

THE UNIVERSITY OF ADELAIDE

NATIONAL SYMPOSIUM ON ORGAN TRANSPLANTATION IN MAN

SYMPOSIUM ORATION

TUESDAY 1 DECEMBER 1981, 8 P.M.

TRANSPLANTATION AND BIO-ETHICS

The Hon. Mr. Justice M. D. Kirby  
Chairman of the Australian Law Reform Commission

November 1981

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TRANSPLANTATION AND LAW REFORM

I must start by expressing appreciation for the honour of being invited to address this important gathering. I am also most grateful to you for agreeing to change the date of my address. In ancient Rome, jurists, for fear of their life, would not dare absent themselves from a function attended by the Emperor. I was recently appointed to the Australian Institute of Multicultural Affairs and was told that the Prime Minister was to deliver an Inaugural Address to the members of that Institute last night. Though my life was probably not at stake, it was certainly an advantage to be able to attend the function with the Prime Minister. One can never be too careful in dealings with rulers : ancient and modern.

Let me next tell you of how it is that a judge and the Chairman of the Australian Law Reform Commission comes to be involved in issues of transplantation and bio-ethics.

In 1976 the then Federal Attorney-General of Australia, R.J. Ellicott, referred to the Australian Law Reform Commission the subject of:

the appropriate legislative means of providing laws in the Australian Capital Territory for the preservation and use of human bodies and for the removal, preservation and use of organs and tissues for the purposes of surgery, medical therapy, transplantation, education and research.<sup>1</sup>

I must confess to you that when the Commission received this project, the thought crossed my lawyerly mind that it was a trifle exotic, that there just might be more important and urgent legal problems awaiting the national law reform commission and that it could be difficult for a group of lawyers to make a useful contribution. I was wrong. Attorney-General Ellicott was right. The examination of the legal implications of human tissue transplantation by the Law Reform Commission was a timely project of great interest and sensitivity. It was a species of a wider genus of categories of the law that had remained unattended, whilst medical science and technology have advanced. It permitted the Australian Law Reform Commission to embark upon the task of designing laws which could be used as a model in the several jurisdictions of Australia. It encouraged us to develop a technique that may be specially useful in addressing the profound ethical and legal questions which our society will have to face as medical techniques develop. Moreover, it allowed us the opportunity of consulting widely, including with the general community, upon difficult subjects, in which the man and woman in the street have a legitimate concern. Neglect of the need to carry the community with the scientific world in technical advances which raise anxieties and pose moral dilemmas, will ultimately result in community resistance to scientific developments and legislative impediments that may be cumbersome and obstructive.

The Law Reform Commission's report on human tissue transplants was prepared under the leadership of Mr. Russell Scott, whose recent book The Body as Property<sup>2</sup> continues the debates which were begun in the report. Amongst the lawyers sitting at the table of the Law Reform Commission were some of the most distinguished in our country. They included Sir Zelman Cowen (now the Governor-General) and Sir Gerard Brennan (now a Justice of the High Court of Australia). The Commission also attracted the participation of a remarkable team of interdisciplinary expertise from medicine, theology and philosophy. Some of our consultants are at this symposium. I repeat the Commission's acknowledgement of their participation. In doing so, I underline once again my view that the only safe course for developing proposals for laws to deal with bio-ethical problems is the bringing together of the best legal, medical, theological and philosophical talents, before tentative proposals are then posed to the general community and placed before the lawmakers in the political process.

The efforts of the Law Reform Commission in the project on human tissue transplants have been rewarded with praise and legislative success. The British Medical Journal<sup>3</sup> welcomed the report as 'the latest of an outstanding series'. It said this about our techniques of developing the proposed law:

The publicity which the Commission's activities attracted in the course of preparing and publishing its report did a lot in Australia to remedy the ignorance of the public and the apathy of the medical profession towards this important subject. Of particular interest is its warning that the difficulties and distress experienced by medical staff in dealing with dying patients are likely to increase rather than diminish as medical advances add to the patient's prospect of survival. ...<sup>4</sup>

In a country which, outside the Acts of the Federal Parliament, cannot boast of many uniform laws, the legislation proposed by the Law Reform Commission is now moving through the several parliaments and proceeding to law. Already, it has been adopted in three Australian jurisdictions. I gather it will shortly be introduced in a fourth<sup>6</sup>, and is said to be under active consideration in other States. Last week I was informed that legislation based on the report, with one possible variation, will be introduced in South Australia in 1982.

The point to be made at the outset of this address, is that bio-ethical questions posed by transplantation and other advances cannot be ignored. The law can provide a facility or it can equally surely act as an obstruction. It can be irrelevant or it can be supportive of scientific endeavour. But the law in areas such as transplantation must be nurtured with the tenderness that would be devoted to an old, feeble, sometimes frightened and usually sceptical patient. We must find ways to carry the law into the new era of scientific technology. My first proposition to you is that the Australian Law Reform Commission can provide a national catalyst to help the experts and the whole community to come to grips, and on a national basis, with problems that will otherwise all too readily be assigned to the 'too hard basket' of law development.

#### THE LAW AND BIONIC MAN

The variety of transplantation today presents society with issues, some of which have a very low ethical content. Others raise profoundly difficult moral questions. I read that there are now more than 50 metal and plastic parts, ranging from heart pacemakers and artificial windpipes to nylon eye lenses and even dacron arteries which are available for transplantation into the human body. More than 2000 heart pacemakers and 1000 artificial heart valves are installed in the bodies of Australians each year. Fifty thousand hip replacements are performed annually in different parts of the world. The benefit of these operative procedures is undoubted. Ninety percent of the people who have a full hip replacement are said thereafter to suffer no pain and to enjoy greater mobility.<sup>7</sup> The risks of post-operative infection are low. The moral questions raised are no greater than those in other operative procedures. In fact, I can say to you that I have myself carried around a transplant of a kind for more than a decade.

A dental surgeon eleven years ago inserted an implant upon which he built a bridge which is working very satisfactorily indeed. Implantation of metal and other objects to replace or support the delicate, intricate, complex organs and tissues of the human body is no longer revolutionary. Many of our fellow citizens benefit from some form of transplantation or another. More will so benefit in the future.

Within the last weeks, almost every day has brought news of new advances, announced in the popular press:

- . By the use of an enzyme, reportedly from green coffee beans, it is said that doctors in New Jersey have developed a technique of changing blood types so that these can be transfused into virtually any patient.<sup>8</sup>
- . Indeed, to overcome certain religious objections to blood transfusion, a new 'artificial blood' called 'Fluosol' has been developed as an emergency agent.<sup>9</sup>
- . Doctors at a hospital in Munich are reported to have inserted successfully an insulin pump in a diabetic patient's chest. The pump, about the size of a packet of cigarettes, administers insulin at a rate controlled by a miniature computer.<sup>10</sup>
- . A week ago it was announced that Swedish surgeons, hoping to relieve victims of Parkinson's disease, plan soon to start transplanting adrenal gland cells from the body of the person into the brain.<sup>11</sup>

Transplantation is decidedly in the news. The British Medical Journal reports somewhat acidly on the 'Transplant Olympic Games' and the ability of kidney transplant men and women to perform in 33 events, reaching standards which:

may not have reached Olympic or even sports club standards, but their times were certainly better than might be expected from, say, their doctors.<sup>12</sup>

I am sure that in your discipline, as in mine, there is an occasional flinching at the tendency of the news media to sensationalise, trivialise and personalise specialist issues. However, you must not make the mistake of retreating to elitist silence. It is important that the community should be informed about the developments in your discipline. This can only be done effectively by harnessing the news media and by professionals learning to communicate the problems of transplantation (ethical and practical) to ordinary people.

Many of the transplantation operations that take place raise few ethical dilemmas. Others raise very great issues for law and morality. It is to these that I now turn.

#### DEFINITION OF DEATH

The first issue which we found we had to face in our report on Human Tissue Transplants was the definition of death. It was well established that, at least in some transplantation operations, the removal of organs and their transplantation are more likely to prove successful if taken from a beating heart donor than otherwise.<sup>13</sup> Relatively few transplants of vital organs come from living donors. But securing organs from persons who are dead, yet ensuring that the organs are in an optimal condition for transplantation, poses problems, including the problem of addressing the definition of death itself. In the English context, the issue was expressed in brief terms, in the context of renal transplants:

The problem was not a shortage of hospital facilities but a shortage of kidneys. This year it was hoped that about 700 transplant operations would be carried out, but there were over 1200 on the waiting list. To increase publicity, kidney donor cards would be sent out shortly to all chemists' shops. During the five years since this scheme was started, 11 million cards had been supplied, but since most of them had gone to people who were hale and hearty it would be a long time before many of the kidneys became available for transplant.<sup>14</sup>

Increasing skill in the transplantation of cadaver kidneys and increasing acceptance amongst surgeons that 'nephrectomy in the ventilated heart beating donor is acceptable'<sup>15</sup> accompanied growing professional satisfaction that death can now be diagnosed more objectively than hitherto in terms of irreversible loss of brain function.<sup>16</sup>

The Australian Law Reform Commission was convinced that a viable definition of death, referring to the concept of brain death, was both possible and desirable. It reached this view quite apart from the necessities of transplantation surgery. Hence its recommendation was framed in terms of a definition available for all purposes of the law. The merits of the definition for the necessities of transplantation donations were plain to be seen. What was needed was a legal definition which endorsed the concept of brain death but did not narrowly regiment the medical profession into particular techniques that could be overtaken by advances in medical knowledge. The necessity to assure the community against conflict of interests, premature decisions or inexperienced decisions was dealt with by specific requirements concerning the procedures to be followed in determining brain death. The suggested definition could not have been in simpler terms:

42. A person has died when there has occurred --

- (a) irreversible cessation of all functions of the brain of the person; or
- (b) irreversible cessation of circulation of blood in the body of the person.<sup>17</sup>

This definition has been adopted in the three jurisdictions of Australia that have already enacted the uniform transplant law. It has also been recommended in Victoria<sup>18</sup> and in South Australia.<sup>19</sup> I gather that it will be included in the law in both States in 1982, so that five of the eight Australian jurisdictions will have adopted it.

A definition in similar terms was recently adopted by a United States Presidential Commission and commended to the States in that country. The model law approved by the Commission proposes that an individual is dead who has sustained either:

- (1) irreversible cessation of circulatory or respiratory functions, or
- (2) irreversible cessation of all functions of the entire brain, including the brain stem.<sup>20</sup>

An analysis of the brain death laws that have been adopted in the United States and in 28 other countries is contained in a paper presented by Frank P. Stuart and others to the Sixth Annual Meeting of the American Society of Transplant Surgeons in May 1980. Differences are identified in these laws as to :

- . alternative means for determining death;
- . provisions to govern death while heart and lung functions are artificially maintained;
- . reference to cessation of total brain functions; or
- . reference to irreversible cessation of brain stem function.

The notion of 'brain death' itself now seems to have secured general professional acceptance. The legislative acceptance reflects the growing understanding in the community of the fact that death is a process, not an event, and that death in terms of brain function is acceptable both scientifically and morally. In a strange way, I feel that the case of Karen Quinlan (though not itself an instance of brain death) contributed significantly to the public's acceptance that the artificial form of 'life' on a hospital ventilator was not 'life' in human terms that ought, by any moral standard, to be prolonged regardless of its non-human quality and indifferent to the burden it places on relatives, the hospital and medical staff involved and the community which must usually bear most of the costs involved in such cases.

I say most people have accepted the notion of brain death. However, controversy has sprung up in Australian legal circles about the definition of death proposed by the Law Reform Commission. In an article in the Australian Law Journal in June 1981, Mr. Frank Galbally, a well known Victorian lawyer, urged that it was premature and confusing to provide statutory definitions of death. He proposed that development of such a definition should be left to the judges in the traditional arrangements of the common law. Public concern about the subject and the need for legal clarification is made plain by the ease with which that concern can become alarm. In October 1980 the BBC television program 'Panorama' suggested that current British surgical practice could be allowing for the removal of organs from patients certified as dead, when those patients could have recovered if the organs had not been removed. The basis of the allegations was a series of United States case histories in which it was claimed that the patients were wrongly diagnosed as having suffered brain death. No evidence at all was offered that any such error had occurred in Britain. Nonetheless, the immediate result was intense national and international publicity, public estrangement between the British Medical Association and the BBC, and above all the virtual collapse of the kidney transplantation program of the United Kingdom in the following month. In November 1980 only 32 kidney transplants were performed in Britain. This was approximately one third of the normal number of operations. It was the lowest number for many years. The Minister for Health said in December 1980 that the government's campaign to obtain transplant donations had been 'tragically affected' by the television program.

The criteria for the determination of death by reference to brain function are constantly being revised and improved. In response to the continued fall-off in transplant operations in Britain, the Minister for Health, Dr. Vaughan, announced in August 1981 the introduction of new procedures requiring two consultants or a consultant and a registrar to carry out brain death tests and to repeat them at least twice.<sup>21</sup> From a legal point of view, however, it is unsatisfactory to leave the definition of death to be developed by common law judges or by ministerial fiat. In the nature of things, they may not have the assistance of all the best experts. They will not have the benefit of widespread community consultation in their decision-making. Unless a statutory provision is made, medical and nursing staff may come to be involved in litigious challenges which they should, if possible, be spared. Cases have come before the courts in which an accused person has raised as an exculpatory defence that the cause of the death of his particular victim was not his violent attack but the action of hospital intensive care specialists in turning off support machinery after diagnosing brain death.<sup>22</sup>



Just relying on medical practice, without the support of legislative sanction which follows broad community acceptance after a detailed public debate, is to court the controversy that arose in Britain. Indeed, this was acknowledged by the Lancet :

What has touched off the present discussion is transplantation, with the none-too-delicate hints of a conflict of interest between donor and recipient. The fault may lie with newspapers, radio and television, even with the Lancet and the BMJ for not pointing up the issue earlier, but the fact remains that a new definition of death seems, to some, to have been introduced by default.<sup>23</sup>

For all the other problems we have had in the relationship between the Australian medical profession and the public, I do not believe that the definition of death is one. I hope that the community education which was part of the Law Reform Commission's exercise may have contributed to the growing acceptance of the brain death notion, not only in the parliaments of Australia but also amongst the people.

#### OPTING OUT

The study by Stuart and others of brain death laws in 28 countries and the United States, to which I have referred, also shows the gradual extension of the notion of the 'opting out' regime for the removal of cadaver organs for transplant purposes. A table illustrates the emerging pattern<sup>24</sup>:

It is interesting to observe that none of the countries which provides an 'opting out' regime (where consent is presumed, unless positively negated during the lifetime of the person) is an English-speaking country. Stuart and his colleagues conclude:

The need for cadaver organs will increase as the clinical outcome of organ transplantation continues to improve. Society is increasingly aware of the remarkable rehabilitation that transplants offer. The shortage of organs is not because of a lack of potential donors. Enough people die under conditions that would allow removal of transplantable organs to meet the needs of all potential transplant recipients. The shortage results from failure to identify potential donors and from frequent lack of consent to remove organs after death. Continued efforts to inform the medical community and the general public about transplantation will help to identify potential donors and increase the likelihood of obtaining family consent to remove organs. But, many doubt that these steps will be sufficient. ... Some suggest that only presumed consent to remove organs will yield sufficient numbers. The countries surveyed were equally divided among those that require family or donor consent and those that presume consent. Consent is not presumed in any of the English-speaking countries and attempts to introduce it would probably meet much resistance.<sup>25</sup>

The comment suggests that definitions of brain death will themselves contribute to the availability of organs by donation because of the removal, at least, of the uncertainty about the death of some persons who are suitable as a source of transplant material.<sup>26</sup>

We had to face up to this issue in the report of the Law Reform Commission. Putting it shortly, we did not believe that Australia was yet ready for a 'contracting out' legal regime. We asserted that there was little doubt that support for such a principle was gaining momentum both internationally and in Australia. We drew attention to the many submissions received favouring the concept. Furthermore, we did not favour the absolute invariable requirement of the consent of the person himself during his lifetime proposed by submissions received from persons having a religious point of view. Instead, the Commission proposed that resort to relatives of deceased patients should be maintained out of 'respect for individual autonomy'. At the same time we simplified the procedures for the indication of consent or 'non-objection' and, in some cases, permitted a coroner to give consent where relatives could not reasonably be found.<sup>27</sup>

Now, I am alive to the difficulty which must be faced by doctors and hospital staff in approaching the relatives of dead or dying persons on the subject of organ transplantation. Programs such as the BBC Panorama program can exacerbate the difficulty and reduce the willingness of medical staff even to broach the subject of organ removal.<sup>28</sup> Doctors are quite naturally reluctant to ask relatives' permission and arrangements for securing donations is not only stressful but also time-consuming. Transplant surgery, as a specialist sphere, may not always have the support of surgeons in other specialities; who may be reluctant to remove organs for use by a transplant team for the benefit of a patient having nothing to do with them.<sup>29</sup>

For all this, our society must face up to the fact that people are suffering when they could be helped by transplantation. A BMJ leader put it this way:

Despite the early drawbacks of rejection and high doses of immunosuppressive drugs, a third of all patients given a [kidney] transplant are permanently rehabilitated from a life of chronic disability. Many more have a very satisfactory remission allowing return to a full-time occupation. Recently the case for renal transplantation has been strengthened by comparison with results of management in other forms of chronic terminal disease. ... Yet many clinicians remain diffident and pessimistic. ... Their lack of enthusiasm may be more important than public attitudes in explaining why potential donors in their care are not notified : each year in Britain several thousand cadaver kidneys are lost by inaction on the part of the clinicians concerned. The deficiency in supply will never be made up by living donors, though the results probably still justify the use of such kidneys where possible. Cadaver transplantation needs to be seen in a better light, and recent reports are encouraging. Nowadays, over 70% of grafts can be expected to function one year after transplantation and patient survival ... should exceed 90%. ... There can no longer be a place for the 'do or die' transplant.<sup>30</sup>

A measure of the resistance to the introduction of 'opting out' legislation can be seen in the result of efforts in Britain and the United States to introduce such laws. In Britain, a Private Member's Bill introduced by Mr. T. Dalyell MP was rejected by the government. A Working Party on Transplants, chaired by Lord Smith of Marlowe, could not accept the notion of a national 'opting out scheme' even limited to kidney donations, saying that the practice would be 'highly unpopular with the public'.<sup>31</sup> In the United States a Bill recently introduced into the Pennsylvania Senate which would make it legal to take organs without specific consent of the deceased or his family was strongly

opposed by the Pennsylvania Catholic Conference. A letter sent to all of the State legislators on behalf of the Bishops criticised the Bill claiming that the removal of consent was a 'key moral issue'. It contended that the taking of organs without permission would strike differentially at one social class, namely the poor, the forgotten and those without family ties.<sup>32</sup>

Opting out legislation may come, indeed a majority of the Australian population might well be ready for it now. However, there is a great difference in matters of this kind between general community consensus and sufficient support for a controversial proposal which is strongly opposed on moral grounds by a section of the community. Getting it through the political process to the law of the land becomes a great problem in such circumstances. I suggest that the approach of the Law Reform Commission for retaining procedures of consent or non-objection, facilitating and simplifying those procedures and providing coronial alternatives in some cases may be more likely to gain legislative acceptance, at least in the foreseeable future. I also suggest that the medical profession must look to itself to find why, amongst its own number, there is continuing resistance to support for transplantation efforts. Dr. Harry Lander, who has taken such a great part in the organisation of this conference, has suggested one explanation:

In Australia, the press has been particularly supportive of renal transplantation. The operation has had good publicity. Its successes have been, if anything, exaggerated and its failures have been largely ignored. It has supported very generously public appeals for organs to be donated. As a result, both the public and the tremendously conservative medical profession (motto - 'don't just do something — stand there') have looked upon renal transplantation most benignly and have actively supported it. As a consequence we have reaped a good steady supply of kidneys over the years and this has been manifested in our excellent results.<sup>33</sup>

For all these hopeful statements, the fact remains that mere benign interest by the medical profession may well deprive the transplanters of useful organs that could relieve suffering. According to the Australian Kidney Foundation in August 1981, the shortage of donor kidneys is now 'so desperate' that it is 'appealing to every New South Wales doctor for help'. The Executive Officer of the Foundation was reported as saying that some patients might have to wait ten years before a suitable kidney became available, meanwhile living dependent on artificial kidney machines, servicing which was said to cost as much as \$25,000 a year.<sup>34</sup>

The problem is partly one of community attitudes but it is also one of medical attitudes and plain old-fashioned organisation:

The demands for cadaver kidneys seem insatiable — though many are still wasted in outlying hospitals which still deal with many accidental injuries. Some of the British problems are found in Australia too : coroners may be difficult and neurosurgeons unco-operative.<sup>35</sup>

I can offer no easy solutions for the internal managerial and attitudinal problems of the medical profession. Nor can I offer the easiest solution to the painful and distressing problem of approaching the donor or his relatives. The obligation to ask, with all its hurt and distress, is itself a check against the world of human organ farms. Though such a world could doubtless be justified by the morality of some good citizens, it would equally be unacceptable to many others and not only to people of a religious persuasion. There would be many who would say that such an artificial unnatural world is not one in which they would choose to countenance.

#### CHILDREN DONATIONS

One matter upon which the Law Reform Commission divided in its study was the subject of donations by legal minors. Put shortly, a majority of the Commission believed that in certain desperate situations, the law's role was a limited one and that it should not interfere in family solutions, save to the extent of ensuring that knowing decisions were made and that undue conflict and pressure had been avoided. A minority of the Commission (Sir Zelman Cowen and Sir Gerard Brennan) suggested that the law had an overriding duty here to protect young people against bravado, against their own immature instincts, against their inability adequately to weigh the pros and cons of donation in a mature way and against undue pressure from the family to donate a vital organ.<sup>36</sup> In the end, this controversy is an illustration of the fact that even with the best possible advice and community consultation, decision-makers in the bio-ethical area can profoundly disagree. Reference to the medical literature since the Commission's report was delivered illustrates that precisely the same debates as were raised around the table of the law commissioners have consulted the medical profession. Certainly the early experience was that better results were obtained in renal grafts where the donor was living and related to the recipient than if the donor was unrelated or dead.<sup>37</sup> In the Lancet, in 1976, it was pointed out that:

The favourable results of transplantation from parent-to-child and from child-to-parent, the high rate of motivation in these groups and the excellent results in terms of donor satisfaction and safety, all strongly support the idea that such donation is warranted when compared with cadaver transplantation.<sup>38</sup>

The issue has been raised quite frequently in the United States. An important article by Norman Fost, 'Children as Renal Donors',<sup>39</sup> criticised the virtual exclusion of adolescent children as renal donors:

The justification of this policy appears to be based on a notion that renal donation is an altruistic act, primarily for the benefit of another, and stringent standards of informed consent must be followed. This paper challenges the present policy on two grounds : consent from adults who donate kidneys is generally not informed and therefore it is inconsistent to use the consent requirement as a justification for excluding children; and renal donation by adults can be seen as a procedure done for the benefit of the donor (as well as the recipient) and the appropriate rules for using children as donors should therefore be those pertaining to beneficial intrusions on non-consenting subjects.<sup>40</sup>

Although it is plain that selection of pre-adolescent children as living donors is and will remain a rare event<sup>41</sup>, the essential question remains whether the law should inflexibly, and without prospect of exception to meet particular cases, totally forbid child donations. Upon this question doctors, lawyers and the community will divide. Generally speaking, with Dr. Lander, I found the medical profession of Australia profoundly conservative and supporting the notion of an absolute rule forbidding donations, whatever the circumstances. Legislation that has followed the Law Reform Commission's report has opted for the majority view in one jurisdiction, the minority view in two others and I believe forthcoming legislation in two States, including South Australia, will also follow the minority position.

All of this is an illustration of the fact that even within a controversial area, it is possible to have great differences of opinion. But it is also necessary and possible to find means of helping the law-making process to resolve those differences of opinion, so that decision-making in such a case is not left to the value systems of particular doctors and the obscurities of the application of common law principles which may exist and which have been developed in much earlier times to meet very different medical circumstances.

### SALE OF TISSUE

One issue upon which the law reform commissioners had no doubts was the undesirability of commerce in human tissue. The draft legislation proposed by the Law Reform Commission specifically forbade trading in tissue, though it allowed the Minister, by instrument in writing, to approve the entering into a contract or arrangement in a special case.<sup>42</sup>

There seems to be no doubt now that there is a serious shortage of human tissue for transplantation in Australia and like countries, particularly for kidney transplantation. Various solutions have been offered to solve this problem. Dr. Gordon Kells, a British surgeon, was reported in the popular press to have urged a scheme for the bulk buying of kidneys and other human spare parts from the world's poor. He is reported to have said:

There is no shortage of money for transplants. After all, it costs a lot less to transplant a kidney than to keep someone on a dialysis machine. People can live just as well with one kidney as with two. But there are insufficient people in this country [Britain] prepared to sacrifice one. In my opinion, a rich society should offer to purchase say, a kidney, from an otherwise fit man in the Third World. I submit that if a Peruvian Indian were offered \$4,000 he would be only too happy at the cost of a kidney to become, in his own country, a relatively rich man.

This is not entirely a hypothetical issue. A recent report in the Melbourne Age reproduces the story of an advertisement in Rio de Janeiro reading:

Cornea for sale, ... Please call working days.

The price cited was \$20,000 and the offering donor put his case thus:

It's very simple.— on one side you have the man who has money but no vision, and on the other side is me : vision, but no money. ... The more people think about it, the more normal it will become.<sup>43</sup>

It seems that these advertisements are not uncommon in South America and some parts of Asia. They are listed under 'medicine and health' in classified columns. They simply extend the controversy which is of long standing of the poor of these countries supplementing their incomes by selling blood to commercial blood banks, frequently for export to the United States. The rate quoted for a kidney was \$30,000.

A recent item in the Bulletin called attention to the Australian shortage of donor material and pointed out that 'the economist's answer to a short fall in supply is to ask what are the incentives'.<sup>44</sup>

The view that trading in body parts should be permitted, including in Australia, is not confined to cranks. It was put forward seriously by Dr. Peter L. Swan, of the Department of Economics in the Australian National University, in a critique of the Human Tissue Transplant report. Adapting his approach from orthodox market theory, Dr. Swan urged an analogy with 'automobile spare parts':

Suppose that by law the price of automobile parts were to be set at zero. For a while car repairers and panel beaters might rely on spares from scrapped cars (cadavers) and donations of non-vital parts from the owners of functioning cars to non-profit voluntary organisations like the Automobile Cross Society. The supply of spares from General Motors and Ford, not being philanthropic organisations, would soon coagulate and congeal. At the regulated price of zero, an excess demand for spares would rapidly develop and the professional car strippers and spare parts thieves would conduct a profitable trade. ... While this scenario might sound slightly fanciful, we are all aware of what happens when prices in other markets are regulated in a less drastic fashion.<sup>45</sup>

Dr. Swan dismisses the arguments that in Australia there is a tradition that human tissue, particularly blood, is given as a gift. He dismisses the importance of public opinion. He rejects the submission of the Australian Red Cross Society as self-interested because 'the Society does not pay its donors, apart from the traditional "cuppa and a biscuit" and does not charge users for the blood it obtains'.<sup>46</sup> He rejects the contention that payment could cause deterioration in standards or increase the health danger to recipients or that it would disadvantage the weaker, poorer or younger members of society. His conclusion is:

Given the [Law Reform] Commission's allegations of a shortage of tissue available for transplantation and the likelihood of a rapid growth in demand for such tissue, what is required is a law specifying that such tissue is a commodity subject to a warranty of fitness in use and initially the legal property of the individual concerned until such time as it is sold or donated to a subsequent legal owner. Such a change in the law would facilitate adequate compensation when the donor must suffer considerable pain, suffering and trauma as in the case of the donor of bone marrow. The individual's own body would be treated as a commodity in like manner.<sup>47</sup>



Because the issue has been raised again, and because of the repeated reference in the press to the shortage of tissue in Australia, I have no doubt that we will be seeing more of this debate. In the age of Milton Friedman, the monetarists, market forces and the Campbell Report, are we really in a position to contemplate trade in human body parts in Australia? It seems to me that we are not. The approach taken by Dr. Swan and those of this economic persuasion would appear to fail to give due weight to non-material, non-economic considerations. These include cultural factors and emotional factors. Religious and moral considerations must also play a part, however uncomfortable these may be for economists. The Law Reform Commission had before it material from the United States which suggested quite plainly that where the sale of organs was permitted, those which came forward were typically from deprived, overwhelmingly poor, black or Hispanic people, hoping to sell organs to rich white people. Although this might be satisfactory from a market point of view and indeed from the point of view of some geneticists, it is not to say that it would be acceptable to a Parliament of Australian legislators or generally accepted in the Australian community. Unfortunately for a pure market thesis of law reform, legal renewal is not so simple. Other aspects of social policy have to be weighed. Amongst these is the view of the community and the medical profession itself. Economists in love with the market forces tend to ignore the intensely strong human feelings that are engendered by discussion of the human body and of life and death. Irrational as it may seem to some economists, drawing an analogy between human body parts and automobile parts reflects a failing of respect for human bodily integrity which has been a special feature of the Judeo-Christian culture, including that of Australia. Trading in human tissue is not illegal in most Australian States, except in the sale of blood. The Australian Law Reform Commission's draft legislation would deal with the problem. And the point to be noted is that not to make a decision — not to provide legislation on this subject — is to make a decision of sorts. It is to condone the possible development of the situation that has already arisen in South America and elsewhere. On the other hand, I do not believe that as a society we can afford noisily to become too self-righteous about the proposal for sale of human organs and tissues. So long as there is a significant shortfall, so long as there are fellow citizens waiting for organs to turn up, we cannot afford self-righteously to denounce one method that could possibly procure more available organs. If we adhere to the view that commerce in human body parts is unacceptable, because of an appeal to some moral principle higher than market forces, there would seem to be an equal obligation on us to develop medical practices and legal rules that diminish, as far as possible, the shortage of human tissues needed for transplantation.

#### OTHER ISSUES

Many Topics. There are many other topics that should be dealt with in a consideration of the bio-ethical issues raised by transplantation. Any single one of them could absorb many hours of debate. You will be relieved to know that I do not intend to submit you to such a test. Let me, however, mention just a few questions which have been identified and which someone, somewhere in the lawmaking process will have to address before too long.

In Vitro Fertilisation. One issue, which has already attracted considerable public attention in Australia, is the extent to which we are facing up to the moral and legal implications of the in vitro fertilisation program. This is a kind of transplantation procedure and because it involves the transplantation of a human life form, it raises strong feelings and perhaps moral issues harder to resolve. These range from the view that the procedure should be totally forbidden (espoused by a Papal statement) through the opinion that human fertilisation divorced from human married love is unacceptable on humanistic grounds, to general indifference to the moral questions raised or positive approbation of the experimental work of Professor Carl Wood and his colleagues. But whether we support or oppose the in vitro fertilisation program, for religious, humanistic or cost reasons, a number of issues are presented that simply cannot be ignored by lawmakers and society. They include the extent to which the procedures should be available for non-married couples, the retention of embryos, the use of surrogates, the contemplation of gender choice, rights of custody to an embryo following death or divorce of a parent and so on. The problems range from the exotic (what will happen to British titles if a test tube baby of an Earl or Prince is born a century later?) to the very practical (how much of the program ought to be publicly funded, given the relatively small numbers benefitting and the competing claims for the medical dollar). Professor Carl Wood has written recently that the bio-ethical issues raised by his work should be carefully examined and evaluated:

The community view on such matters may be determined by government, by a legal body or by a medical or scientific group. A group such as the Law Reform Commission would be most appropriate, as it is less likely to be (or seen to be) biased than either the medical or scientific professions who are involved in the work, and the Commission would be less sensitive to possible criticism than a political party which may adopt an excessively conservative attitude because of fear of criticism. The Commission is experienced in assessing evidence, making decisions, requiring different emphasis for, for example, general guidelines for research, uniform regulations, hospitals and scientific groups or laws on particular matters. ... [I]t would be an appropriate body to resolve the current difficulties and explore possibilities for the future.<sup>48</sup>

Under the Law Reform Commission Act, it is for the Federal Attorney-General to decide whether the Commission should embark upon such a project. He may take the view that the issue is too complex or sensitive or that the legal questions raised are primarily State matters under the Australian Constitution.

Genetic Engineering. A second new kind of transplantation involves the use of genetically manipulated material. Ten days ago, a national symposium was held on the potential for the industrial application of genetic engineering in Australia. As emerged from that symposium, and from the medical literature on the subject, there seems little doubt that important advances in the treatment of disease will follow the medical applications of genetic engineering. But the developments in this area will have to be carefully watched, because of the danger that manipulation of basic life forms may have consequences that cannot at this stage be predicted with accuracy. The Federal Government has established a monitoring committee to propose voluntary guidelines for development of genetic engineering. A point may be reached where voluntary guidelines and monitoring committees, wholly or mainly comprised of scientists, do not adequately satisfy the community interest in the safety and propriety of these developments.

I call to attention the case of Dr. Martin Cline, a Professor of Medicine at the University of California at Los Angeles. In July 1980, in Israel and Italy, Cline performed experiments on two victims of beta thalassaemia, a fatal genetic blood disease. Without the approval of the voluntary monitoring body in the United States, Professor Cline inserted cloned versions of the gene that produces the missing haemoglobin proteins into the patients' bone marrow. In fact he went to Italy and Israel to perform these experiments there shortly before UCLA declined permission for the experiment. He has since been reprimanded for violating United States Government voluntary guidelines controlling genetic engineering and experiments on human subjects. Some observers have considered that the risks of his experiment were high and that the sanctions provided by the voluntary system were inadequate.<sup>49</sup> The annual review for 1980 of the Office for Protection from Research Risks at the National Institutes of Health in the United States reported 450 violations of the human experimentation rules, although most of them were technical or procedural violations. The infraction by Professor Cline only came to attention because of a report to the University Committee by nurses in the School's medical wards.

Whilst we must get right our system of monitoring and approving developments involving genetic manipulation, there is little doubt that this is going to be an important growth area in transplantation in the future. Cline himself, in a piece in the New England Journal of Medicine, had asserted his undiminished optimism and enthusiasm:

Genetic diseases of blood are logical first targets of studies aimed at inserting normal genes. Eventually many other inherited disorders may be approached by genetic techniques. ... One can envisage the eventual possibility of identifying, cloning and inserting genes mediating resistance to malignancy or enhancing the effectiveness of anti-cancer drugs. This new technology will present society with challenging problems; it will also provide the potential for enormous benefit for many patients suffering from diseases now considered incurable.<sup>50</sup>

Euthanasia. The recent trial in Britain of Dr. Leonard Arthur and other cases involving Down's syndrome or otherwise retarded children, together with the conviction of the members of EXIT, the British Euthanasia Society, and the release of a son on a bond after conviction of a so-called 'mercy killing' raise the issue of the law and euthanasia. That debate, in turn, calls attention to the so-called right to a 'natural death' and the right to execute a 'living will' which may forbid the use of extraordinary medical procedures in the case of the terminally ill. Already in South Australia and Victoria Private Member's Bills have been introduced into Parliament to permit the execution of such a will binding on the medical profession. Their significance for transplantation donations need not be underlined by me. The strong passions raised in the debate of the subject, both in the United States and in Australia<sup>51</sup>, merely illustrate once again the sensitivity and complexity of the relationship between medicine and the law, where issues of life and death are involved.

#### CONCLUSIONS

I am conscious of the inadequacies of this address. I have said nothing about many subjects that remain to be studied. These include the great debate concerning the costs of transplantation and other medical treatment and the contention that society, in making its ethical judgments, is entitled or required to look at the costs involved in treatment of different kinds or in the choice between treatment and non-treatment.<sup>52</sup> I have said nothing about informed consent and about clinical trials. I have said nothing about the research of Dr. Ian Johnston and his team at Melbourne University involving the dissection and microscopic study of the human embryo. I have said nothing about the alleged special ethical problems involved in cardiac transplantation. I have said nothing about the teaching of new medical ethics. I have not dealt with the retention of particular organs and tissues (such as the human pituitary or corneas) from autopsies or coronial cadavers for use in the production of useful serum or for transplant purposes. I have left unconsidered the use suggested in some quarters of embryos, deliberately grown for no other purpose than to provide organs for transplantation, especially in children.

I hope enough has been said to indicate this much:

- .. That the practitioners of law and medicine have a great responsibility to society to help sort out the bio-ethical and legal questions that are raised by advances in medical techniques.
- .. That nowhere is this more true than in the remarkable developments of transplantation of human organs and tissues or of other life forms by the new procedures involving genetic manipulation.
- .. That it will not be good enough to ignore these problems, because to do so is to make a decision that may result in a legal regime which is inimical to medical science or out of keeping with community morality or both.
- .. That the problems are presenting themselves to society with ever-increasing speed and complexity.
- .. That our institutional arrangements for dealing with these problems, with the benefit of interdisciplinary expertise and community consultation, tend to move too slowly.
- .. That, in a democracy, there is an ever-present willingness to postpone issues such as I have been addressing, because of the strong passions that they can raise in some quarters. It will be a shocking admission of the failure of our democratic institutions if, as a society, we cannot find ways to solve problems of the kind I have been mentioning in the assembly of the whole people — our parliaments. The alternative is far less acceptable : it involves silence and timidity where, in matters of life and death, there should be clear rules. It involves turning a blind eye to the inadequacies of the law and abdicating to the private consciences of a few, the large moral judgments in which the whole of society should be involved through its representatives.

I cannot say to you that the Australian Law Reform Commission is the only body that can help our society to tackle these issues. But it does have some advantages. It is a national institution. It has a proved track record. It has achieved success with legislation in this area both at a Federal and State level. It has secured the participation of some of the most distinguished scientists, medical professionals, lawyers, theologians and philosophers in the country. One thing is sure. Issues such as I have been addressing are no longer suitable for treatment in hospital committees, university councils or government agencies behind closed doors. If the medical profession, including those engaged in transplantation, are to carry the community with them in their brave experiments and if they are to be supported by modern laws which reflect the community's opinion, we must make it our business as a society to ensure that institutional means are found to address the bio-ethical controversies of our time.

FOOTNOTES

1. Australian Law Reform Commission, Human Tissue Transplants (ALRC 7), 1977, v.
2. Russell Scott, The Body as Property, Viking Press, New York, 1981.
3. 'Human Tissue Transplants', British Medical Journal, 28 January 1978, 195.
4. ibid, 196.
5. Transplantation and Anatomy Ordinance 1978 (ACT); Human Tissue Transplants Act 1979 (NT); Transplantation and Anatomy Act 1979 (Qld).
6. It is understood that the Victorian Cabinet has recommended enactment of legislation based ALRC 7 in Victoria. In South Australia, a Legislative Council Select Committee on the Natural Death Bill recommended in 1980 the redrafting of the Transplantation of Human Tissues Act 1974 (SA) and the adoption of a uniform definition of death as proposed by the Australian Law Reform Commission. The South Australian Minister has indicated to the Law Reform Commission the expectation that legislation based on the report (but with modifications, especially in relation to donations by minors) will be introduced in the South Australian Parliament in 1982.
7. The Age, 14 March 1981.
8. The Age, 30 October 1981.
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10. The Melbourne Herald, 14 November 1981.
11. Sun Herald, 22 November 1981.
12. British Medical Journal, 22 September 1979, 688.
13. 'Brain Death and Transplantation', The Lancet, 15 December 1979, 1311.
14. 'Supply of Kidneys for Transplantation', The Lancet, 19 November 1977, 1089.

15. 'Renal Transplantation in the 1980s', British Medical Journal, 23 February 1980, 503.
16. *ibid.*
17. ALRC 7, 136.
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20. As reported in the Canberra Times, 11 July 1981.
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23. 'Death and the Brain Stem', The Lancet, 13 December 1980, 1286.
24. Table 2 in F.P. Stuart, F.J. Veith, R. Cranford, Brain Death Laws and Patterns of Consent to Remove Organs for Transplantation from Cadavers in the United States and 28 Other Countries; in Transplantation Proceedings, Vol. XIII, No. 1, March 1981. F.J. Veith and Ors, 'Developments in the Use and Recognition of Brain Death in the United States and Other Countries', Transplantation, Vol. 31, No. 4, April 1981, 238.
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26. *ibid.*
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35. T. Smith, 'Kidney Transplants : Doctors and the Media', British Medical Journal, 20 January 1979, 182, 183.
36. ALRC 7, 47ff.
37. Lander, n.33 above.
38. R.L. Simmons and Others, 'Parent-to-Child and Child-to-Parent Kidney Transplants', The Lancet, 14 February 1976, 321.
39. New England Journal of Medicine, Vol. 296, No. 7, 17 February 1977, 363.
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41. 'Altruism and Coercion : Should Children Serve as Kidney Donors?', in the New England Journal of Medicine, Vol. 296, No. 7, 17 February 1977, 390-391.
42. ALRC 7, 136 (Draft Bill, cl.40(6)).
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44. The Bulletin, 27 October 1981, 30 ('Pirating Body Spare Parts').
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50. K. Mercola and M.J. Cline, 'The Potential of Inserting New Genetic Life', New England Journal of Medicine, Vol. 303, 27 November 1980, 1297, 1300.
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