminster Hall — are now being required to answer hard questions. To illustrate this proposition, I take a sample of cases in common law countries, all of them heard since the last occasion upon which I addressed the National Science Forum.

In fact, it is apt that we should consider these cases today because on my desk following my return from overseas yesterday was the report from New York of the case of baby Jane Doe. Many of you will have read of it. The baby was born eight weeks ago with severe mental and physical defects. She has an abnormally small head and brain, excess fluid on the brain, spina bifida and an incompletely formed spine. Doctors at the hospital in Long Island, New York, told her parents that without surgery she would die within two years. If she were to have a series of operations requiring heroic efforts of skilled medical staff, she could live for 20 years but would be completely and severely

disabled and grossly retarded. Her parents decided against surgery. But their decision came to the attention of a right to life group who obtained a court order instructing doctors to operate. The parents appealed. The order was overturned. The Reagan Administration then became involved, asserting that the failure to operate violated the baby's civil rights. The government's attempt to intervene in the case has raised legal as well as moral controversies. But this case is only the latest in a growing series of difficult quandaries which, for want of clearer legal rules, are being posed for solution before the courts of a number of countries of our legal tradition :

- In August 1981 the Court of Appeal in England had to decide on appeal from Justice Ewbank whether an operation to relieve an otherwise fatal obstruction in a baby born with Downs Syndrome should be ordered. The parents in that case did not consent to the operation. They believed that the child should be allowed to die 'naturally' under sedation. The English Court of Appeal disagreed. It ordered the operation performed, allowing but one exception to the right to life, namely where the child's life would be 'so demonstrably awful' that it should be allowed to die. But what does this phrase 'demonstrably awful' mean and how will courts determine when was is 'awful' has become 'so demonstrable' that life should not be insisted upon?

- In November 1981 Dr Leonard Arthur was acquitted of a charge of attempted murder of a baby boy, John Pearson. This baby was also grossly retarded and deformed at birth. He was given a regime of water and sedatives and allowed to die. According to evidence adduced at the trial of Dr Arthur, this was a standard medical practice in such cases, at least in many hospitals. Right to life organisations insisted on protection of any human life, regardless of its quality. Some humanist philosophers were equally critical of Dr Arthur's regime. One, the Australian philosopher Peter Singer, urged that it would be kinder and more principled to give such neonates a needle rather than to require a slow death by starvation in the name of a suggested legal superiority of 'passive neglect' over 'positive and active termination', once the decision is made not to sustain life.

- In March 1983 in the Supreme Court of British Columbia in Canada, Justice McKenzie overruled a Provincial court order concerning a young child. In effect, the judge required that an operation should take place against the wishes of the parents to treat a severely retarded boy approaching seven years. The boy was blind, partly deaf, incontinent, unable to stand, walk, talk or hold objects. An implanted shunt upon which he relied for life had broken down. Without operation the boy would almost certainly die. The judge held that the case was not in the 'demonstrably awful' class. Accordingly he reversed the primary judge. He ordered that the operation should be performed.

. In April 1983 a Federal judge in the United States struck down an attempted Federal Fule proposed by President Reagan to deal with cases of neonaticide. The Rule sought to introduce toll-free lines for citizen complaints to Washington about suspected cases of hospital neonaticide. It also proposed the strict removal of Federal funds for any hospital found guilty of the practice of passive termination of life in the case of deformed neonates.

Apart from these cases involving neonaticide which are coming to the courts in increasing number, numerous other questions are now being posed:

. Should a judge have the power to overrule a State Minister who, in the name of his personal conscience, will not condone an abortion in the case of a State ward?
. Should a doctor be entitled to challenge abortion certificates given by other members of the medical profession on the grounds of objection of conscience?
. Should a lover be entitled to prevent the unmarried mother of his child from aborting a foetus he claims to have fathered?
. Should the very old and infirm be able to die peacefully without enduring heroic medical and surgical intervention. If the law does not uphold every moment of human life and if it does look to the quality of life and to the conditions of pain and suffering of patient and family and friends, how can principled decisions be made. How can we do more than substitute the arbitrary and possibly idiosyncratic opinion of doctors and hospitals for the arbitrary defence of human life as such, whatever its condition?

RESOLVING THE CONFLICT

Sometimes, when societies are faced with problems of the kind I have mentioned, there are bitter disputes between scientists and technologists. The nuclear energy issue illustrates the problems that can arise when scientists themselves disagree about basic facts and assessments of those facts from a social and moral point of view. To confront this kind of problem Parliaments and Cabinets, made up of laymen, look for ready-made solutions which they hope will command political and community consensus. The solution may be an interdisciplinary committee like ASTEC. It might be a judicial inquiry, such as the judge-led inquiry that investigated the Windscale nuclear fuels reprocessing plant in Britain. It might be a Cabinet committee or some other political institution, such as the body set up to evaluate the conflicting opinions on the Australian National Animal Health Laboratory (ANAHL).

In the United States, conscious always of the high levels of litigation surrounding science-based controversies and the incompetence of lay judges or juries to resolve scientific conflicts, a proposal has been put forward for the establishment of a special 'Science Court'. The idea was ventured by Arthur Kantrowitz. The suggested goal of such a 'Science Court' was to to provide an 'unbiased account of the scientific facets of particular questions without abandoning the adversarial setting'. The foundation of the proposal lies in the perception of decision-making on scientific-type issues in our form of society. Political decisions affecting science cannot be entirely separated from the scientific information on which they are based. The idea of a Science Court is to provide the political community with a considered and unbiased statement of currently available scientific facts. It would relegate the ultimate policy choices, hinging on questions of social values, to the political decision-makers themselves. But, at the least, it would get the scientific facts out of the way so that the ultimate decision would be made on an accepted, neutral basis of agreed scientific information. Kantrowitz's proposal contemplated a panel of 'judges' sitting in the Science Court, who would be composed of exceptionally qualified scientists who had no obvious connection with the issue in dispute. Scientific standards of evidence would be combined with certain legalistic procedural protections aimed to ensure maximum fairness and scientific validity. The published findings of such a Science Court, normally expressed in terms of mathematical probability, would involve statements of fact without value-laden recommendations. The judges would delineate areas where scientific knowledge did not exist and suggest avenues for further research.

Although this proposal has attracted a great deal of support from thoughtful commentators in the United States, I am afraid I must express my scepticism about the proposal:

. In the first place, I have reservations about the adversarial process, which I have expressed in other places. The notion of courts and court-like procedures for the resolution of disputed scientific theories is not one which I find congenial. Courts do their important social tasks within well-established rules and procedures. These rules may not be perfect but at least they have the merit of public resolution of disputes. Scientific facts and theories are not so readily submitted to such procedures. It is trite but necessary to remember that the Sacred College which evaluated Galileo's opinions, included some of the finest intellects of the time and proceeded in a thoroughly fair and dispassionate way to the wrong conclusion.

. Furthermore, many matters of difference over science and technology policy are simply not susceptible to black and white resolution. The position of the Australian National Animal Health Laboratory is a case in point. Scientific opinion does not remain conveniently still or harmoniously united. Yet governments and their advisers must make decisions and the political and economic consequences of those decisions must be taken into account in addition to so-called objective scientific facts. Whether it is in a Science Court, a Board of Inquiry, an Interdepartmental Committee or the Executive of the CSIRO, questions are still raised as to the separation of facts from values, the relevant expertise and independence of the decision-maker, the access to the decision-makers of a whole range of varying opinions and the ultimate assessment of mixed scientific and non-scientific values.

In the fields of biotechnology, an additional problem of an acute kind can be illustrated. There may be relatively little controversy about scientific aspects of the program of in vitro fertilisation and artificial conception ex utero. But very real moral and social questions may be posed as to whether, for example:

. in vitro fertilisation should be permitted at all;
. in vitro fertilisation should be confined to married couples, and if so, why?
. in vitro fertilisation should be postponed until every other possibility has been exhausted, and if so, why?
. in vitro fertilisation should proceed only on the basis of reimplantation of <u>all</u> fertilised ova;
. in vitro fertilisation should proceed only using sperm and ova donated by the couple concerned;
. fertilised human embryos excess to use should be retained or destroyed or retained until the death of one party or until divorce or until some other defined time.

These and many other questions surrounding the scientific technique illustrate the complexity of the problems now facing our law-makers as they confront the bioethical quandaries of the closing years of the 20th century.

<u>AN EXCITING TIME</u>

The questions of bioethics are becoming more than the stuff by which afternoon newspapers are sold. The cases are coming before the courts and, as I have said, the courts must find solutions. Generally speaking, the solutions must be found from within the narrow experience of judges calling upon precedents developed in earlier times when things were quite different.

Developments in informatics are also posing complex questions requiring attention of law-makers and lawyers. Many countries now have data protection laws. A major report of the Law Reform Commission on privacy protection will be tabled in Federal Parliament next week. That report will provide proposals for an Australian response to what is undoubtedly a worldwide problem. In devising its proposals, the Australian Law Reform Commission has developed techniques of public and expert consultation which provide a useful model for a democratic community responding to the controversies of science and technology as they interact with morality and the law. The report on human tissue transplants took great care to consult the experts. But it also consulted the general community. The report on privacy followed the same painstaking course. In democracy, it is a cliche to say that the ultimate decision must be made by the people's representatives, reflecting the people's opinions. But where science and technology of today are concerned, the people may have no opinion or their opinions may be based upon outmoded information or prejudices and attitudes developed around much easier issues in earlier times. And Ministers may have at their ear the harrassing calls of conflicting scientific experts — differing on the 'facts' and conflicting on the evaluation of those facts from an ethical, economic or political point of view.

A Science Court to help isolate the scientific issues may not be the answer. But the truism must be said and said again. The controversies crowd upon us and there must be doubt that our present democratic institutions of decision-making and law-making can keep pace. Some will surrender the future, with varying degrees of enthusiasm, to the Scientist Triumphant. Others, who value the democratic features of our society, with all the weaknesses and prejudices and folly that democracy can involve, will be searching for effective ways in which the democracy can play an informed and constructive part in critical decisions of science policy. Governments and Ministers will look to bodies such as the National Science Forum to offer reflections on this critical institutional problem. Particular issues of science policy may be important — even vital. But no question can be of more abiding importance than that of how we design institutions and procedures that make our national decisions on science and technology policy informed, responsive to community opinion and alert to the potential of science to benefit mankind.