REFINING THE DEFINITION OF DEATH FOR AUSTRALIAN LEGISLATION

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[*In the article Mr Smith considers the need for reform in the area of defining when death occurs and the various approaches that exist to define death. He then analyses the stages of the developments in the various Australian jurisdictions and discusses the substantive content of the basic definition adopted and the practical implications of any enactment. The author suggests that the concept of death should be legislatively enacted in relevant pieces of legislation which call for a resolution of the question at the present time and a more general separate statement defining death should be avoided at the moment. Conceptually death should be defined as the permanent and irreversible loss of consciousness of the individual as determined by irreversible cessation of brain stem function. The actual operational criteria of death should form the subject of a circular published by the relevant statutory health authority for the guidance of medical practitioners in relation to the specific problems they face.*]

INTRODUCTORY

'Either he's dead or my watch has stopped'
Groucho Marx c. 1935**

When the above quip was made, deciding whether someone had died was generally a matter of feeling for a pulse or listening for breathing, and in the absence of either of those signs, it was acceptable to conclude that the individual in question was dead. However, in recent times, and particularly in the last decade with the advent of technological means of supporting and replacing human life processes, such tests have proved unreliable and have given rise to doubts as to the exact moment at which an individual can be considered to be no longer living.

Because questions have arisen as to the proper mode of determining death, and because the medical profession has demonstrated anxiety and uncertainty in making decisions at the time of death, law makers have been called upon to enact legislation codifying the manner in which death is to be determined. Unfortunately, as Mr Justice Windeyer has observed, 'the law marches with medicine, but in the rear and limping a little'.[1] It is the objective of the present article to examine the manner in which the law has handled and is handling the question of the determination of death, and to suggest improvements to the measures already adopted and to provide guidelines for future legislative interventions.

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** Cited in The Law Reform Commission [1983] No. 29 *Reform* 27.

[1] Cited by The Hon. L. H. Davis in debate on the second reading of the Transplantation and Anatomy Bill 1983 (S.A.): South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 641.

I THE NEED FOR REFORM

Until recent times, when biomedical technology has outstripped, to some extent, the capacity of society to contemplate its own existence, little consideration was given to defining a point of time beyond which individuals were no longer considered to be alive. In the last few years, however, doctors, lawyers, theologians, sociologists, politicians, philosophers, and other members of the community have examined the issues in considerable depth,[2] and have recommended a plethora of ways in which the seemingly simple question of deciding when an individual has died may be resolved.[3] It is clear, as a recent United States report on this subject has observed, that 'determination of death must be made in a consistent and evenhanded fashion'.[4] Unfortunately, the prolific research and analysis of the relevant issues has led to a variety of solutions being adopted worldwide providing overall inconsistency and uncertainty. In some respects greater clarity might have been achieved had the recent analyses and debates not occurred, for traditionally the determination of death was simply left to the medical profession. Now it is considered by all.

Two main circumstances have given rise to the need to define precisely the time of death. First, the development of techniques for prolonged maintenance of ventilation, circulation, alimentation, and excretion of the human body by artificial means, makes possible the creation of a macabre situation in which the body lives while the brain is dead.[5] Second, the widespread use of cadaver organs for transplantation requires an accurate determination of when the donor has died so that organs may be removed. In addition, numerous other legal, philosophical, and social situations require an accurate decision that death has occurred.[6]

[2] Veatch R. M., *Death Dying and the Biological Revolution. Our Last Quest for Responsibility* (1976); Van Till-D'Aulnis de Bourouill H. A. H., 'Legal aspects of the definition and diagnosis of death' in Vinken P. J. and Bruyn G. W., *Handbook of Clinical Neurology* (1976) xxiv 787-828; Veatch R. M., *Case Studies in Medical Ethics* (1977) 317-47; Glover J., *Causing Death and Saving Lives* (1977); Russell O. R., *Freedom to Die Moral and Legal Aspects of Euthanasia* (1977) 29-34, 297-320; Australian Law Reform Commission Working Paper *Human Tissue Transplants* (1977), Issue Paper *Statutory Brain Death* (1977), Report No. 7 *Human Tissue Transplants* (1977) 52-63 ('A.L.R.C. Report'); Weir R. F., *Ethical Issues in Death and Dying* (1977) 57-132; McMullin E., *Death and Decision* (1978) 1-34; Walton D. N., *On Defining Death An Analytic Study of the Concept of Death in Philosophy and Medical Ethics* (1979); President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research, *Defining Death; A Report on the Medical Legal and Ethical Issues in the Determination of Death* (1981) ('President's Commission'); Beauchamp T. L. and Walters L., *Contemporary Issues in Bioethics* (2nd ed. 1982) 87-116, 269-306; Plueckhahn V. D., *Ethics, Legal Medicine and Forensic Pathology* (1983) 43-6, 263-79.

[3] See, for example, Report on the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death 'A Definition of Irreversible Coma' (1968) 205 *Journal of the American Medical Association* 337-40 ('Ad Hoc Committee'); *Resolution of the 22nd World Medical Assembly*, Sydney (1968) ('Declaration of Sydney'); Capron A. M. and Kass L. R., 'A Statutory Definition of the Standards for Determining Human Death An Appraisal and a Proposal'. (1972) 121 *University of Pennsylvania Law Review* 87; see also the references cited in A.L.R.C. Report, *op. cit.* n. 271; National Health and Medical Research Council *A Code of Practice for Transplantation of Cadaveric Organs* (1982) ('N.H.M.R.C. Code') reprinted in Plueckhahn, *op. cit.* Appendix II, 263-79; Law Reform Commission of Canada *Criteria for the Determination of Death* Working Paper 23 (1979) ('C.L.R.C. Working Paper').

[4] President's Commission, *op. cit.* 43.

[5] Harp J. R., 'Criteria for the Determination of Death' (1974) 40 *Anesthesiology* 391.

[6] Legally, the time of death is relevant for termination of marriage, succession and inheritance, insurance, taxation and social security benefits, claims by surviving relatives, tortious and contractual claims, and criminal law.

(a) Life support machinery

Codes of medical ethics require doctors to preserve life as a fundamental principle of practice.[7] A corollary is that once a patient has died, the doctor is no longer obliged to continue treatment and is morally and professionally at liberty to disconnect electrical devices previously used to maintain life in the now deceased patient. Accordingly, precise determination of the time of death has critical implications for both the patient receiving treatment prior to death and the practitioners administering the treatment, for once a patient has been declared dead, it is unnecessary and undesirable for life support machinery to be kept operating.

Medical technology is presently able to maintain most visceral functions in patients who would otherwise die within a short period of time. However, the full extent to which such life support machinery is used is sometimes not fully appreciated:

> It is true that death is rarely dignified, but it is also undignified to die with a urethral foley catheter connected to a drainage bag, a continuous I.V. running, a colostomy surrounded with dressings, and irrigation tubes stuck in an abscess cavity line, a moisturised oral endotracheal tube attached to a Bennett respirator taped to the face, an oral airway, a feeding naso-gastric tube also taped to the face, and all four extremities restrained.[8]

Whether these mechanical devices are to be disconnected from a patient will depend upon a number of considerations. First, whether the patient would be likely to recover if they were disconnected.[9] Second, whether it would be preferable to terminate life support so as to allow the patient to die naturally and more quickly than if the machinery were maintained.[10] Third, whether the organs of the patient, once dead, are required for transplantation into another living patient.[11] Fourth, whether the life support machinery is required for another patient who will have a greater chance of survival than the patient presently receiving the use of that machinery.[12] Fifth, whether it is legally permissible to withdraw mechanical treatment.[13] The resolution of each of these considerations depends upon value judgments being made by individual practitioners in relation to the specific

[7] See the Hippocratic Oath, Declaration of Geneva, American Medical Association Principles of Medical Ethics, and the International Code of Medical Ethics in Veatch (1977), *op. cit.* Appendix 1, 351-6; for the Australian practice see Burton A. W., *Medical Ethics and the Law* (3rd ed. 1979) 11-4; Plueckhahn, *op. cit.* 'The Australian Medical Association Code of Ethics' Appendix I, 253-262.

[8] Extracted from a letter written by a Massachusetts doctor to the *National Times* and cited by The Hon. Frank Blevins in debate on the Natural Death Bill 1980 (S.A.), South Australia, *Parliamentary Debates*, Legislative Council, 5 March 1980, 1429.

[9] On the question of recovery once life support machinery is disconnected, see Van Till-D'Aulnis de Bourouill H. A. H., 'How dead can you be?' (1975) 15 *Medicine Science and the Law* 133, 138; and the case of Karen Ann Quinlan is referred to in President's Commission, *op. cit.* 61.

[10] The issues of active and passive euthanasia in this context are discussed by Walton, *op. cit.* 4, 10-2. See also the debate on the Refusal of Medical Treatment Bills 1980, 1981 (Vic.) in Victoria, *Parliamentary Debates*, Legislative Council, 3 December 1980, 4071; 10 December 1980, 4693; 28 October 1981, 2158.

[11] A.L.R.C. Report, *op. cit.* 58, citing the case of a heart transplant operation having been abandoned owing to doubts over the legal liability of the practitioners involved.

[12] The problem of resource allocation was discussed by the Hon. R. J. Ritson in South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1560; see also President's Commission, *op. cit.* 24 and *infra.* ns 7-8, 234.

[13] The question of malpractice suits and criminal charges against practitioners is discussed by McMullin, *op. cit.* 6.

circumstances of the individual cases before them. Legislative guidelines could, however, ensure that this decision-making process is uniform and in accordance with currently held societal views. In the opinion of the present writer, legislators should treat the need to preserve the individual patient's life as of paramount importance while acknowledging the undesirability of providing artificial support to patients who demonstrate no real likelihood of recovery. As the President's Commission commented in 1981, there is a need both to render appropriate care to patients and to replace artificial support with more fitting and respectful behaviour when a patient has become a dead body.[14]

Similarly, the editors of the *Lancet* noted that

> it would be unfortunate if the time came when no patient in hospital could decently die without the last rite of modern medicine — a statutory period on the ventilator.[15]

The precise manner in which a legislative definition of death will ameliorate these difficulties will be considered shortly. For the moment it is clear that there is a definite need to regulate the unnecessary and inappropriate use of medical technology in a way most beneficial to individual patients and to society generally.

(b) Transplantation

As with the decision to withdraw artificial life support machinery, the decision to remove human tissues and organs for the purpose of transplantation into other living persons requires an accurate determination that the donor has died. The issue in this context is of principal importance where organs and tissues are removed from the donor which are essential to the donor's life, for there is nothing objectionable in this context about live donor transplantation where organs, such as the kidney, are removed in such a way as to permit the donor to continue living.

Organ transplantation is carried out extensively in Australia now, with well over one thousand transplants taking place each year.[16] However, such operations are often abandoned because the practitioners involved are uncertain as to whether the donor is legally dead, resulting in a possibly successful therapeutic treatment being denied a recipient patient.[17] With the current demand for human organs suitable for transplantation, a reluctance to remove organs from a potential donor because of uncertainty as to the state of life of that donor, may well result in the recipient patient's death.

It is important in considering a legislative solution to this problem to distinguish the diagnosis of death from the determination of when to remove organs for

[14] President's Commission, *op. cit.* 24; see also the views of Dr Michael Shannon, Vice President of the National Right to Life Association reported in Victoria, *Parliamentary Debates*, Legislative Council, 10 December 1980, 4695 *per* The Hon. R. A. Mackenzie.

[15] Editorial [1974] *Lancet* 341, 342.

[16] Current statistical information is provided in South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 641 showing numbers of transplant operations, functioning transplants, and dialysis patients for each State and Territory in Australia.

[17] A.L.R.C. Report, *op. cit.* 58; South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1560 *per* The Hon. R. J. Ritson; President's Commission, *op. cit.* 23; see also N.H.M.R.C. Code, *op. cit.* 4 referring to the hesitancy of hospital staff to initiate procedures leading to transplantation also discussed in South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 642.

transplantation. Care must be taken not to have two sets of criteria of death, one for normal patients and another for transplant donors.[18] In the case of kidney, heart and lung transplants, however, it is necessary for the donor's blood to remain circulating until the time of organ removal. In most cases blood circulation and respiration are being artificially maintained owing to the donor having lost all cerebral functions, and this raises the issue presently before Australian Parliaments as to whether death has occurred even though blood circulation and respiration are being artificially maintained following loss of brain function. If legislation provides an affirmative answer to this question, then the donor's organs may be removed at any time following loss of brain function; if a negative answer is provided, then blood circulation and respiration must first cease, either naturally or by the withdrawal of life support machinery, before the donor's organs may be removed.

(c) Legal relevance

The practical situations described above can have important legal consequences sometimes resulting in the medical practitioners concerned being prosecuted for criminal acts or omissions, or being sued for damages for malpractice or trespass to the person. In addition, important civil consequences can flow from an uncertain or contrived extension of the time of death.

So far as life support machinery is concerned, there can be serious implications for the laws of succession, insurance, contracts, and taxation where the time of death is able to be manipulated. For example, in South Australia succession duty was abolished on 1 January 1980. On the basis of the then existing law, it could have been possible to keep a patient, artificially maintained by life support machinery, alive so as to avoid paying duty prior to that date.[19] Other problems of maintaining life artificially so as to obtain benefits under insurance policies or deceased estates can only be resolved by a precise definition of when a person is to be considered legally dead in each of these situations.

With respect to the removal of organs and tissues from individuals who are not legally considered to be dead, the criminal law provides that if the physical interference with a living person causes that person's death, then, in the absence of consent, and assuming criminal intent, the crime of murder will be committed. Three situations have arisen in this context. First, a surgeon removing a vital organ may be charged with murder for having caused the death of the donor.[20] Second, a defendant charged with the murder of a donor prior to the donor being the subject of transplantation surgery, may seek to raise in his or her defence the fact that the death of the donor was not caused by his or her criminal act but rather by the

[18] Walton, *op. cit.* 5-6.

[19] This and other instances are fully discussed in South Australia, *Parliamentary Debates*, Legislative Council, 23 March 1983, 576 *per* The Hon. R. J. Ritson; Legislative Assembly, 21 April 1983, 1005 *per* The Hon. Jennifer Adamson; see also Legislative Council, 29 October 1980, 1560 *per* The Hon. R. J. Ritson.

[20] South Australia, *Parliamentary Debates*, Legislative Council, 5 November 1980, 1758 *per* The Hon. L. H. Davis; Legislative Assembly, 23 September 1981, 1119 *per* Mr Kenneally citing the Australian Law Reform Commission.

removal of the vital organ by the transplant team.[21] Finally, a surgeon seeking to comply with the existing law may withdraw life support machinery before removing organs from the donor, and thus cause the death of the donor, not by removing a vital organ, but by withdrawing life support machinery.[22] Each of these scenarios can only be resolved satisfactorily by defining precisely, for the purposes of each situation, when the donor is legally considered to be dead.

(d) Philosophical relevance

Until recent times the concept of death was the subject neither of detailed discussion nor critical analysis. However, biomedical technology has compelled members of society to contemplate the nature of their existence for pragmatic reasons, and such enquiry is subject to severe time constraints, as the continued use of modern technology in the presence of the issues discussed above has created an urgent and crucial need for analysis of the concepts and resolution of the dilemmas which have arisen.

Defining death, however, is not purely a matter of practical analysis, for any given definition carries with it far reaching implications for society in general. By describing operational criteria to determine whether a person is no longer living, the law maker is making a value judgment on behalf of society that an individual possessing certain attributes should no longer be treated as existing as a member of the society. Accordingly, that individual's body may then be disposed of according to accepted practices in the society and his or her property distributed according to law.

Although the concept of death might not be addressed by legislators, the criteria which are specified carry the value judgment that the society no longer considers the deceased person worthy of recognition and attention. Accordingly, the accepted medical and legal definition of death needs to reflect closely the social meaning of death as understood in the community in question.[23]

In providing a legislative definition of death, society is impliedly distinguishing those indicia of life which are considered worthy of preservation, from those which are not. Central to this enquiry is the issue of whether it is valid to view death as a process rather than an event. Morison has suggested that instead of toying with redefinition, we ought to recognize that a life may reach a state where we are not ethically bound to preserve it, and thus a quality of life decision must be made that it can be terminated when the benefits decline and the costs, pain and suffering mount correspondingly.[24]

In the opinion of the present writer, it is essential in order to obtain logical analysis and legislative precision, for the concept of death to be expressed prior to embarking upon the exposition of operational criteria which reflect that concept,

[21] A.L.R.C. Report, *op. cit.* 58; South Australia, *Parliamentary Debates*, Legislative Council, 23 March 1983, 576 *per* The Hon. R. J. Ritson citing *Potter's* case.

[22] South Australia, *Parliamentary Debates*, Legislative Council, 26 November 1980, 2223 *per* The Hon. R. J. Ritson, citing Mr Justice Kirby.

[23] Discussed in President's Commission, *op. cit.* 31.

[24] Morison R. S., 'Death: Process or event?' (1971) 173 *Science* 694, 694-5; see also A.L.R.C. Report, *op. cit.* 53; Walton, *op. cit.* 2.

or by which that concept may be measured. Accordingly, an appropriate conceptual analysis of death will be considered shortly. Only after that concept has been depicted will it be possible to set relevant standards by which it might be determined.[25]

(e) Summary

In the past the question of determining death was generally left to the discretion of the medical profession with decisions being made solely on the basis of and in accordance with the ethics and judgment of individual practitioners.[26] It now appears that it is undesirable to continue this practice and instead, the methods and criteria for determining death should be clarified and codified to ensure uniformity of practice and resolution of the legal, social, and philosophical issues which have arisen. It should be stressed, however, that medical practitioners are making decisions daily to resolve these dilemmas and will continue to do so even in the absence of legislative intervention. In the interests of uniformity of practice, certainty of legality, and responsible government, the time has now arrived to openly analyze these practices and make policy decisions implementing any conclusions reached. In the absence of reform, the problems referred to above shall continue to exist and almost certainly increase in frequency and number thus leading to an intolerable position for the community generally.

2 METATHEORY

(a) Levels of analysis

Unlike many other areas of legislative intervention, the question of defining death may be approached from a number of varying levels. The recent literature in this field has described between three and six levels of analysis differing in the focus and specificity of subject matter.[27] It is important to conduct this preliminary enquiry for, at the outset, a decision must be made as to which level policy, philosophy, and legislation should be directed.

(i) *Ethical theory*

Inherent in all policy making is a reliance upon some fundamental ethical theory upon which decisions are founded.[28] In the present context differences between utilitarian, social contract, and deontological theories can have important consequences when selecting between competing value judgments. Similarly, the analysis of ethical principles such as autonomy, beneficience, and justice can reveal important determinants of the manner in which death can and should be

[25] As to the order of rational enquiry see Engelhardt H. T., 'Definitions of death: where to draw the lines and why.' in McMullin, *op. cit.* 15, 26.

[26] Victoria, *Parliamentary Debates*, Legislative Assembly, 11 December 1981, 4969 *per* Mr Borthwick.

[27] Cassell E. and Kass L. R., 'Refinements in criteria for the determination of death: an appraisal'; (1972) 221 *Journal of the American Medical Association* 48 (5 levels); Capron and Kass, *op. cit.* (4 levels); Walton, *op. cit.* 22 (3 levels); Engelhardt, *op. cit.* (2 levels); Veatch (1976), *op. cit.* 53 (3 levels).

[28] Beauchamp and Walters, *op. cit.* 1-43.

defined. However, it is clear that legislators are reluctant to embark upon these enquiries, preferring to limit their discussions to more pragmatic issues.[29]

(ii) *Concepts*

Assuming one holds views in accordance with a particular ethical theory, one is then able to use that theory to establish a preferred concept. Again, in the present context, the choice of a particular concept of death seems too esoteric an enquiry for politicians to undertake, but nevertheless remains of crucial importance in resolving the issue and setting more exacting criteria. In debate on the Death (Definition) Bill 1983, in the South Australian Legislative Council, it was submitted that 'the Bill assumes that everyone knows what death is. It is the criteria of diagnosing death and legal recognition of it that was dealt with by that Bill.'[30] In the respectful opinion of the present writer, it is tautologous to assume that everyone knows what death is in enacting such legislation, and that to embark upon more precise analysis without having first resolved upon a conceptual definition is futile. The range of possible concepts of death is extensive and includes the loss of soul from the body, the cessation of the flow of bodily fluids, the loss of consciousness, the loss of the ability for social interaction, loss of sentience generally, and loss of personhood. Selecting the appropriate concept might well necessitate philosophical analysis, but this should not be avoided merely because more operational criteria are to be embodied in legislation.

(iii) *Physiological criteria*

Having selected a desirable concept of death on the basis of one's personal ethical principles and theories, it then remains to describe general physiological criteria by which that concept may be assessed. Such an enquiry will rest heavily with medical practitioners as well as law makers and will look to such indicia as organic systems, physiological functions, and human capacities.

(iv) *Operational criteria*

Directly related to the selection of general physiological criteria is the determination of appropriate operational criteria by which the systems and functions can be tested for the presence of life. At this level legislators look to describing such criteria as irreversible cessation of blood flow, respiration, or cerebral function.

(v) *Tests and procedures*

Finally, medical practitioners must carry out specific tests and procedures to decide whether the operational criteria have been satisfied in a particular instance. This may include taking blood pressure readings, electroencephalogram and electrocardiogram recordings, and testing for spinal and neural reflexes.

Thus, each level of enquiry has its own exponents, locus, and alternative

[29] President's Commission, *op. cit.* 55-6; South Australia, *Parliamentary Debates*, Legislative Council, 30 March 1983, 744 *per* The Hon. R. J. Ritson; Western Australia, *Parliamentary Debates*, Legislative Assembly, 17 November 1982, 5635 *per* Mr Hodge.

[30] South Australia, *Parliamentary Debates*, Legislative Council, 30 March 1983, 744 *per* The Hon. R. J. Ritson.

approaches. In deciding that a person has died, enquiries need to be undertaken at each level, although in the majority of instances detailed analysis is unwarranted as the fact of death is self-evident. It must be stressed, however, that any given determination of death must satisfy all levels of analysis. As Walton remarks, 'a useful philosophical analysis of death must be . . . anchored in the practicalities of medicine's daily life-and-death working decisions'.[31]

(b) Multidisciplinary enquiry

As appears from the immediately preceding discussion, the framing of an adequate definition of death requires the skills of a variety of professionals: philosophers, theologians, medical practitioners, lawyers, politicians, sociologists, and psychologists. In addition, the general lay public need to be consulted in order to ensure readily comprehensible rules are made. Each discipline has a particular focus at the differing levels of analysis and some perception of this fact needs to be stressed. It would be unwise for philosophers to dictate the type of equipment needed to ascertain when the brain stem ceases to function, for example.

Nevertheless, each discipline has skills necessary for and relevant to the resolution of issues strictly within the province of the other fields of analysis. Engelhardt stresses this point as follows:

> medical, legal, and religious concepts of death do not necessarily denote essentially different concepts, but may instead signal special social circumstances within which definitions of death receive a particular articulation or employment.[32]

It is essential in legislating for an operational definition of death that the legislators consider the views of both philosophers as to the definition's conceptual antecedents, and doctors and lawyers who will apply the definition in practice. Thus, there is a need to coordinate practical inquiries with some degree of theoretical abstraction.[33] The precise way in which these approaches can be melded together will be considered *infra*.

3 BACKGROUND TO AUSTRALIAN LEGISLATIVE DEFINITIONS

Before describing and discussing the Australian legislative solutions to the above matters, the reader should be aware of the extensive developments which have occurred both locally and internationally in resolving the question of how best to determine that death has occurred. The following comments are by way of summary only, as complete and detailed analyses have already been published.[34]

(a) Traditional approaches

'Defining death should, in its roots, be a commonsense enterprise.'[35] In the past this was self-evident and death was traditionally ascertained by reference to the

[31] Walton, *op. cit.* 19.
[32] Engelhardt, *op. cit.* 15.
[33] Walton, *op. cit.* 15.
[34] *Supra* ns 2 and 3.
[35] Engelhardt, *op. cit.* 16.

absence of respiration and blood circulation. For most legal purposes the absence of respiratory and pulmonary function could be observed by visual and tactile examination of the body and could be tested by doctors and lay members of the public alike. Most dictionary and encyclopaedic definitions refer to the cessation of life and list physiological criteria necessary to determine this.[36]

In recent times,[37] however, there has been a general recognition that individuals cease to exist if their brains no longer function, and accordingly, medical and legal sources now include reference to 'brain death' as distinct from 'death' *simpliciter*.[38] However, the precise formulations of these definitions vary considerably amongst different sources.

(b) Medical approaches

In the majority of instances, medical practitioners ascertain the time of death by reference to the absence of respiration and circulation. It follows that without artificial support, neural cells will cease to function within a very short time due to lack of oxygen. Accordingly, in time sequence, cessation of respiration and circulation generally occur, although not always, prior to cessation of brain function. This temporal aspect is relevant when considering whether death is a process or an event.

The medical determination of death is concerned with ascertaining the fact of death rather than its legal definition. If death, or more precisely dying, is considered as a process, then its determination involves a judgment by the practitioners concerned that the patient's progress to a state of non-living or non-existence is sufficiently advanced to be diagnosed with certainty as being irreversible.[39] It is therefore essential in making their diagnostic assessment that practitioners adduce sufficient evidence of the irreversible and permanent cessation of function.[40] The question that has arisen in recent times concerns to which organs or structures physicians should look when seeking such evidence — heart, lungs, or brain?

It is accepted worldwide that where circulation and respiration are being artificially maintained, it is necessary to look to the functioning of the brain in order to establish the death of the patient.[41] While the concept of brain death may have achieved universal acceptance amongst medical practitioners in such circumstances, the precise formulation of that concept is presently a matter of

[36] Traditional legal definitions of death appear in *Jowitt's Dictionary of English Law* (2nd ed. 1977) i 557-8; *Stroud's Judicial Dictionary* (4th ed. 1972) ii 692-3; *Bouvier's Law Dictionary and Concise Encyclopedia* (8th ed. 1914) i 775-83; Walker D. M., *The Oxford Companion to Law* (1980) 338. See also A.L.R.C. Report, *op. cit.* 54-7; President's Commission, *op. cit.* 13.

[37] And, indeed, in less recent times: Macbeth — 'the time has been, That, when the brains were out, the man would die, And there an end'; *Macbeth* (Globe ed. 1900) Act III Scene iv, 79.

[38] *Black's Law Dictionary*, (5th ed. 1979) 170; Blakiston, *Gould Medical Dictionary* (4th ed. 1979) 'brain death' 190, 'death' 358.

[39] A.L.R.C. Report, *op. cit.* 53. On the issue of whether death is a process or event see Declaration of Sydney, *op. cit.*; Morison, *op. cit.* Against the view of death as a process, see Kass L. R., 'Death as an event: A commentary on Robert Morison' (1971) 173 *Science* 698; Walton, *op. cit.* 25; President's Commission, *op. cit.* 77.

[40] See Burton, *op. cit.* 65-6; Knight B., *Legal Aspects of Medical Practice* (2nd ed. 1976) 34-6; Plueckhahn, *op. cit.* 44.

[41] A.L.R.C. Report, *op. cit.* 54-6; Beauchamp and Walters, *op. cit.* 270-1; Ad Hoc Committee, *op. cit.*; Capron and Kass, *op. cit.*; Russell, *op. cit.* 29-33; President's Commission, *op. cit.* 23-6; N.H.M.R.C. Code, *op. cit.* Plueckhahn, *op. cit.* 44.

continuing controversy, which shall be dealt with more fully *infra*. In addition, even assuming agreement as to the particular locus of functional cessation *within* the brain, a further difficulty arises in reaching agreement as to the battery of tests and procedures which are to be used when examining the patient to ascertain such loss of function.

(c) Philosophical approaches

At the outset it needs to be determined whether or not philosophy has a role to play in resolving the question of the definition of death, or whether the enquiry should be conducted pragmatically by medical and legal practitioners alone. It has already been suggested by the present writer that to enact legislation at the level of operational criteria without giving due consideration to conceptual issues would be counter-productive.[42] Others have argued that to embark upon a philosophical analysis of the meaning of death in this context is unwarranted because such enquiries cannot yield definitive results of practical use in resolving the issues presented to medicine and the law.[43] Walton has discussed this epistemic problem of skepticism in depth and has concluded that it *is* possible to achieve real progress at the conceptual level of analysis.[44] Assuming, therefore, that it is not fatuous to discuss the definition of death at the conceptual level, the following arguments need to be considered.

Initially, it is possible to distinguish positive and negative conceptual approaches: the former dealing with an examination of those characteristics which, if lost, will evince death; and the latter dealing with an examination of those characteristics which, if present, will permit death to be adopted. This latter approach concerns the acquisition by individuals of essentially undesirable characteristics of life such as pain, suffering, disfigurement, and severe intractible anxiety. These negative characteristics go to the determination of whether an individual life is objectively worth living, and concern the value judgments inherent in euthenasia and natural death legislation, which are generally beyond the scope of the present paper.[45]

Those conceptual analyses of greater relevance to the present discussion, concern the elucidation of which positive characteristics must be lost in order for the individual to be categorized as dead.

The first of these approaches deals with the concept of personhood; that is, to ascertain those characteristics of individuals which are essential to being a human being.[46] Such an enquiry may be ontological or moral but generally entails an assessment and delimitation of various characteristics which are necessary for

[42] *Supra* 2 Metatheory [ii] *Concepts* 206.
[43] President's Commission, *op. cit.* 36.
[44] Walton, *op. cit.* 24-5.
[45] See Weir, *op. cit.* chs 3-4; Veatch (1976), *op. cit.* chs 3 and 8; Walton, *op. cit.* ch. VII; Beauchamp and Walters, *op. cit.* ch. 8; McMullin, *op. cit.* chs 5-7; Glover, *op. cit.* chs 14-5; Keyserlingk E. W., *Sanctity of Life or Quality of Life in the Context of Ethics, Medicine and Law* (Law Reform Commission of Canada, Protection of Life Series) (1979).
[46] For instances of such approaches see Beauchamp and Walters, *op. cit.* ch. 3; Veatch (1976), *op. cit.* 25-42; Walton, *op. cit.* 9; Engelhardt, *op. cit.* 15-29; President's Commission, *op. cit.* 38-41; Finnis J., *Natural Law and Natural Rights* (1980) 86-90.

personal as opposed to biological life. Such characteristics may be socially or individually oriented. A difficult philosophical task is to rank these characteristics in order of importance, and finally to differentiate necessary from merely sufficient ones. One way of approaching this problem has been to seek a locus for the necessary characteristics in the human organism and then to assume that destruction of that locus shall inevitably lead to loss of personhood, and thus life.[47] Such phrenological enquiries have generally proved futile except in so far as the brainstem is regarded as the controlling centre of consciousness in humans.

Indeed, the analysis of consciousness as a criterion of life has proved far more reliable and fruitful than the accumulation of lists of human characteristics. In seeking to distinguish life from death, one must look to the manner in which individuals use their varied skills and attributes. Engelhardt concludes that sentience and consciousness are the necessary criteria for life: 'to be dead is no longer to be around, to be one on whom things in this world can have direct and immediate bearing'.[48] Glover similarly regards consciousness as the essential characteristic which demarcates life from death but argues that adoption of this criterion requires conceptual revision and a decision as to whether or not we attach any value to the preservation of someone irreversibly comatose: 'Do we value "life" even if unconscious, or do we value life only as a vehicle for consciousness?'[49] In the opinion of the present writer, the fact that the concept of brain death has widely been accepted in the community implies that consciousness is the singular valuable attribute of life, for consciousness vanishes at the moment of cessation of neural activity, or more precisely, of brainstem activity. This question of the cerebral locus of consciousness will be considered shortly. To conclude, in the words of Roland Puccetti,

> unconscious breathing and the beating of the heart have no intrinsic value to a departed person; you could do no more harm to *that* individual, now dead, than you could do by opening a grave and stabbing a corpse.[50]

(d) Psychological approaches

While psychological theory and practice are principally related to the assessment and treatment of individuals in connection with the process of death and dying,[51] they can provide useful perspectives when considering whether death has actually occurred. The conception of death as 'irreversible, and total extinction of consciousness and sensation, including discontinuation of actual survival of the individual personality',[52] relies upon scientific assessment of the onset of such

[47] Engelhardt, *op. cit.* 17. See with respect to the history of phrenology, Walsh K. W., *Neuropsychology A Clinical Approach* (1978) 13-4; Luria A. R., 'The functional organization of the brain' (1970) 222 *Scientific American* 66.

[48] Engelhardt, *op. cit.* 16.

[49] Glover, *op. cit.* 45. On the question of defining the concept of consciousness see Globus G. G., Maxwell G. and Savodnik I., *Consciousness and the Brain: A Scientific and Philosophical Inquiry* (1976); Popper K. R. and Eccles J. C., *The Self and its Brain* (1977); Jantsch E. and Waddington C. H., *Evolution and Consciousness: Human Systems in Transition* (1976).

[50] Reproduced in Beauchamp and Walters, *op. cit.* 107.

[51] Kübler-Ross E., *On Death and Dying* (1969); Kastenbaum R. and Aisenberg R., *The Psychology of Death* (1974).

[52] Walton, *op. cit.* 13.

conditions. While empirical techniques are unable to assess experience after death, psychologists frequently conduct behavioural and personality assessment during the process of dying. Neuropsychological techniques have added great precision to the discovery and localization of neural lesions and have provided important theories about the functional interpretation of the brain.[53]

However, possession of such knowledge poses concern for those who rely upon irreversible loss of consciousness as the concept of death. In the psychoanalytic perspective, for example, consciousness is viewed as only one component of the entire psychic apparatus, and so if individuals who suffer total and irreversible loss of consciousness are allowed to die, their unconscious and preconscious personality components are thus considered of no value.[54] Acceptance of this notion again requires a value judgment being made as to the necessary criteria of a valuable existence. In this context, unconscious and preconscious personality components will only be considered to have value so long as they are able to be expressed in and related to a conscious personality.

(e) Sociological approaches

A number of writers have described the determination of death in social terms. Veatch, for example, considers one of the criteria of death to be the irreversible loss of the capacity for social interaction,[55] while McMullin argues that for a permanently comatose patient, the termination of life support equipment no longer matters. Instead, it is a decision relevant only for the community based upon the relative weight to be attached to such factors as reverence for life, pain caused to the family, economic cost, and allocation of scarce medical resources.[56]

In the context of organ transplantation, definitions of death are said to serve a social role of distinguishing between stealing an organ from a living person and harvesting an organ from a dead person.[57] Finally, Knight concludes that,

> when all sentient cerebral activity ceases, never to return, then the person is socially dead, in that he can never again communicate with his fellows, is unaware of their existence or indeed, of his own existence.[58]

All these important perspectives should be considered when making the individual value judgment that a particular person is no longer alive. In seeking to reduce these values to a single concept, again one reaches the conclusion that the possession of consciousness is the basal criterion for all social activities.

(f) Theological approaches

Western Christian theology holds the view that death marks the end of becoming for the individual. But it is not the end in the sense of cessation of being but rather the beginning of a new existence with God.[59] This view of immortality carries with it the conception of the soul leaving the mortal body at the time of death, which

[53] *Supra* n. 47.
[54] Freud S., *New Introductory Lectures on Psychoanalysis* (Standard ed. 1964) xxii ch. 3.
[55] Veatch (1976), *op. cit.* 38.
[56] McMullin, *op. cit.* 7; see *infra* n. 8, 234.
[57] Engelhardt, *op. cit.* 27.
[58] Knight, *op. cit.* 34.
[59] McMullin, *op. cit.* 1; Veatch (1976), *op. cit.* 31.

time correlates positively with the cessation of the flow of bodily fluids and, presumably, neural activity. Such a notion is of doubtful verifiability[60] and is certainly unfalsifiable in the natural scientific sense.[61]

However, because theologians postulate actual survival of the individual personality and continuation of post mortem consciousness and sensation, it matters little at what precise moment biological death is pronounced. To the dying individual, death is a quiet, still moment between two worlds.[62] Accordingly, it is logical that, for example, Catholic dogma sees nothing objectionable in the concept of brain death, preferring to leave the determination of death to medical practitioners.[63]

By defining death in terms of irreversible loss of consciousness, legislators would not necessarily accord with the time at which the soul departs the body. However, theologians and philosophers would concur that the time at which the soul leaves the body is really an aspect, in theological terms, of the time at which an individual ceases to be a person. Thus, 'if . . . conscious life and achievement is definitively ended, the human being is no longer there.'[64]

(g) Common law approaches

In the English common law tradition, little attention has been paid to the question of defining the time of death. As Mr Justice Fullager commented, 'the Courts have not, and will not, lay down any rule as to when a man is dead'.[65] The common law regards the moment of a person's death as a question of fact for determination at trial on the basis of expert testimony. However, the standards by which that testimony are to be measured are determined as a matter of law.[66] Nevertheless, judicially, the time of death is when a doctor concludes that death has occurred on the basis of current medical diagnostic techniques.[67]

To assist in cases of uncertainty, the common law has devised two doctrines, principally of evidentiary importance, but also of relevance in ascertaining the characteristics of life which are considered to be of value by the courts.

First, is the presumption of death where a person has been absent for a period of seven years after he or she was last known to be living.[68] This approach treats an

[60] Walton, *op. cit.* 84; President's Commission, *op. cit.* 42.

[61] Popper K. R., *Conjectures and Refutations: The Growth of Scientific Knowledge* (4th ed. 1972).

[62] As expressed, for example, in John Donne's Divine Poems such as 'Hymne to God my God, in my sicknesse' 1623: Hayward J., *John Donne A Selection of his Poetry* (1950) 177.

[63] A.L.R.C. Report, *op. cit.* 59; President's Commission, *op. cit.* 11; Health Advisory Council *Report to the Minister of Health on the Right to Refuse Medical Treatment Bill sic.* (1983) 4.

[64] McMullin, *op. cit.* 8.

[65] Ewing M. and Fullagar R. K., 'The lore and law of tissue homo-transplantation' (1965) 10 *Proceedings of the Medico Legal Society of Victoria* 152, 162 *per* Mr R. K. Fullagar QC (as he then was). In the context of allowing defective neonates to die, Griffiths L.J. recently said: 'The common law does not have the tools to fashion a remedy in these cases.' *McKay v. Essex Area Health Authority* [1982] 2 All E.R. 771, 790h.

[66] President's Commission, *op. cit.* 46.

[67] Burton, *op. cit.* 64-5; Similar views have been expressed by Lord Kilbrandon and the General Council of the Bar in England, both cited by Plueckhahn, *op. cit.* 44, ns 35-6.

[68] *In re Aldersey; Gibson v. Hall* [1905] 2 Ch. 181; *Phipson on Evidence* (12th ed. 1976) para. 2124-5; Hutley F. C., Woodman R. A. and Wood O., *Cases and Materials on Succession* (2nd ed. 1975) 12; Jarman T., *A Treatise on Wills* (8th ed. 1951) i 447.

individual as being legally dead when their social existence is no longer able to be established.

Second, where persons die together on the same occasion but it cannot be ascertained by clear evidence which died first, the law presumes death to have occurred in order of seniority.[69] The philosophy behind this rule has been the subject of considerable analysis, some of which has cast aspersions as to its propriety.[70]

In the United States, novel fact situations arising out of the use of recent medical techniques, have been presented to courts on a number of occasions.[71] The traditional approach of the courts has been to decide the time of death by reference to the absence of blood circulation.[72] More recently, however, following the approach of modern medical opinion, American courts have recognized the concept of brain death in the context of organ transplantation and termination of life support machinery.[73] With respect, these decisions tend to be poorly resolved and rely heavily on the medical evidence supporting a particular view as to the occurrence of death, without providing any general principles which could be of precedent value.

The English case of *R. v. Potter*[74] is a recent example of a criminal defendant seeking to defend a charge of murder by denying causation owing to a subsequent organ transplant operation performed on the victim/donor. In that case the defence was successful with the court finding Potter guilty only of common assault.

In South Australia another case has appeared although proceedings were not pursued by the Crown. It concerned an Alice Springs doctor who withdrew treatment from a brain dead patient. Although reported to the police as a case of euthenasia, the Crown elected not to proceed.[75] Similarly, in Melbourne, it appears that doubts exist as to the legality of removing organs for transplantation and terminating life support apparatus.[76]

The President's Commission in the United States has recently discussed whether reform of the law could be carried out by the courts in the absence of statute. It was concluded, however, that this process of reform would have insufficient celerity and might not result in a clear and uniform practice being adopted.[77]

[69] Hutley *et. al.*, *op. cit.* 553; *Theobald on Wills* (13th ed. 1971) para. 2039; for the purposes of the law of property see s. 184 Property Law Act 1958 (Vic.).

[70] The issue of proving simultaneous death has been described as 'a position bursting, as it were, with the bigness of its own inconsistency' *Fearn's Posthumous Works* (1797) cited in Jarman, *op. cit.* 447 n. (n).

[71] See the review provided in President's Commission, *op. cit.* 46-69 and Appendix D, and Russell, *op. cit.* 33.

[72] For example, in *Grey v. Sawyer* (1952) S.W. 2d 496 it was held that where two people died in the same accident, the decapitated body gushing blood was still alive after the other body whose heart had stopped.

[73] *In re Bowman* (1980) 94 Wash 2d 407.

[74] Cited in A.L.R.C. Report, *op. cit.* 58 para. 124, and South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1560 *per* The Hon. R. J. Ritson.

[75] Cited in South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1560 *per* The Hon. R. J. Ritson.

[76] A.L.R.C Report, *op. cit.* 58 para. 124; see also Health Advisory Council Report, *op. cit.* 6-8.

[77] President's Commission, *op. cit.* 47-9.

(h) International legislative approaches

International attempts at legislatively resolving the issue of the determination of the time of death have produced a wide variety of approaches.[78] While most recent statutes fundamentally embody the concept of death being evidenced by an irreversible cessation of brain function, some statutes extend and refine this concept by inclusion of operational criteria necessary to establish the concept.

In addition, the precise description of the concept varies considerably. In the United States this wide variety of conceptual definitions of brain death[79] has led to the drafting of a Uniform Determination of Death Act which provides that

> an individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.[80]

A discussion and evaluation of the components of this definition will follow a description of the Australian approaches already adopted.

(i) Summary

The various approaches to the definition of the time of death outlined above emphasise the complexity and difficulty inherent in providing an effective resolution of the problems which arise in a variety of contexts.

To summarize, four methods appear to have been adopted by the various disciplines to resolve these issues. First, are those approaches which attempt to ascertain the most *important* human characteristic necessary for life. Second, are the *temporal* approaches which consider the time at which the most vital physiological function is first lost. Third, are the definitions which examine the *purpose* to which the cadaver will be put following a determination of death; and finally, the *conceptual* approaches which seek to make abstract value judgments as to when death should be declared.

In the opinion of the present writer, the final conceptual approach is to be preferred as it embodies the essential aims and elements of each of the preceding approaches. On the basis of the considerations already discussed, it appears that the concept of irreversible loss of *consciousness* is the most accurate and acceptable criterion necessary to establish death. The manner in which this concept is to be enshrined shall be considered shortly when the present Australian legislative approaches are discussed.

4 AUSTRALIAN LEGISLATIVE APPROACHES

(a) A.L.R.C. Report

In 1977 the Australian Law Reform Commission published a working paper entitled *Human Tissue Transplants* and an issue paper entitled *Statutory Brain*

[78] A most recent review of international legislation is provided in Appendices C and E of President's Commission, *op. cit.* 109-34; 147-58. See also Russell, *op. cit.* 33; A.L.R.C. Report, *op. cit.* 54-7; C.L.R.C. Working Paper, *op. cit.* 23-4.

[79] Twenty seven States in America now have statutes which rely upon brain oriented criteria for determining death. See President's Commission, *op. cit.* 109-34.

[80] President's Commission, *op. cit.* 119.

Death. These publications were followed later in 1977 by the seventh report of the Commission entitled *Human Tissue Transplants*. Although discussion in the report principally concerned the question of organ and tissue transplantation, the Commission considered it necessary to discuss the determination of the time of death.[81]

The conclusions reached by the Commission were that legislation should contain a definition of death for all purposes, and not merely for the law of tissue transplantation, that death should be defined by reference to the irreversible cessation of all functions of the brain of the person or irreversible cessation of circulation of blood in the body of the person, and finally in the case of brain death, where it is desired to remove tissue for transplantation, death should be declared by two registered medical practitioners each of five years' standing, one of whom should be a neurologist or neurosurgeon, and neither of whom should participate in any transplant operation involving tissue of the deceased. Draft legislation was appended to the report, and it was further recommended that there be uniformity of enactment throughout Australia.

(b) Tasmania

In Tasmania, the Law Reform Commission's report has yet to be considered by Parliament and in that State the common law position remains that the time of death is to be determined by medical expert testimony. Removal of tissue from cadavers is presently governed by the Anatomy Act 1964.[82]

(c) New South Wales

In New South Wales, legislation is under consideration with respect to the matters raised in the Law Reform Commission's report, but has yet to be enacted. At the present time, the use of tissues from cadavers is regulated by the Anatomy Act 1977 and the Tissue Grafting and Processing Act 1955. In both these pieces of legislation, the terms 'body', 'deceased', 'dead body', and 'dead person' are undefined. The Minister for Health has recently indicated that proposed amending legislation is being considered in consultation with the Australian Medical Association and other interested persons, and will be introduced later in 1983.[83]

(d) Australian Capital Territory

The Australian Capital Territory was the first Australian jurisdiction to enact legislation adopting the Law Reform Commission's recommendations, and section 45 of the Transplantation and Anatomy Ordinance 1978 enacts exactly the draft section from the Commission's report.

(e) Northern Territory

In March 1978, considerable debate occurred in the Northern Territory Legislative Assembly over the Law Reform Commission's report.[84] On 17 May 1979,

[81] A.L.R.C. Report, *op. cit.* ch. 10.
[82] S. 10.
[83] New South Wales, *Parliamentary Debates*, Legislative Council, 29 March 1983, 5238 *per* Mr Brereton.
[84] Northern Territory, *Parliamentary Record*, Legislative Assembly, March 1978.

the Human Tissue Transplant Bill 1979 was introduced and following brief debate on 13 September 1979[85] concerning the definition of death, was passed in a form exactly corresponding with the Law Reform Commission's proposal.[86]

(f) Queensland

Soon after the Northern Territory legislation received royal assent, the Legislative Assembly of Queensland brought in its Transplantation and Anatomy Bill 1979.[87] The Bill largely corresponded with the Law Reform Commission's report save that the definition of death was expressed to be only for the purposes of the Act and not the law of the entire State, and that the certification provisions relating to removal of tissues for transplantation appeared as part of the same section which defined death.

Debate on the Bill lasted for only three days and the clause defining death received only passing consideration,[88] it being generally agreed that the recommendations of the Law Reform Commission were immutable.

(g) Victoria

The next State to consider the Law Reform Commission's report was Victoria. In 1981 the Transplantation and Human Tissue Bill was introduced[89] and allowed to lie over for public comment. Following the change of government, the Bill was reintroduced as the Human Tissue Bill on 30 November 1982.[90] Once again, the provisions relating to the definition of death received scant consideration in the House, despite the views of some Honourable members that the introduction of such legislation was a significant step to take.[91] The Victorian Bill differed from its Queensland counterpart in that the definition of death provided in clause 41 of the Bill was for the purposes of *all* Victorian law, and not merely in relation to tissue transplantation.[92]

The definition adopted again corresponded with the Law Reform Commission's recommendation and was said to be generally accepted in the community and to accord basically with the presently accepted medical practice in Victoria.[93] The Act was assented to on 5 January 1983 and commenced operation on 4 April 1983.[94]

[85] *Ibid.* 17 May 1979, 1304 *per* Mr Tuxworth; 13 September 1979, 1905, *per* Mrs O'Neil, 1907 *per* Mrs Padgham-Purich.

[86] Section 23 Human Tissue Transplant Act 1979 (N.T.) assented to 15 October 1979.

[87] Initiated in Committee on 6 December 1979: Queensland, *Parliamentary Debates*, Legislative Assembly, 6 December 1979, 2406 *per* Hon. Sir William Knox, Minister for Health.

[88] *Ibid.* 6 December 1979, 2408 *per* Hon. Sir William Knox; 2410 *per* Mr D'Arcy; 7 December 1979, 2411-2 *per* Dr Lockwood; 11 December 1979, 2445-6, 2450, 2452 *per* Hon. Sir William Knox. Transplantation and Anatomy Act 1979 (Qld) assented to 21 December 1979.

[89] Victoria, *Parliamentary Debates*, Legislative Assembly, 10 December 1981, 4773, see Mr Borthwick's comments on the need for a definition of death at 4969 on 11 December 1981.

[90] *Ibid.* 30 November 1982, 2198 *per* Mr Roper.

[91] Victoria, *Parliamentary Debates*, Legislative Council, 30 November 1982, 1061 *per* The Hon. B. P. Dunn.

[92] See the comments of Mr Roper on this point in Victoria, *Parliamentary Debates*, Legislative Assembly, 1 December 1982, 2261.

[93] Victoria, *Parliamentary Debates*, Legislative Assembly, 1 December 1982, 2257 *per* Mr Roper, Legislative Council, 30 November 1982, 1063 *per* The Hon. B. P. Dunn.

[94] Victoria, *Government Gazette*, 26 January 1983, 176.

In addition, the Victorian Parliament has considered the questions associated with the use of life support machinery in the Refusal of Medical Treatment Bills. The first Bill was introduced into the Legislative Council as a private member's Bill on 3 December 1980.[95] It had received detailed analysis by the Law Department and discussion by numerous organizations within the community. Following brief debate in the Legislative Council[96] it was not proceeded with but reintroduced on 9 September 1981 by the government of the day[97] and again received brief debate[98] before being referred to the Health Advisory Council in August 1982. On 8 September 1983, the Health Advisory Council's report dated July 1983 was released by the Minister of Health who has since indicated that the government had not decided on the action it would take on the report but would seek submissions and then make a recommendation to Cabinet and Caucus. It appears likely that a Bill will be introduced early in 1984.[99]

These Bills deal with the use of life sustaining procedures in the context of people suffering from fatal conditions and provide that individuals over the age of 18 years and of sound mind may make declarations which allow medical practitioners to withdraw life-sustaining procedures where the declarant has a fatal condition. Clause 6 of the Bill provides for the use of artificial respiratory and circulatory procedures to maintain bodily organs for transplantation and for preserving the life of a foetus.

(h) Western Australia

Concurrently with the passage of the Victorian Human Tissue Bill 1982, the Western Australian Parliament was also considering the matters raised in the Law Reform Commission's report, for on 27 October 1982, the Human Tissue and Transplant Bill was introduced into the Legislative Assembly.[1] This Bill, while corresponding with the Commission's recommendations concerning tissue transplants, did not contain a separate clause defining death, as it was felt that 'much more public debate is needed on this difficult subject before the definition is embodied in the Statute'.[2] Opposition members were aghast at this decision and extensive debate took place on the question of whether or not to include a general definition in the Bill. In the words of the Bill's chief opponent in this respect, The Honourable Robert Hetherington: 'I think the government needs to bite the bullet,

[95] Victoria, *Parliamentary Debates*, Legislative Council, 3 December 1980, 4071, introduced by the Hon. R. A. Mackenzie.

[96] *Ibid.* 10 December 1980, 4693-6.

[97] *Ibid.* Legislative Council, 9 September 1981, 105; Legislative Assembly, 15 October 1981, 1652.

[98] *Ibid.* Legislative Council, 28 October 1981, 2158.

[99] Health Advisory Council Report, *op. cit.*; Birnbauer B., 'Laws likely to back the right to die', *Age* (Melbourne), 9 September 1983, 1, 6, 24. See also The Law Reform Commission [1983] No. 30 *Reform* 57. The Health Advisory Council's Report has provoked an ongoing public discussion of the Bill in the daily press. See, for example, *Age* (Melbourne), 30 June 1983, 11; 1 July 1983, 11; 3 September 1983, 12; 9 September 1983, 1; 12 September 1983, 12, 13; 13 September 1983, 12, 13; 17 September 1983, 12; 19 September 1983, 12; 22 September 1983, 12.

[1] Western Australia, *Parliamentary Debates*, Legislative Assembly, 27 October 1982, 4206.

[2] *Ibid.* 4315 *per* Mr Young.

make up its mind, and define "death"; and I think it should do it in this Bill and then take what comes from the public.'[3]

Clause 24(2) of the Bill did, however, resolve the question of the determination of the time of death for the purposes of tissue transplantation by providing that

> where the respiration and circulation of the blood are being maintained by artificial means, tissue shall not be removed from the body of the person for the purpose or a use specified in subsection (1)[4] unless 2 medical practitioners (each of whom has carried out a clinical examination of the person, each of whom has been for a period of not less than 5 years a medical practitioner and one of whom holds specialist qualifications in general medicine, neurology or neurosurgery or has such other qualifications as are accepted by the Commissioner) have declared that irreversible cessation of all function of the brain of the person has occurred.

In the opinion of the present writer, this provision, without a general clause defining death, provides a far more acceptable use of legislation in the present context than has occurred in the other States and Territories. The Western Australian Bill proceeded through its remaining stages and received royal assent on 8 December 1982 becoming operational on 1 March 1983.

(i) South Australia

The remaining State of South Australia has been grappling with the issues raised by the Law Reform Commission's report for approximately five years now and has still not completed the task. Nevertheless, the South Australian Parliament is unique amongst the Australian States and Territories in that it has provided a detailed, thorough, and careful consideration of many of the issues raised in this important context.

The Parliament of South Australia has approached the question of defining death in three separate contexts: withdrawal of life support machinery; tissue transplantation; and generally for all the law of that State. On 18 July 1978, The Honourable F. T. Blevins raised the question of the right to refuse life-sustaining procedures and withhold life support machinery in the Legislative Council.[5] It appears that he undertook extensive enquiries culminating in his being granted leave to introduce a private member's Bill into the Legislative Council on 5 March 1980[6] entitled the Natural Death Bill 1980. This Bill provided that individuals could make a declaration in the event of their suffering from a terminal illness, that their life shall not be prolonged by extraordinary measures. In addition, Part II of the Bill defined death in accordance with the Law Reform Commission's guidelines relying upon irreversible cessation of brain function as the criterion of establishing death. Clause 2b dealt with the problem of causation where extraordinary life support measures were withdrawn from a patient by a doctor, by providing that such withdrawal would not constitute a cause of death for the purpose of legal proceedings.

[3] *Ibid.* Legislative Council, 18 November 1982, 5733. See also 5729-49.

[4] Transplantation to the body of a living person or for other therapeutic medical or scientific purposes.

[5] South Australia, *Parliamentary Debates*, Legislative Council, 18 July 1978, 40-1.

[6] *Ibid.* 5 March 1980, 1428-9.

The Bill was the subject of considerable debate in both Houses, and by a Select Committee over a period of approximately ten months[7] whereupon it was passed in the Legislative Council on 26 November 1980[8] but not passed in the Legislative Assembly on 23 September1981.[9]

After some delay, the questions raised by the Law Reform Commission were again brought before Parliament on 16 March 1983 with the introduction of the Transplantation and Anatomy Bill 1983, and the Death (Definition) Bill 1983.[10] The purpose of the latter piece of legislation was to provide a general definition of death corresponding with the Law Reform Commission's guidelines for the purpose of all South Australian law. On 23 March 1983 a new Natural Death Bill 1983 was introduced[11] in essentially the same form as the 1980 Bill save that the provisions defining death were excised owing to the more general Death (Definition) Bill 1983 having been introduced.

At the date of writing, both the Transplantation and Anatomy Bill 1983[12] and the Death (Definition) Bill 1983[13] have passed both Houses and are awaiting royal assent. The Natural Death Bill 1983 has passed the Legislative Council[14] but is still undergoing second reading debate in the Legislative Assembly.

If the Natural Death Bill 1983 passes the Legislative Assembly, South Australia will be left with a comprehensive legislative package concerning the three areas of life support machinery, tissue transplantation, and the definition of death.

(j) Commonwealth

At the date of writing, the Commonwealth Parliament has not yet enacted legislation comparable to that of the other States and Territories but is still considering the question.[15]

(k) Summary

To summarize, four States and the two Territories have legislation concerning the definition of death at the present time, with three States and two Territories having adopted the Law Reform Commission's recommended draft legislation for the purpose of the whole of the law of that State or Territory.

It now remains to assess whether or not the legislative provisions which have been enacted are sufficiently acceptable and appropriate for the remaining States to

[7] South Australia, *Parliamentary Debates*, Legislative Council, 5 March 1980, 1428-9; 26 March 1980, 1690-2; 2 April 1980, 2017-8; 10 June 1980, 2385; 24 September 1980, 1060; 22 October 1980, 1278-83; 29 October 1980, 1559-63; 5 November 1980, 1757-64; 19 November 1980, 1986-9; 26 November 1980, 2215-23; Legislative Assembly, 26 November 1980, 2311; 23 September 1981, 1119-21.

[8] *Ibid.* Legislative Council, 26 November 1980, 2223.

[9] *Ibid.* Legislative Assembly, 23 September 1981, 1121.

[10] *Ibid.* Legislative Council, 16 March 1983, 361 and 365 respectively.

[11] *Ibid.* Legislative Council, 23 March 1983, 550.

[12] *Ibid.* Legislative Council, 22 March 1983, 493, 641, 23 March 1983, 569, 575-6; 21 April 1983, 994; Legislative Assembly, 30 March 1983, 793, 21 April 1983, 1003.

[13] *Ibid.* Legislative Council, 22 March 1983, 494; 23 March 1983, 575; 29 March 1983, 679; 21 April 1983, 994; Legislative Assembly, 29 March 1983, 722; 30 March 1983, 797; 21 April 1983, 1004.

[14] *Ibid.* Legislative Council, 4 May 1983, 1110.

[15] See Western Australia, *Parliamentary Debates*, Legislative Council, 18 November 1982, 5743 *per* The Hon. R. G. Pike.

adopt when they come to consider the question in the near future. The following factors and arguments should be borne in mind when the States of New South Wales and Tasmania approach the problem, and indeed should be reconsidered by those Parliaments which have already enacted legislation with a view to possible amendment.

5 DISCUSSION OF AUSTRALIAN LEGISLATION

(a) Application of legislation

Prior to discussing the substantive aspects of the Australian legislation, a number of preliminary questions arise as to the application of that legislation, and, indeed, whether or not it is desirable to deal with these matters legislatively at all.

(i) *Decision to legislate*

Resolving the question of the determination of the time of death by common law methods has already been discusssed[16] and rejected owing to the delays and eventual uncertainty which might arise in the application of judicial pronouncements. The arguments in support of a common law approach to the problem rest largely in the flexibility of the common law and in its ability to be guided by current popular community sentiment when juries are present. Mr Justice Kirby has recently stressed the undesirability of the law getting too far ahead of community understanding and moral consensus, but also warned against 'an ostrich-like refusal to face up to the legal consequences of medical therapy that is already occurring'.[17]

If a legislative solution is to be adopted, it must be considered that such a solution will embody the expression of legal positivism and will, in the words of Lord Hailsham, depend upon 'the metaphysical riddle of free will, and the enigmas of moral responsibility and value judgments of right and wrong'.[18] If Parliament is to take this step, then it must be with the knowledge that there is a clear agreement in the community as to the solution to be adopted.

Although the professional community has agreed that irreversibly unconscious patients should not have their physiological functions artificially maintained, there does not appear to be agreement as to whether death should be defined legislatively at the present time. Certainly, as Van Till commented some time ago, if physicians disagree on such important matters as the definition and diagnosis of death, then the legal profession is entitled, and indeed obliged, to study the problem, and, if necessary, to decide what criterion should be adopted,[19] but, as the President's Commission found, '[a]ny newly formulated standard should attain equal recognition by the public and physicians before being adopted'.[20]

[16] *Supra* n. 77.

[17] The Malcolm Gillies Oration, Sydney, 22 September 1980 'New dilemmas for law and medicine' cited in South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 644 *per* The Hon. Frank Blevins.

[18] Lord Hailsham, *The Dilemma of Democracy* (1978) 91.

[19] Van Till-D'Aulnis de Bourouill, (1976) *op. cit.* 824.

[20] President's Commission, *op. cit.* 45.

In the opinion of the present writer, there has been sufficient community acceptance of the *concept* of death to warrant legislation, but consensus has not yet been reached over the operational criteria to be adopted, or even the physiological standards which should apply. In the absence of such agreement Parliament should move slowly and only legislate with respect to the problems and issues presently before it. Despite the recent support for a general legislative solution to the question of the determination of the time of death, it appears that such legislation is not yet called for. The Honourable R. J. Ritson in the South Australian Legislative Council has recently discussed the problem of overregulation[21] as have others:

> one of the legal dilemmas of our electronic age is too much unnecessary legislation enacted too soon, and in response to too many legal problems.[22]

Similar sentiments led the Western Australian Parliament to delay the enactment of its proposed statutory definition of death until the community has had a chance to formulate an opinion.[23] In South Australia, however, although the Select Committee Report of 1974 recommended against a statutory definition of death, it was concluded earlier this year that times have changed and a statutory definition is now called for.[24]

In England[25] and France[26] the need for a legislative definition of death has been circumvented by the relevant government health authorities publishing official booklets for medical practitioners giving clear guidelines as to the resolution of specific practical dilemmas. Such a solution appears preferable in some respects as it allows flexibility should the medical conventional wisdom alter.

(ii) *Specific or general legislation*

If it is assumed that some legislative intervention is deemed necessary, a further question arises as to the location of that legislation; in a separate general enactment solely for the purpose of defining death, or rather in individual pieces of legislation to solve specific practical problems. Arguments have been advanced in support of both the former[27] and latter[28] approaches and in the opinion of the present writer,

[21] South Australia, *Parliamentary Debates*, Legislative Council, 26 March 1980, 1690.

[22] *Ibid.* 5 November 1980, 1758 *per* The Hon. L. H. Davis citing Mr Horan, Lecturer in Law at the University of Chicago Law School; see also the discussion by Plueckhahn, *op. cit.* 43-4.

[23] Western Australia, *Parliamentary Debates*, Legislative Assembly, 27 October 1982, 4315 *per* Mr Young.

[24] South Australia, *Parliamentary Debates*, Legislative Council, 22 March 1983, 494 *per* The Hon. J. C. Burdett.

[25] Statement issued by the Honorary Secretary of the Conference of Medical Royal Colleges and their Faculties in the United Kingdom on 11 October 1976, 'Diagnosis of Brain Death' [1976] 2 *British Medical Journal* 1187-8; [1976] ii *Lancet* 1069-70. See also President's Commission, *op. cit.* 72.

[26] Savatier J. *Et in hora mortis nostrae* (1968) ch. 2 XV, 89; Chabas F., 'le corps humain et les actes juridiques en droit francais' (1976) XXVI *Travaux de l'Association Henri Capitant* 224; see also — A.L.R.C. Report, *op. cit.* 56; C.L.R.C. Working Paper, *op. cit.* 46.

[27] President's Commission, *op. cit.* 80; South Australia, *Parliamentary Debates*, Legislative Council, 16 March 1983, 363 *per* The Hon. J. R. Cornwall; Legislative Assembly, 30 March 1983, 797 *per* The Hon. G. F. Keneally; 21 April 1983, 1004, *per* The Hon. Jennifer Adamson; Victoria, *Parliamentary Debates*, Legislative Assembly, 11 December 1981, 4972 *per* Mr Borthwick; Western Australia, *Parliamentary Debates*, Legislative Assembly, 17 November 1982, 5634 *per* Mr Hodge; A.L.R.C. Report, *op cit.* 63.

[28] South Australia, *Parliamentary Debates*, Legislative Council, 5 November 1980, 1757 *per* The Hon. L. H. Davis, 19 November 1980, 1988 *per* The Hon. J. A. Carnie; Western Australia, *Parliamentary Debates*, Legislative Assembly, 27 October 1982, 4315 *per* Mr Young.

the latter alternative is to be preferred in order to avoid the problems already discussed of unnecessary and inappropriate legislation.

In the present context, the Western Australian approach is to be preferred with its provision of a specific definition in the Human Tissue and Transplant Act 1982 to deal with the time at which tissues may be removed from donors. If, at some future date, it is deemed necessary to include a definition of death in legislation dealing with natural death, succession, family provision, taxation, and other matters, then this should be considered in the context of the particular problems created in each of these areas.

A fortiori, it would be undesirable, if a general definition of death for the purposes of all relevant law were to be adopted, that such a definition should appear in an enactment dealing with a specific subject matter such as tissue transplantation.[29] Rather, in that event, the South Australian approach should be followed in which a separate Death (Definition) Act was passed. As this approach is not considered desirable in the opinion of the present writer, it should nevertheless be stressed that any definition which is adopted in individual pieces of legislation, be uniformly and consistently expressed so as to accord with the generally agreed concept and operational criteria.

(iii) *Uniform code throughout Australia*

The need for uniformity of legislation throughout separate jurisdictions is generally applauded,[30] although where some jurisdictions raise special problems, an appropriate divergence might be tolerated. In discussing this question, the Honourable Sir William Knox commented that 'each State has raised its own special problems in the legislature. It is proper that that should be so. Because of circumstances that have arisen, the States' legislation has varied in some instances.'[31] Nevertheless, it does seem undesirable that such a fundamental issue as the determination of the time of death should receive different treatment in the various States and Territories of Australia. What should be avoided at all costs, however, is the adoption of a uniform code which is not, itself, uniformly recognized and accepted in the community or otherwise acceptable in its application. That some jurisdictions have sought merely to rely upon the Law Reform Commission's recommendations does not imply that these are beyond question.

In summary, the present writer is of opinion that the *concept* of death should be legislatively enacted in those relevant pieces of legislation which call for a resolution of this question at the present time. A more general separate statute defining death should be avoided at the moment. Operational criteria should not be legislatively enacted but rather should form the subject of an approved circular published uniformly throughout all jurisdictions by the relevant statutory health authorities for the guidance of medical practitioners in relation to the specific

[29] President's Commision, *op. cit* 1.

[30] A.L.R.C Report, *op. cit.* 63; President's Commission, *op. cit.* 51-2, 72-3; South Australia, *Parliamentary Debates*, Legislative Council, 5 November 1980, 1757 *per* The Hon. L. H. Davis; 19 November 1980, 1988 *per* The Hon. J. A. Carnie, 24 March 1983, 641 *per* The Hon. L. H. Davis.

[31] Queensland, *Parliamentary Debates*, Legislative Assembly, 11 December 1979, 2450.

practical problems which they face. The content of such a circular will be considered shortly. In the words of Mr Justice Kirby,

> what is needed is effective machinery to find Australian solutions for the guidance of conscientious doctors and distracted (and often timorous) lawmakers.[32]

(b) Determining body or individual

Reference has already been made in this paper to the inter-disciplinary nature of the issues at hand[33] and in deciding who is best equipped to resolve these issues, one is again confronted with the necessity to consider the problems from a number of theoretical and practical perspectives.[34] At the outset, a distinction needs to be drawn between deciding who should *define* death, and who should *apply* that definition.

With respect to the former question, a definition of death can be prescribed by either law makers or medical practitioners. Definitions by the lay public have to be discounted owing to the complexity which has been created by modern biomedical technology. Judicial law making has already been considered[35] and found to be unsatisfactory in this context, and so the choice is between legislators and medical practitioners.

Arguments have been advanced in support of both approaches with some considering the matter to be purely for medical practitioners,[36] and others seeing the determination of such importance and with such implications that only Parliament should decide.[37] This particular question has been poorly argued in the literature as there tends to be confusion between the allocation of responsibility for the *decision* and its *application*. Further confusion is encountered by writers not adequately distinguishing the various levels at which the decision is to be made. In the opinion of the present writer, it is for Parliament to proclaim a definition at the conceptual level, and for the purpose of setting physiological criteria to determine whether the concept has been met, but it is for medical practitioners to define operational criteria and the necessary tests and procedures to apply those criteria.

Turning to the latter question of who should *apply* the definition once determined, it appears that similar considerations apply. Medical practitioners have the training and expertise to apply operational criteria and to carry out the necessary tests and procedures to determine whether or not a patient is dead, but the courts should, on the basis of expert testimony given by medical witnesses, in relation to

[32] Cited by The Hon. Frank Blevins in South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 644.

[33] *Supra* n. 32, 207.

[34] See the discussion of this problem by Welton, *op. cit.* 26-7.

[35] *Supra* ns 77 and 16-7, 120.

[36] Declaration of Sydney, *op. cit.*; Walton, *op. cit.* 24 citing Lord Kilbrandon; McMullin, *op. cit.* 6; Burton, *op. cit.* 66; Veatch (1976), *op. cit.* 57; Victoria, *Parliamentary Debates*, Legislative Council, 30 November 1982, 1063-4 *per* The Hon. B. P. Dunn.

[37] A.L.R.C. Report, *op. cit.* 62; President's Commission, *op. cit.* 50; Queensland, *Parliamentary Debates*, Legislative Assembly, 6 December 1979, 2410 *per* Mr D'Arcy: '. . . determination of death will be left to the medical profession. The credibility of that profession in our society is at a very low ebb, and medical practitioners are certainly not in a position to play God in these issues.'

given factual circumstances, decide whether the prescribed physiological criteria and conceptual meaning of death have been met.[38]

(c) Certification and evidence

Another issue related to the preceding one, concerns the manner in which the decision that death has occurred is to be recorded for public purposes. In the context of tissue transplantation, this is of crucial importance as a certificate of death will amount to an indemnity from criminal liability for surgeons who remove organs from a deceased donor. The certificate will also be proof for other civil purposes.

In 1977 the Law Reform Commission recommended the following statutory provision:

> Where the respiration and the circulation of the blood of a person are being maintained by artificial means, tissue shall not be removed from the body of the person for the purpose of the transplantation of the tissue to the body of a living person or for use for other therapeutic purposes or for medical or scientific purposes unless two registered medical practitioners (each of whom has carried out a clinical examination of the person, each of whom has been, for a period of not less than five years, a registered medical practitioner and one of whom is a specialist neurologist or neurosurgeon or has such other qualifications as are prescribed) have declared that irreversible cessation of all function of the brain of the person has occurred.[39]

It is important to note four aspects of the above requirement. First, that the certification be made by two medical practitioners. This requirement has been adopted by all the States and Territories which have enacted legislation relating to tissue transplantation[40] and was subject to no criticism in the parliamentary debates.

Second, it is required that the two medical practitioners be of at least five years' standing, and although this requirement has similarly been incorporated into most of the relevant Australian statutory provisions, it was subject to some discussion in the Victorian Legislative Council.[41] It should be noted that international enactments of a similar nature generally allow certification by any registered medical practitioner, regardless of experience.[42]

Third, it is required that one of the certifying medical practitioners be a specialist neurologist or neurosurgeon or have other prescribed qualifications. This requirement was followed in the Northern Territory, Australian Capital

[38] See the discussion of this point in President's Commission, *op. cit.* 46, n. 4; Veatch (1976), *op. cit.* 76; Burton, *op. cit.* 66.

[39] A.L.R.C. Report, *op. cit.* 63; see the discussion of this provision by Plueckhahn, *op. cit.* 45-6.

[40] Human Tissue Act 1982 (Vic.) s. 26(7)(b); Human Tissue Transplant Act 1982 (W.A.) s. 24(2); Transplantation and Anatomy Act 1979 (Qld) s. 45(2); Human Tissue Transplant Act 1979 (N.T.) s. 21(1); Transplantation and Anatomy Ordinance 1978 (A.C.T.) s. 30(1)(b); See also Transplantation and Anatomy Bill 1983 (S.A.); this requirement is also endorsed by N.H.M.R.C. Code, *op. cit.* 11, para. 7.6.

[41] Victoria, *Parliamentary Debates*, Legislative Council, 30 November 1982, 1064 *per* The Hon. J. V. C. Guest referring to a letter from the Roman Catholic Archbishop of Melbourne who doubted the competence of physicians of only five years' experience. Note that s. 45(2) Transplantation and Anatomy Act 1979 (Qld.) does not require certifying practioners to be of five years' experience.

[42] President's Commission, *op. cit.* 115 (The States of Florida and Virgina require specialist qualifications) 147; (in Argentina and Finland, specialist qualifications are required.); the N.H.M.R.C. Code, *op. cit.* 11, para. 7.6 requires one doctor to be a specialist in charge of the donor patient with both doctors being appropriately qualified and suitably experienced in the care of such patients.

Territory, Western Australia, and Queensland, but was not deemed necessary in Victoria[43] or South Australia.[44]

Finally, it is to be noted that neither of the certifying practitioners should participate in the proposed transplant operation.[45] This requirement, included to ensure independence of the determination and to guard against bias, was originally required by the Declaration of Sydney in 1968,[46] and has been affirmed by others since then as essential.[47] It has been included in all the Australian legislation to date.[48]

On the basis of the evidence already cited, these requirements amount to sufficient safeguards with respect to the certification of death by medical practitioners. Some legislatures have proposed separate provisions dealing with the questions of evidentiary proof of the time of death for legal proceedings. In South Australia, the Natural Death Bill 1980 provided for a death certificate to constitute an evidentiary presumption that death has occurred at the time and day specified in the certificate. However, the Natural Death Bill 1983 and the Death (Definition) Bill 1983 contain no such provisions.[49] It appears that the South Australian Legislative Council intends amending the Births Deaths and Marriages Registration Act to include an evidentiary presumption, although at the date of writing, the matter was still awaiting Parliamentary Counsel's advice.[50] It should also be noted that most jurisdictions contain express provisions excluding persons from liability where they have acted in accordance with the relevant statutes.[51]

An additional problem arising out of the certification of death concerns the necessity for coronial inquests in certain circumstances.[52] All jurisdictions allow for a coronial inquest to be held where the circumstances require, in which case tissue shall not be removed from the donor for the purpose of transplantation until the coroner consents.[53] It appears that it is unnecessary, and would smack of overregulation, for the coroner to certify that death has occurred in *all* cases of tissue transplantation, for in the majority of cases the safeguards outlined above would be adequate.

[43] *Supra* n. 40, 224. See Victoria, *Parliamentary Debates*, Legislative Assembly, 1 December 1982, 2261 *per* Mr Roper; Legislative Council, 13 October 1982, 377 *per* The Hon. D. R. White.

[44] Transplantation and Anatomy Bill 1983 (S.A.). See also the discussion in South Australia, *Parliamentary Debates*, Legislative Council, 24 March 1983, 643 *per* The Hon. L. H. Davis.

[45] A.L.R.C. Report, *op. cit.* 63.

[46] Declaration of Sydney, *op. cit.* 'the physicians determining the moment of death should in no way be immediately concerned with performance of transplantation.' A.L.R.C. Report, *op. cit.* 112.

[47] President's Commission, *op. cit.* 70; Burton, *op. cit.* 139 N.H.M.R.C. Code, *op. cit.* 11, para. 7.6.

[48] *Supra* n. 40, 224.

[49] See South Australia, *Parliamentary Debates*, Legislative Council, 23 March 1983, 576 *per* The Hon. R. J. Ritson.

[50] *Ibid.* 29 March 1983, 680 *per* The Hon. J. R. Cornwall.

[51] Human Tissue Act 1982 (Vic.) s. 43; Human Tissue and Transplant Act 1982 (W.A.) s. 31; Transplantation and Anatomy Act 1979 (Qld) s. 46; Human Tissue Transplant Act 1979 (N.T.) s. 25; Transplantation and Anatomy Ordinance 1978 (A.C.T.) s. 47.

[52] See the discussions provided by Plueckhahn, *op. cit.* 97-104; Knight, *op. cit.* ch. 8; and Dr Lockwood in Queensland, *Parliamentary Debates*, Legislative Assembly, 7 December 1979, 2412.

[53] Human Tissue Act 1982 (Vic.) s. 27; Human Tissue and Transplant Act 1982 (W.A.) s. 23; Transplantation and Anatomy Act 1979 (Qld) s. 24; Human Tissue Transplant Act 1979 (N.T.) s. 20; Transplantation and Anatomy Ordinance 1978 (A.C.T.) s. 29.

(d) Level of legislation and code of practice

The five levels of analysis have already been discussed[54] with the conclusions reached that legislation is most appropriate at the levels of concepts and physiological criteria, leaving the determination of operational criteria and tests and procedures to medical practitioners.[55] Care must be taken not to demarcate these levels too discretely for the final satisfactory resolution of the question of the determination of the time of death will ultimately depend upon an amalgamation of aspects from all levels of inquiry. Walton has stressed the need to have an internally consistent approach between all levels and all disciplines involved[56] and it seems that this might best be achieved by considering the expertise of all those concerned when making decisions.

Some medical practitioners have expressed great anxiety at the thought of legislators telling them how to conduct diagnostic procedures,[57] and some lawyers have expressed concern at doctors making decisions in the absence of guidelines.[58] Medical practitioners do, however, see the need for uniformity of practice and have agreed that some regulation is necessary.[59] The majority of reports and recommendations on this point concur that legislation is appropriate and desirable at the level of concepts and physiological standards.[60]

Having established that, for example, death is to be legislatively defined by reference to irreversible loss of consciousness as evidenced by total cessation of brain stem function,[61] the issue which then arises concerns how medical practitioners are to interpret and apply that standard. Left to their own devices, a multiplicity of tests and standards could emerge with sometimes significant discrepancies being involved.

One solution is to seek agreement between all medical practitioners as to the currently accepted operational criteria, tests and procedures involved in satisfying the legislative standard. It is preferable for medical practitioners to draft and agree upon such a code of practice, as it will be for them to use it in daily practice. Already, in August 1982, the National Health and Medical Research Council of Australia published a code of practice for transplantation of cadaveric organs for the purpose of clarifying practical procedures to be adopted and this has proved an important reference for practitioners involved.[62] In the opinion of the present writer, the determination of tests and procedures should be a matter for senior

[54] *Supra* n. 27, 205.
[55] *Supra* n. 38, 224.
[56] Walton, *op. cit.* 24.
[57] A.L.R.C. Report, *op. cit.* 60-3; President's Commission, *op. cit.* 30; Burton, *op. cit.* 65.
[58] Queensland, *Parliamentary Debate*, Legislative Assembly, 6 December 1979, 2410 *per* Mr D'Arcy, *supra* n. 37, 223; see also A.L.R.C. Report, *op. cit.* 53.
[59] See *Age* (Melbourne) 5 April 1983, 5 Metherell M., 'Law permits doctors to take organs while heart beats.'
[60] A.L.R.C. Report, *op. cit.* 63; President's Commission, *op. cit.* 56-7; Veatch (1976), *op. cit.* 53; N.H.M.R.C. Code, *op. cit.*; C.L.R.C. Working Paper, *op. cit.* 30, 54-5.
[61] The concept and physiological standard preferred by the present writer.
[62] Discussed in South Australia, *Parliamentary Debates*, Legislative Council, 16 March 1983, 363 *per* The Hon. J. R. Cornwall; 24 March 1983, 642 and 29 March 1983, 679 *per* The Hon. L. H. Davis referring to p. 10 of the code defining death. See also The Law Reform Commission *Reform* April 1983, No. 30, 54-5; N.H.M.R.C. Code *op. cit.*

medical policy makers. In the past legislators and policy makers have attempted to draft such a code and the results have generally been unacceptable to the medical profession as a whole.[63] Where, however, medical practitioners have drawn their own code, this has met with little opposition.[64]

Once an acceptable code has been agreed upon by medical practitioners, the question then arises as to whether this code should be legislatively enacted, either by statute or statutory rules. In order to permit flexibility and to allow frequent changes in light of new technological developments, it is generally considered preferable for the code to remain non-legislative. It should, however, be created in consultation with, and with the authority of, the relevant statutory health authority, with the usual professional penalties being prescribed for non-compliance. Any such code should, in addition, be drafted in consultation with legislators and lawyers to ensure that it accurately reflects the conceptual and physiological standards legislatively prescribed.

If an acceptable and uniform code of practice is adopted, then the need for a legislative definition is cast into doubt, as the behaviour of medical practitioners would be fully governed by their code without need to resort to any statutory definition adopted. Such an argument carries weight so long as the code of practice corresponds with the concepts which are generally accepted in the community. Legislation has the ability to formalize such concepts and is able to place them in the context of specific practical areas which need clarification. In the opinion of the present writer, therefore, legislation should only be enacted where current problems require legislative attention. As previously concluded, a general provision for all the law of a particular State or Territory is unwarranted and could lead to confusion in, as yet, unencountered situations.

(e) Standards adopted — problems of definition

(i) *Generally*

Turning from more general considerations to the specific enactments adopted in Australia, it is clear that the substantive content of the various definitions is uniform, following closely the recommendations of the Australian Law Reform Commission in 1977. An initial problem with the definitions, however, concerns the use of the word 'person'. The President's Commission cautioned against the use of this term as it could connote companies, preferring the expression 'individual' as being more in keeping with the application of the definition.[65]

(ii) *Dual definition*

The definitions adopted in Australia provide for death to be determined by the occurrence of:

(a) irreversible cessation of circulation of blood in the body of the person; or

[63] President's Commission, *op. cit.* ch. 5 and Appendix C; Ad Hoc Committee, *op. cit.*; Declaration of Sydney, *op. cit.*

[64] *Supra* n. 25, 221; see also A.L.R.C. Report, *op. cit.* 112-5; President's Commission, *op. cit.* 153-4; N.H.M.R.C. Code, *op. cit.*

[65] President's Commission, *op. cit.* 74.

(b) irreversible cessation of all function of the brain of the person.

The decision to adopt a dual definition of death was founded upon a number of considerations. First, the reference to blood circulation acknowledges traditional approaches and will be applicable in the majority of cases.[66] Second, reference to cessation of blood circulation provides a second criterion for use by medical practitioners where there is some doubt as to whether or not irreversible cessation of all function of the brain has occurred.[67] Third, the reference to blood circulation gives the definition relevance to ordinary cases of death and is able to be determined by popular tests.[68]

There are, however, difficulties with adopting an alternative dual definition. Because the brain function definition will be applied generally in cases of organ transplantation where the donor's vital functions are being maintained by life support machinery, there arises the implication that a patient may be dead for transplantation purposes but not for general purposes. Such a double standard should be avoided as it creates anxiety in the community and imprecision in practice. As Walton observes, two patients may be at the same stage of dying and yet one will be considered alive while the other dead.[69] This leads to the criticism of having a less stringent test where organs are needed for transplantation, and raises the problem that a person may be able to die twice in terms of each definition. Engelhardt has justified the dual definition by arguing that it is merely a more crude and a more precise set of determinations to suit different circumstances.[70]

In the opinion of the present writer, it is unnecessary to pay lip service to traditional conceptions of death when the legislative concept will be practically applied by medical practitioners in all contexts in accordance with the same conceptual criterion. The approach of the Law Reform Commission of Canada and the American Bar Association adopting a single standard referable to brain function is to be preferred to the recommendations of the President's Commission and the Australian Law Reform Commission which favour the existing Australian legislative definitions.[71] The arguments that such an approach breaks with tradition and is alien to public understanding appear to have little logical support and should be rejected in favour of a precise and rational single physiological standard. In any event, as will be discussed shortly, such a definition ought only be included in those statutes which require resolution of a specific practical problem, and thus there would not be any public outcry at an unnecessary legislative change to traditional conceptions of death.

[66] A.L.R.C. Report, *op. cit.* 63; President's Commission, *op. cit.* 38, 59-60; Northern Territory, *Parliamentary Debates*, Legislative Assembly, 13 September 1979, 1905 where reference was made to the cessation of blood circulation being unnecessarily included in the definition 'from a point of view of tradition, if for no other reason.' *per* Mrs O'Neill.

[67] A greater safeguard would be provided by having the two definitions cumulative rather than alternative, see Glover, *op. cit.* 44-5 and Knight, *op. cit.* 34.

[68] President's Commission, *op. cit.* 64.

[69] Walton, *op. cit.* 7-8; see also Kennedy I. M., 'The Kansas Statute on Death: An Appraisal' (1971) 285 *New England Journal of Medicine* 946-50.

[70] Engelhardt, *op. cit.* 25.

[71] See President's Commission, *op. cit.* 62-4, 74; A.L.R.C. Report, *op. cit.* 137; C.L.R.C. Working Paper, *op. cit.* 58-9.

Having concluded that a single definition is desirable, it now remains to examine the precise aspects to be included in that definition.

(iii) *Irreversibility*

Both the existing definition and that to be proposed shortly, rely upon a determination of irreversible cessation of function. Various suggestions have been put forward to describe the state in which functions are no longer present and can no longer be recommenced.[72] Whether or not a given state is irreversible depends upon a prediction being made by the person who makes the declaration based upon evidence then available. By adopting a definition which requires irreversibility, legislators are shifting responsibility to the diagnostic clinician to predict that function will not be regained, and therefore that life will not recommence. The National Health and Medical Research Council Code recommends that where equivocal results are obtained with any of the tests used in determining brain death, then the tests should be repeated. The interval between tests should depend upon the progress of the patient and may be four-hourly or as long as twenty four-hourly. The code concludes that the decision is a matter for clinical judgment and will be influenced by evidence of improvement, or deterioration of the patient's condition.[73] Problems of uncertainty, in this regard, have already been stressed, but it must be concluded that only physicians are able to make this assessment upon the basis of their diagnostic examination. For this purpose, some jurisdictions[74] require a clinical examination to be carried out, and, in the United States, the prognosis must be based upon ordinary standards of medical practice.[75]

(iv) *Loss of function*

A further issue concerns the description of the form of activity which, if lost, will evince death. A continuum exists from describing such loss by reference to *cellular* destruction, through *organic* inactivity, to *functional* loss. As the loss of an organic structure's ability to function is the essential determinant for deciding whether or not the individual person ceases to be conscious, it is therefore preferable to speak of functional loss rather than mere destruction of cells which might give rise to a functional loss. It is quite possible that metabolic activity will continue after the loss of function, but in making a value judgment as to the existence of the person, such circumstances are irrelevant. This approach, favoured by the President's Commission[76], has been covertly accepted by the Australian Law Reform Commission and adopted in the Australian enactments concerning loss of brain function.

[72] For example, 'irreversible', 'irretrievable', 'total loss of function', 'permanent loss of function', 'organ destruction', President's Commission, *op. cit.* 75.

[73] N.H.M.R.C. Code, *op. cit.* 12, para. 7.7; see also the terms of the Declaration of Sydney, *op. cit.* and the discussion of this issue in McMullin, *op. cit.* 6-7; Plueckhahn, *op. cit.* 44; and recently by Pallis C. 'Prognostic significance of a dead brain stem' (1983) 286 *British Medical Journal* 123, 124.

[74] Human Tissue Act 1982 (Vic.) s. 26(7)(b)(i); Transplantation and Anatomy Act 1979 (Qld) s. 45(2); Human Tissue and Transplant Act 1982 (W.A.) s. 24(2).

[75] President's Commission, *op. cit.* Appendix C.

[76] *Ibid.* 75.

Having decided upon a single rather than a dual approach to the definition of death, and preferring the criterion of loss of brain function, it is unnecessary to discuss further that part of the existing Australian legislative definitions which deal with blood circulation. The more important requirement for analysis concerns precise formulation of brain death.

(v) *Brain death*

Historically, in the second half of the seventeenth century and the early part of the eighteenth century a number of neurologists and philosophers embarked upon an investigation to locate that part of the brain responsible for human existence, or in the words of René Descartes, the seat of the mind or soul.[77] The most widely accepted site at the time was the pineal gland because it was so strategically situated with regard to the ventricular chambers that it could influence and be influenced by the flow of spirits between them.[78] Although the search for a single neural unit corresponding with the seat of conscious experience faltered soon afterwards, the phrenologists of the eighteenth and nineteenth centuries continued the study of the brain searching for evidence of specific functional localization.

It is now accepted that the ascending reticular activating system of the brain stem controls states of arousal and consciousness, and that if the brain stem is unable to function the patient will remain in a comatose state.[79] Accordingly, if consciousness is taken to be the criterion of death in the conceptual sense, then if that part of the brain which mediates consciousness is unable to function and consiousness is thereby irretrievably lost, it follows that the individual will be dead. This physiological standard of irreversible loss of brain stem function has been considered in the United States as the criterion of death but has been doubted owing to the difficulties of practically applying the test.[80] The President's Commission did, however, recommend specific reference to loss of brain stem function in the proposed definition, referring to 'irreversible cessation of all functions of the entire brain, including the brain stem'.[81]

An alternative approach relies upon proof of loss of cortical function without loss of brain stem activity. This state, described as 'the apallic syndrome'[82] is likely to occur in cases where the paleum of the brain has been deprived of oxygen for such a period as to lead to destruction of all the neural cells of the cortex. In such cases the patient's metabolic functions will continue to be maintained by brain stem activity but there will be a complete absence of higher cortical functions and conscious activity. However, because of the continuation of spontaneous

[77] Descartes R., *Treatise of Man* (trans. T. S. Hall, 1972) 86, 95, 103.

[78] Walsh, *op. cit.* 12; see also Engelhardt, *op. cit.* 18.

[79] Magoun H., 'The ascending reticular system and wakefulness' in Delafresnaye J. F., *Brain mechanisms and consciousness* (1954) 13; see also Walsh, *op. cit.* 46-9; Butter C. M., *Neuropsychology: The Study of Brain and Behaviour* (1968) ch. 6; Luria A. R., *The Working Brain* (trans. B. Haigh, 1973) 58-63; for the anatomy of the brainstem see *Cunningham's Manual of Practical Anatomy* (13th ed. 1966) iii 221-240; *supra* n. 49; see also the discussion in C.L.R.C. Working Paper, *op. cit.* 12-6.

[80] President's Commission, *op. cit.* 28; see the discussion, *infra*; on the question of diagnosing brain stem death with certainty, see Pallis, *op. cit.* 123-4.

[81] *Ibid.* 73-5

[82] Puccetti, R., 'The life of a person' in Beauchamp and Walters, *op. cit.* 101-7, 106-7.

circulatory and respiratory functions, the criterion of cortical death has generally been rejected.[83] In the context of tissue transplantation, Knight comments:

> everyone agrees that cessation of spontaneous respiration is an absolute prerequisite — no donation would ever be made from a person with spontaneously functioning heart and lungs even if it could be shown that his cerebral activity was irretrievably absent.[84]

In the opinion of the present writer, the Australian legislative approach of requiring irreversible cessation of all function of the brain is over-inclusive and logically imprecise. As already argued, loss of consciousness should be the conceptual criterion of death, and this standard should be expressed in the most direct causal antecedent of such loss. As the brain stem is the neural region directly responsible for maintaining cortical tone, and thus consciousness, loss of function in this region should be the physiological standard for determining death.[85] The precise manner of applying this definition will be considered shortly.

(f) Standards adopted — problems of application

Having accepted that death is present where there has occurred total loss of consciousness following the irreversible cessation of function in the brain stem, it now remains to examine the manner in which that standard will be practically applied. Operational criteria for the determination of brain death have been adopted by numerous groups of practitioners in the past with differences in detail, procedures and tests to be applied.[86] This lack of uniformity has led to widespread concern amongst policy makers who fear that less stringent procedures will be adopted in some jurisdictions.[87] These doubts have given rise to a uniform code of practice being recommended, and although this might not be possible internationally, it certainly should be favoured within Australia.

It has already been stressed that the determination of operational criteria to apply the physiological standards which have been legislatively adopted should be for policy makers and administrators within the medical profession.[88] In devising such guidelines, medical practitioners will need to consider the following factors. First, the code should enable the operational criteria and tests which are adopted to be reviewed frequently and regularly to ensure that the most reliable and accurate

[83] President's Commisssion, *op. cit.* 38; Engelhardt, *op. cit.* 26; A.L.R.C. Report, *op. cit.* 53-5.

[84] Knight, *op. cit.* 34.

[85] In debate on the Death (Definition) Bill 1983 (S.A.), The Hon. L. H. Davis said '[t]here is now, general agreement in the medical world that the permanent functional death of the brain stem constitutes brain death when, further support is pointless'. South Australia, *Parliamentary Debates*, Legislative Council, 29 March 1983, 679.

[86] Ad Hoc Committee, *op. cit.*; Declaration of Sydney, *op. cit.*; Statement of the Conference of Medical Royal Colleges and their Faculties in the United Kingdom, *op. cit.*; A.L.R.C. Report, *op. cit.* Appendix III; President's Commission, *op. cit.* Appendix F; Knight, *op. cit.* 35; Russell, *op. cit.* 29-33; N.H.M.R.C. Code, *op. cit.* 19, Appendix I — Transplantation checklist, Part B — Criteria for Diagnosing Death.

[87] President's Commission, *op. cit.* 29, see also South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1562 *per* The Hon. R. J. Ritson; Victoria, *Parliamentary Debates*, Legislative Assembly, 11 December 1981, 4972 *per* Mr Borthwick; *Age*, Melbourne, 5 April 1983, 5 reporting Dr Larry Osborne's criticism of the Human Tissue Act 1982 (Vic.) for not encouraging uniform practices in hospitals.

[88] *Supra* n. 33, 223.

procedures will be carried out.[89] The need for such reviews is the main reason why the code should not be created legislatively, owing to the time and delays involved in amending statutes and rules made by Parliament.

Second, the individuals making the code should consider the circumstances in which it will be applied bearing in mind the differences in skill and experience which the persons carrying out the tests will have and the fact that some hospitals and clinics might not have access to the most currently available technology.[90] Third, adequate instructions will need to be given to ensure unquestionable proof of diagnosis, perhaps by inclusion of repeat tests and relatively long-term trials.[91] Particular care needs to be exercised in providing tests which exclude confounding influences such as loss of consciousness and coma caused by poisoning, large doses of barbiturates, hypoglycaemia, metabolic disorders, treatable brain lesions, and hypothermia.[92]

Finally, practitioners should be instructed to make their assessment with sensitivity and appreciation of the emotional and religious needs of those involved. This is especially important where the accepted physiological standard marks a departure from traditional practice and where relatives and friends have strongly-held philosophical and theological views about the proper procedure to be adopted.[93]

In addition, it should be stressed that an operational code of practice should be published concurrently with the enactment of relevant legislation and distributed to all practitioners concerned immediately. To summarize, in the words of Sir Arthur Burton,

> [the] determination [of death] will be based on clinical judgment, 'employing the classical criteria known to all physicians', supplemented but not replaced by modern diagnostic aids.[94]

(g) Implications

The decision to enact or amend legislation and publish codes of practice carries with it important implications with respect to the matters already discussed.

(i) *Tissue transplants*

It has been said that the 'brain death legislation could make many more kidneys available than are presently available' for transplantation.[95] This will follow as a result of two important developments. First, medical practitioners, who presently fear prosecution for removing vital organs from patients who are not legally dead, will feel free to embark upon transplant operations with greater confidence arising

[89] Victoria, *Parliamentary Debates*, Legislative Assembly, 11 December 1981, 4972 *per* Mr Borthwick; South Australia, *Parliamentary Debates*, Legislative Council, 29 October 1980, 1562 *per* The Hon. R. J. Ritson; President's Commission, *op. cit.* 29; N.H.M.R.C. Code, *op. cit.* 11, para. 8.5.

[90] A problem raised by the President's Commission, *op. cit.* 27 and Mr D'Arcy: Queensland, *Parliamentary Debates*, Legislative Assembly, 11 December 1979, 2446; *supra* n. 73, 229.

[91] Although brain death can be ascertained within hours, some practitioners have questioned whether urgency is really justified and have cautioned against hasty procedures being used. See Arfel G., 'Brain death' in Vinken and Bruyn, *op. cit.* xxiv, 782.

[92] President's Commission, *op. cit.* 30; and Plueckhahn, *op. cit.* 44; Pallis, *op. cit.* 124.

[93] President's Commission, *op. cit.* 43.

[94] Burton, *op. cit.* 66; see also the recommendations in A.L.R.C. Report, *op. cit.* 63.

[95] South Australia, *Parliamentary Debates*, Legislative Council, 26 November 1980, 2223 *per* The Hon. R. J. Ritson.

out of the increased security and protection afforded them.[96] Second, a clarification of the law will assist in gaining public confidence in the transplantation procedures by demonstrating to people who may presently feel reluctant to participate knowing that the donor is not yet legally dead,[97] that the law has sanctioned the procedure.

(ii) *Life support machinery*

If rules for the determination of death are included in the Tissue Transplantation Acts, then it is equally desirable that legislation be enacted to deal with the question of termination of life support machinery in cases where patients have been certified as dead. Otherwise, one would be left with the possibility of having tissue banks and artificially maintained bodies of deceased persons. The Honourable R. J. Ritson, in debating the Natural Death Bill 1980 (S.A.), referred to 'the emotional impact where a gruesome "living" mortuary would upset people. Also, relatives have to be considered'.[98]

In both Victoria[99] and South Australia[1] legislation is being considered by Parliament concerning the termination of life support machinery, and in South Australia the Bill is being considered concurrently with other legislation relating to the definition of death and tissue transplantation.[2] In the opinion of the present writer, any legislative provision defining death should appear only in the context of enactments which specifically require such a definition: *viz.*, where organs are to be removed after death for transplantation, and where life support machinery is to be turned off once individuals have become irreversibly unconscious.

It is recognized that in cases other than those in which tissues are required for transplantation purposes, life support machinery should be terminated at the same time as death is pronounced.[3] Where organs and tissues are required for transplantation, artificial life support should only be maintained for such time as is reasonably necessary to perform the transplantation. Thereafter, donor cadavers should not have circulation and respiration artificially maintained.[4] Specific directions in this regard should be included in any legislation dealing with the question of natural death and the termination of life support machinery.

(iii) *Euthanasia*

Germain Grisez and Joseph M. Boyle have argued that a correct definition of death could relieve some of the pressure for legalizing euthanasia in that artificially maintained brain dead patients would be declared dead.[5] By clarifying and expressing the concept of death the community will have a better understanding of

[96] *Age* (Melbourne) 9 April 1983, 5 reporting Prof. Gordon Clunie, transplant surgeon; President's Commission, *op. cit.* 12.

[97] Knight, *op. cit.* 37; Beauchamp and Walters, *op. cit.* 269.

[98] South Australia, *Parliamentary Debates*, Legislative Council, 26 November 1980, 2221.

[99] *Supra* n. 99 referring to the report of the Health Advisory Council, *op. cit.*

[1] Natural Death Bill 1983 (S.A.).

[2] Death (Definition) Bill 1983 (S.A.); Transplantation and Anatomy Bill 1983 (S.A.).

[3] A.L.R.C. Report, *op. cit.* 60; President's Commission, *op. cit.* 83.

[4] This would overcome the possibility raised by Engelhardt, *op. cit.* 26, of a brain dead person producing sperm so as to reproduce by artificial insemination.

[5] Grisez G. and Boyle J. M., *Life and Death with Liberty and Justice A Contribution to the Euthanasia Debate* (1979) 61; see also the discussion by Walton, *op. cit.* 10-2.

when individuals should be allowed to die, or positively assisted to die. Such issues are beyond the scope of the present discussion, but should be addressed by Parliament and the community in the near future.[6]

(iv) *Resource allocation*

A further implication of specifying the conditions by which death may be determined concerns the need to make value judgments about which patients are in need of scarce medical and technological resources in hospitals. Walton cites the case of a woman in a Montreal hospital who remained in a state of irreversible unconsciousness for twelve years, thereby, in a utilitarian sense, depriving an estimated 312 patients of hospital beds.[7] Clearly such considerations need to be borne in mind when deciding that irreversibily unconscious patients with loss of brain stem function are dead and should no longer have metabolic functions maintained artificially.[8]

(v) *Social — psychological*

Once death has been determined, the emotional stress on relatives, doctors, and hospital staff is reduced and decisions made accordingly. Without a definite approach to the determination of death, there arises community disquiet and misunderstanding, for individuals do not appreciate when their own and their friends' and relatives' existence ceases.[9] Defining the concept of death with certainty might have positive psychological implications by encouraging people to be more willing to confront the fact of their own death.[10]

The social and psychological implications of defining death need to be carefully considered by practitioners in interacting with relatives. First, practitioners should explain the inevitability of death with relatives prior to raising the matter of organ transplantation.[11] Second, the President's Commission suggested that it might be possible to keep patients in hospital beyond the stage of brain death out of deference to family wishes or in order for the family to decide whether the deceased's organs should be donated. Of course, this would only arise once a declaration that death has occurred has been made.[12] Generally, what is required is

[6] See the recent cases dealing with euthanasia and neonates: *McKay and Anor. v. Essex Area Health Authority* [1982] 2 W.L.R. 890 (C.A.) and discussing this case: Brahams D., 'Acquittal of paediatrician charged after death of infant with Down syndrome' [1981] ii *Lancet* 1101-2; Brahams D., 'No claim in English law for wrongful birth' [1982] i *Lancet* 691-2; *In re B (A Minor) (Wardship: Medical Treatment)* [1981] 1 W.L.R. 1421 (C.A.); *R. v. Leonard Arthur* [1981] unreported, discussed in *Times* 8 August 1981, 9 November 1981; (1981) 55 *Australian Law Journal* 826; (1982) 56 *Australian Law Journal* 139; (1983) 57 *Australian Law Journal* 57; and the debates in Parliament on the Victorian and South Australian Bills, *supra* ns 95-9, 117 and ns 5-9, 118-9 respectively; See also the views of A. Baker, president of Pro-Life, Victoria, in the *Age* (Melbourne), 22 September 1983, 12.

[7] Walton, *op. cit.* 3; see also the discussion by Keyserlingk, *op. cit.* 173-7.

[8] See President's Commission, *op. cit.* 24; Beauchamp and Walters, *op. cit.* 270; Englehardt, *op. cit.* 23; Victoria, *Parliamentary Debates*, Legislative Council, 10 December 1980, 4696 *per* The Hon. Glyn Jenkins; On the extent of unnecessary ventilation of patients with brain stem death see Pallis, *op. cit.* 123-4.

[9] Kennedy, *op. cit.*; Walton, *op. cit.* 21; A.L.R.C. Report, *op. cit.* 60.

[10] Discussed in South Australia, *Parliamentary Debates*, Legislative Council, 2 April 1980, 2017 *per* The Hon. Anne Levy.

[11] Knight, *op. cit.* 35.

[12] President's Commission, *op. cit.* 81.

a sensitive and careful consideration of what it means for a person to be declared dead in the particular circumstances which confront practitioners.

(vi) *Ethical — philosophical*

Earlier in this paper it was argued that human existence is only of value where the individual has a conscious perception of that existence.[13] By adopting a criterion of death couched in terms of consciousness, the community implies that if consciousness is not present, then life is of no value, and may be discarded. It is necessary, however, to ensure that loss of consciousness is permanent and irreversible before a declaration is made that the individual in question has died, otherwise unborn foetuses, severely mentally retarded people, and those asleep could be considered dead.

By publishing rules which rely upon loss of consciousness as the criterion of life, a philosophical distinction is drawn between human biological life and human personal life,[14] with the corollary that biological life is of less value in some circumstances than personal conscious life and existence.

The most signficant implication of reducing the concept of death to writing is that it crystallizes society's view as to the worth of its inhabitants. Such statements could have far-reaching implications for other social problems where the value of life is in question, such as in wars and in the debate over capital punishment.

(vii) *Theological*

Theological conceptions of the determination of the time of death generally follow the medical practice currently accepted in the community.[15] Where, however, religious dogma requires the cessation of blood circulation before death may be pronounced to accord with particular religious views, it could be possible to keep patients' circulation artificially maintained until the relevant pronouncement could be made. While practically unjustifiable, this practice might be considered in individual cases where theological hardship would be caused.[16]

(viii) *Legal*

The implications for defining the time of death for the criminal law have already been considered,[17] and in order to protect medical practitioners from unjustified prosecutions and to prevent defendants from raising unworthy defences to charges of murder, it is concluded that the precise formulation of the time of death is a justified legal reform. In order to satisfactorily clarify the law, the proposed definitions of death need to be inserted into the relevant existing or proposed legislation dealing with tissue transplantation, life support machinery, euthanasia, and criminal law. Generally, however, once death has been certified in appropriate

[13] *Supra* n. 50, 210.
[14] Engelhardt H. T. 'Medicine and the concept of person' in Beauchamp and Walters, *op. cit.* 94.
[15] *Supra*, n. 63, 212. See also the theological submissions presented in the Health Advisory Council Report, *op. cit.* 4.
[16] See President's Commission, *op. cit.* 81.
[17] *Supra* ns 20-2, 203-4.

circumstances, then the legal consequences will follow and liability will accordingly be eliminated, for it is the manner in which the definition is applied that sets the boundary between legal and illegal activity.[18]

The civil consequences of determining the time of death are far-reaching, for, as Walton comments, 'a declaration of death means that the comatose patient is legally without rights as an existent individual from the time of the pronouncement'.[19] Accordingly, a determination of the time of death will carry implications for inheritance, taxation, family provision, insurance, and other matters. Such implications will not, however, be legally novel or unusual merely because the deceased died following irreversible loss of consciousness caused by cessation of brain stem function.

It has been suggested in the context of the Natural Death Bill 1980 (S.A.) that the enactment of such legislation would result in an increase in medico-legal litigation.[20] While such a possibility follows any alteration in the law, in the opinion of the present writer, the legal clarification of the time of death should reduce litigation rather than encourage it.

6. PROPOSALS FOR REFORM

The preceding discussion has raised numerous issues which the Australian community and Parliaments should address, and suggested a number of proposals which should be considered in any further developments in deciding how best to determine the time of death. In summary, the following conclusions have been reached and the following recommendations suggested.

(a) Conceptual definition

Conceptually, death should be defined as occurring when the individual attains a state of permanent and irreversible unconsciousness.

(b) Physiological standards

The physiological standard by which permanent and irreversible loss of consciousness should be determined, is the irreversible cessation of brain stem function of the individual, without reference to the traditional standards of cessation of respiration and blood circulation.

(c) Operational criteria

Operational criteria should be published concurrently with the enactment of, and referred to in the, legislation by the relevant statutory health and medical authorities[21] in the form of specific tests and procedures to be carried out in order to establish the irreversible cessation of brain stem function of the individual. Such a

[18] See President's Commission, *op. cit.* 79; McMullin, *op. cit.* 6; Glover, *op. cit.* 44.
[19] Walton, *op. cit.* 9.
[20] South Australia, *Parliamentary Debates*, Legislative Council, 5 November 1980, 1758 per The Hon. L. H. Davis.
[21] For example, the National Health and Medical Research Council and the Royal Australian Medical Colleges.

publication should be regularly reviewed in order to accurately reflect current medical procedures in the professional community.

(d) Legislation

Legislation should be enacted to define death as the permanent and irreversible loss of consciousness of the individual as determined by irreversible cessation of brain stem function. This definition should not be enacted in a separate statute for the purposes of all law in the jurisdiction in question, but rather the same definition should be incorporated into each individual statute which requires clarification of the time of death, such as tissue transplantation Acts and natural death Acts where they occur. The legislative definition adopted should make reference to the fact that operational criteria are published by the appropriate statutory health authorities for the guidance of medical practitioners in applying the definition.

(e) Uniformity

In those jurisdictions which have yet to codify the law dealing with tissue transplantation, natural death, euthanasia, and termination of life support machinery, legislation should be uniform with the other Australian jurisdictions in accordance with the above requirements.