A question of life and death

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Abstract

Science and technology have assumed a pivotal role in shaping all aspects of modern society. They are intertwined with wider socio-political issues, and feature in both civil and criminal courtrooms. The law, however, often lags behind in adequately considering scientific and technological advances, social context, and the consequences of technological advances in a multicultural society. This article focuses on the moment of death, defined in the National Health Act 61 of 2003 as brain death. The development of death criteria will be considered, together with contemporary controversies surrounding brain death as the generally accepted death criterion. The pivotal role of social norms in determining the moment of death is discussed with specific reference to Jewish law, Japanese culture, and finally African indigenous traditions. It is argued that while it is important that the concept of death be 'updated' and redefined as science and technology provide for new possibilities, and social norms and belief systems change over time, it is only with due regard to societal norms and values that the law can truly give effect to the role of science and technology in shaping all aspects of modern society – including the medical and legal definitions of death.

INTRODUCTION

The moment of death is defined in the South African National Health Act 61 of 2003 as brain death. This profound shift in South African jurisprudence from somatic death to brain death was effected without consultation or discussion with interest groups or the general public. The greatest advantage of this new definition of the moment of death, is that organs can now be harvested for transplantation – with the assistance of modern technology and medical breakthroughs – before respiration, circulation, or heartbeat have ceased. But, the moral, religious and/or cultural beliefs and values of a multi-cultural nation like South Africa may not accord with this new legal recognition of the concept of brain death.

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This article focuses on the development of the brain death criterion as the legal definition of death in terms of the National Health Act of 61 of 2003 of South Africa. Criteria to determine the moment of death refer to the diagnosis of a clinical state or condition made evident by ascertainable signs present in the patient. It is therefore not death that is diagnosed by these criteria, but rather a clinical state or condition from which we can medically and legally deduce that the person is no longer alive.[1] While the biological reality of death is certain, how death is viewed from a clinical perspective, from a legal perspective, and in terms of the general social norms in a multi-cultural society, is the primary concern of this paper. In other words, how can the concept of death, and the artificial prolongation of life – which medical and technological advances make increasingly possible – be agreed upon from a medico-clinical perspective, from a legal perspective, and with due regard to the societal values and norms of a multi-cultural nation?

It is important to note that I do not address the relationship between the determination of the moment of death and the harvesting of organs. I also do not attempt to address the clinical concerns and controversies with regard to the diagnostic criteria for determining brain death, and whether these criteria are valid – although reference will be made to some of these concerns. What I do address is, first, a historical overview of the development of the brain death criterion as the generally accepted death criterion used in most jurisdictions. Some contemporary controversies in determining the moment of death are highlighted before the discussion shifts to the very important role of social norms and values in determining the moment of death. Examples of death and dying in traditional Jewish law, Japanese culture, and lastly, African indigenous cultures are considered to highlight the importance an informed perspective of the views, norms and values of diverse groups and communities on the clinical and scientific determination of death, its social and legal context, and its consequences for a diverse multi-cultural society.

SOMATIC DEATH, THE TRADITIONAL DEATH CRITERION

The exact determination of death has always been an uncertain and controversial issue. Early Greek civilisations, for example, believed that life starts with the very first heartbeat and that the heart is also the very last organ to die in the death process. Great importance was later also placed on

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[1] Pellegrino *et al Controversies in the determination of death: a White Paper by the President's Council on Bioethics* (December 2008) 18.

respiration and the last breath as a true indicator of death in Hebrew and Christian literature. However, as medical technology and knowledge continued to develop, it became evident that the exact moment of death as articulated in *Thomas v Anderson*[2] where it was stated that death is an event that takes place at a precise time and moment, is in fact a legal fiction.[3]

Death refers to a biological process involving the irreversible loss of cellular and tissue functions and metabolic activity. As cells and tissue die at different intervals, there is no precise moment of death. Yet, it is important to determine and articulate precisely when a person can be regarded as clinically dead, and from a legal point of view, when the legal subject ends. This determination is important in the context of organ transplantation, with regard to questions of euthanasia, insurance claims, the termination of marriage or a business partnership, as well as regarding matters of succession.[4]

Since the Enlightenment, somatic death has been regarded as the criterion by which to determine the moment of death from both a clinical and legal perspective. Somatic death refers to cardiopulmonary failure determined by permanent cessation of spontaneous respiration, heartbeat, and circulation. Some four to five minutes after spontaneous respiration and circulation have ceased, irreversible damage to the brain can be observed and the consequent cessation of all functions of the central nervous system then also indicates brain death in addition to somatic death. This is the traditional and generally accepted moment of death. The brain, in terms of this criterion, is therefore not vital in diagnosing death, which is rather premised on the lack of vital functions. The courts adopted these medical criteria for the determination of death and no more precise legal definition of death was formulated or required. By the mid-20th century, however, advances in medical technology had rendered this traditional standard inadequate. Advances in science and medical technology, especially with regard to the artificial prolongation of life, spurred on by an interest in organ transplantation, have necessitated that a new death criteria be developed and applied.

'BRAIN DEATH' OR THE NEUROLOGICAL STANDARD[5]

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2 *Thomas v Anderson* 215 P 2d 478 (1950).

3 *Id* at 371.

4 Van Rooyen 'Sekondes sal bepaal wie miljoene erf' *Die Volksblad* 12 September 2011.

5 It has also been referred to as whole or total brain death, total brain failure, *Coma Dépassé* irreversible coma, (total) brain infraction, brain arrest and irreversible apneic

With the development and use of the mechanical ventilator in clinical settings, came confusion and controversy about when death occurs in a clinical care setting. Mechanical ventilators support a patient's respiration externally when injury or infirmity prevents the body from performing this vital function. In this context, injury to vital parts of the brain are the most common cause restricting the ability to breath spontaneously as the central nervous system – comprising the brain and the spinal cord – plays a crucial role in maintaining an organism's vital functions.[6] Although ventilators do not treat the underlying disease or improve the underlying condition, they can stave off death for months or even years.[7]

However, the prolongation of life in this way can be described as something of a hollow victory, in that, medical practitioners and the patient's family often later, have to decide that '...death should be allowed to come even when the ventilator is capable of putting it off for a time'.[8] Further, not all patients on mechanical ventilators have lost the ability to breathe spontaneously, nor do they all have the same level of incapacity. In 1959, French neurologists Pierre Mollaret and Maurice Goullon found that some brain-injured patients dependent on a ventilator are more incapacitated than others who initially appear to be in a similar state. To differentiate between states of maximal incapacitation and other instances of incapacitation, the term *coma dépassé* (or beyond coma) was coined.[9] Patients who are beyond coma have suffered irreversible damage to and loss of their vital functions. They are therefore already dead and are not being 'kept alive' by a mechanical ventilator. Conversely, patients who are not beyond coma (in other words, the damage and loss suffered is not irreversible) but who are breathing by way of a mechanical ventilator, may experience full recovery of their central nervous system functions. It must be noted, however, that in most cases where the functions of the central nervous system are restored, the patient will be in a vegetative state which, if it persists, will be labelled a 'persistent vegetative state'.[10] This persistent vegetative state cannot, however, be equated with brain death as it does not meet the diagnostic criteria for an irreversible loss of vital functions. It is also for this latter

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coma, see Pellegrino n 1 above at19.

6 Pellegrino n 1 above at 25.

7 *Id* at 2.

8 *Ibid*.

9 Le Roux-Kemp 'The moment of death: law, society and science'(2008) 29/2 *Obiter* 261 260–267; Pellegrino n 1 above at 3.

10 Pellegrino n 1 above at 30.

group of patients that the ethical dilemma of whether further medical treatment is futile and should be discontinued arises.[11]

It was this advance in medical technology that inspired the use of (whole) brain death as the ultimate criterion for death.[12] In 1968 a physician-led committee at Harvard Medical School concluded that patients who meet the diagnostic criteria for a certain type of severe brain injury may be pronounced dead before the cessation of the heartbeat.[13] The diagnostic criteria identified by the Harvard Committee included that the patient is in a completely unresponsive coma and the cause of the patient's brain injury is not hypothermia, poisoning, drug intoxication, or any other factor that results in metabolic changes that can mimic the effects of total brain failure.[14] Once these two diagnostic criteria have been answered in the affirmative, a variety of clinical/bedside tests together with laboratory/imaging tests must confirm the finding of whole brain death.[15] Ultimately, a diagnosis of total brain failure can only be made if:

- the patient has a documented history of injury that does not suggest a potentially transient cause of symptoms
- the patient is verified to be in a completely unresponsive coma
- the patient demonstrates no brainstem reflexes
- the patient shows no effort to breathe during the apnea test.[16]

A result indicating that all these diagnostic criteria have been met must be confirmed by a follow-up test a few hours after the initial positive results have been obtained.[17] This briefly sketches the Harvard diagnostic criteria, which is only one of many sets of criteria that have been developed in

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11 In the South African case of *Clarke v Hurst* NO 1992 4 SA 630 (D), the court was of the opinion (at 658) that the maintenance of life in the form of certain biological functions such as the heartbeat, respiration, digestion and blood circulation but unaccompanied by any cortical and cerebral functioning of the brain, cannot be equated with living in the human or animal context. This state of existence (or rather non-existence can be defined as neo-cortical death). Pellegrino n 1 above at 3.

12 Carstens & Pearmain *Foundational principles of South African medical law* (2007) 204.

13 Beecher *et al* 'A definition of irreversible coma'? (1968) 205 *Journal of the American Medical Association* 337–40.

14 These conditions are usually transient and may clear up when the cause of the metabolic change passes out of the patient's system or is otherwise removed; Pellegrino n 1 above at 31.

15 Pellegrino n 1 above at 31.

16 Apnea refers to the inability to breath and the apnea test requires that the mechanical ventilator be removed and the level of carbon dioxide in the bloodstream is permitted to increase beyond the point that would normally trigger inhalation. Pellegrino n 1 above at 32–34.

17 Pellegrino n 1 above at 34

different jurisdictions and are prescribed by different professional bodies.[18] By 1978, for example, over seventy different diagnostic criteria had been published, and there is to date no consensus on exactly which diagnostic criteria should be used in determining brain death.[19]

Shortly after the publication of the Harvard criteria in the *Journal of the American Medical Association,* the 22nd Congress of the World Medical Assembly (WMA) adopted the Sydney Declaration.[20] This declaration recognised that medical practitioners will generally meet their legal responsibility in diagnosing death by relying on the classic somatic criteria but that these criteria will be inadequate in cases of the artificial prolongation of life, the use of mechanical ventilators, and in certain instances of organ transplantation. The WMA consequently concluded that 'no single technological criterion is entirely satisfactory in the present state of medicine nor can any one technological procedure be substituted for the overall judgement of the physician'.[21]

However, by the early 1970s various courts and state legislatures in the USA acted to turn the presumed 'medical consensus' as articulated by the Harvard Committee, into a legally recognised standard for determining death.[22] This, despite the absence of official diagnostic criteria for irreversible cessation of all brain function, and of any generally accepted philosophical rationale as to why irreversible non-functioning of the brain should constitute death. Among the legislation and standards enacted are te Uniform Determination of Death Act published by the National Conference of Commissioners on Uniform State Laws (NCCUSL). Section 1 of the Act endorses the use of whole brain death as the criterion for determining death.

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18 Wijdicks 'Brain death worldwide: accepted fact but no global consensus in diagnostic criteria'? *Neurology* 58 (2002) 20–25.

19 Black 'Brain death' (second of two articles) (1978) 299 *New England Journal of Medicine* 393–401, at 395–96; Ohnuki-Tierney *et al* 'Brain death and organ transplantation: cultural bases of medical technology' (3 June 1994) 35/3 *Current Anthropology* 233–254, 234; Wijdicks 'The diagnosis of brain death' (2001*)* 344/16 *NEJM* 1215–1221; Joffe 'The neurological determination of death: what does it really mean?' (2007) 23/2 *Issues in Law and Medicine* 119–140.

20 Reprinted in 'Declaration of Sydney'(1973) 2 *Med J Aust Supp* 58.

21 Abram et al *Defining death: medical, legal and ethical issues in the determination of death: President's Commission for the Study of Ethical Problems in medicine and Biomedical and Behavioural Research* (July 1981) 70.

22 Le Roux-Kemp n 9 above at 261; Pellegrino n 1 above at 4.

> §1. [Determination of Death]. 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.[23]

Other states in the USA and other countries who did not accept this two-pronged standard, have opted for only a whole brain death determination stating that: 'whole brain death – but no other sort of injury that leaves circulation and respiration intact – is an appropriate standard for determining the death of a human being'.[24] The reasoning behind the whole brain death criterion is that the brain is necessary for the permanent functioning of the organism as a whole.[25] Further, the Uniform Brain Death Act provides that an individual who has sustained irreversible cessation of all functioning of the brain, including the brain stem, is dead for medical and legal purposes.[26] Brain death has also been recognised by the courts in various USA states as the legal definition of death, and jurisdictions across the globe have followed suit.[27]

In an attempt to address the variety of views and legislative reactions to the brain death criterion, the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research published a landmark report in 1981. The report proposed a uniform statute for determining death. In the report entitled: 'Defining death: medical legal and ethical issues in the determination of death', the application of alternative physiological standards for determining death was proposed. First, the traditional criterion of irreversible cessation of circulatory and respiratory functions should remain and continue to be used as the standard death criterion. Only in those rare cases where mechanical ventilation is used to support the respiration of a severely brain injured individual who meets the criteria of the Harvard Committee, may the irreversible cessation of all functions of the entire brain, including the brainstem, be used.[28] In terms of this reasoning, both physiological standards are necessary as circulatory and

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23 This two-pronged model is also referred to as the Capron-Kass Model; Abram n 21 above at 63.

24 Pellegrino n 1 above at 6.

25 *Id* at 39.

26 (Supp 1981) 12 *Uniform Laws Ann* 15.

27 Cook & Hirsh 'The legal implications of brain death' (1982) 1/135 *Medicine and Law* 135–151 137.

28 Pellegrino n 1 above at 5.

respiratory functions cannot be considered signs of life if they are supported mechanically.[29] This recommendation was confirmed by the President's Council on Bioethics in a White Paper entitled 'Controversies in the determination of death' (December 2008).[30]

Until 2003 when the National Health Act 61 of 2003 defined the crucial moment of death as brain death (s 1), there was no official legal definition in South African jurisprudence to determine the exact moment of death. In practice, death was determined by the traditional criterion of somatic death. Medical practitioners and the courts agreed that the cessation of spontaneous respiration, circulation and heartbeat were sufficient to conclude that somatic death had occurred and that the consequent legal implications of this formal recognition of death should follow.[31]

CONTEMPORARY CONTROVERSIES IN DETERMINING THE MOMENT OF DEATH

Despite the general and widespread recognition that whole brain death is now the standard criterion for determining the moment of death, controversy and confusion persist. Clinicians, for example, do not all agree that brain death really is and should be the standard criterion for determining the moment of death. Many clinicians argue that if death is not established through the diagnostic criteria generally associated with it, and which we have to date referred to as somatic death, there is really no way to state *with confidence* that death has in fact occurred.[32] In his 1974 essay the philosopher Hans Jonas articulated this argument as follows:

> We do not know with certainty the borderline between life and death, and a definition cannot substitute for knowledge. Moreover, we have sufficient grounds for suspecting that the artificially supported condition of the comatose patient may still be one of life, however reduced–i.e., for doubting that, even with the brain function gone, he is completely dead. In this state of marginal ignorance and doubt the only course to take is to lean over backward toward the side of possible life.[33]

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29 *Ibid*.

30 Pellegrino n 1 above.

31 Le Roux-Kemp n 9 above at 262.

32 Ohnuki-Tierney n 19 above at 233–254; Pellegrino n 1 above at 53.

33 Jonas 'Against the stream' *Philosophical essays: from ancient creed to technological man* (1974) 138; Pellegrino n 1 above at 53.

In an article in 1998,[34] Shewmon cited evidence for the claim that neither bodily disintegration nor cessation of heartbeat necessarily and imminently ensue after brain death.[35] Shewmon referred to more than one hundred documented cases that demonstrated a variety of factors that influenced the probability of survival of 'brain dead' patients and proof that asystole[36] does not necessarily follow from brain death.[37] The fact that brain death is difficult to diagnose and not necessarily always a sure sign of death, was again confirmed in a relatively recent case at the Emory University School of Medicine in Atlanta, Georgia. In this case a fifty-five year old man, pronounced dead after cardiac arrest, was found to be breathing independently and to have regained his corneal reflexes on being moved to the operating table for organ donation.[38]

Through the widespread acceptance of brain death as the new criterion for determining the moment of death, a dual conception of death and the end of legal subjectivity has emerged. People tend to describe a brain dead person – who is clinically speaking and in terms of the particular diagnostic criteria for brain death, dead – as 'being kept alive' by a mechanical ventilator and other machines, and as 'dead' once the machines have been switched off. Or as the Japanese journalist Takashi Tachibana articulated it: 'brain death is, to the lay person, the invisible death before real death.'[39] Medical practitioners, on the other hand, tend to declare a person dead as soon as the specific diagnostic criteria for brain death used in their hospital or jurisdiction have been met, without considering the signs of on-going integrated bodily activities that are at times still evident.[40] The use of terms like 'organ harvesting' also impersonalise the death and organ transplantation process.

In addition, there is increasing resistance to the insistence that death or 'organ donation eligibility' requires the irreversible loss of function of the

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34 Shewmon 'Chronic ''brain death'': meta-analysis and conceptual consequences' (1998) 6/51 *Neurology* 1538–45. See also Shewmon 'The brain and somatic integration: insights into the standard biological rationale for equating ''brain death'' with death' (2001) 26(5) *Journal of Medicine and Philosophy* 457–478.

35 Pellegrino n 1 above at 54.

36 The absence of cardiac contractions

37 Pellegrino n 1 above at 54.

38 Webb & Owen 'Reversible brain death after cardiopulmonary arrest and induced hypothermia' (June 2011) 39/6 *Critical Care Medicine* 1538–1542.

39 Morioka & Masahiro 'Reconsidering brain death: a lesson from Japan's fifteen years of experience' (2001) 31/4 *The Hastings Centre Report* 41–46 42.

40 Pellegrino n 1 above at 6.

entire brain.[41] This is primarily because artificial support for respiration and circulation maintains the vitality of organs targeted for surgical removal, optimising their value for their eventual recipients.[42] In *New York City Health and Hospitals Corporation v Sulsona*,[43] for example, the hospital sought a declaratory judgment legally defining 'time of death' for purposes of organ transplantation. In this case it was submitted that many medical practitioners are reluctant to use the neurologically oriented death criteria, and stick with the traditional definition of death when making decisions on organ transplantation. The court found that in terms of the Uniform Anatomical Gifts Statute of the State of New York, the term 'death' implies a definition consistent with generally accepted medical standards which it held encompassed the brain death criterion.[44]

In the South African case of *S v Williams*,[45] the question whether brainstem death should be regarded as the critical moment of death in South Africa was raised. Although Rabie CJ did not address the question whether brain death, brainstem death, or somatic death, should be regarded as the moment of death in South African law, he did emphasise that the traditional legal convictions of the community, religious beliefs, as well as moral convictions should be taken into consideration by the law when deciding on a precise and appropriate legal definition for the moment of death.[46]

An informed perspective of the views, norms and values of diverse groups and communities about the scientific and technological advances in the determination of death, the social and legal context in which it operates, as well as the consequences thereof for a multi-cultural and diverse society is therefore required. The role of social norms and societies in determining the moment of death will consequently be considered. In this discussion death and dying in traditional Jewish law, Japanese culture, and African cultures will be examined.

THE ROLE OF SOCIAL NORMS AND SOCIETIES IN DETERMINING THE MOMENT OF DEATH

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41 *Ibid*.
42 *Id* at 8.
43 81 Misc.2d 1002, 367 NYS 2d 686, 76 ALR 3d 905.
44 Cook & Hirsh n 27 above at 149.
45 *S v Williams* 1986 4 SA 1188 (A).
46 *Id* at 1194; Le Roux-Kemp n 9 above at 262.

To date, great deference has been paid to medical expertise in making a diagnosis of death. The law largely reflects the common view on death, and largely allows physicians to formulate and apply the tests to measure vital human functions. Yet, the standard definition of death has the potential to touch social life profoundly, and with advances in science and medical technology there is a perceptible move away from long-held social standards for differentiating between life and death. The need has consequently arisen for greater public scrutiny and input in this regard.[47] It is also clear from the exposition of the development of the brain death criterion above, that a choice as to different death and diagnostic criteria for determining death is at play – a choice that ought to involve people beyond the biomedical community.[48]

While it is trite that biomedical knowledge should inform public policy regarding the determination and moment of death, as well as the legal standards governing death, society as a whole must judge whether these technical standards and the opinions reflected conform to the specific society's settled values and accepted conceptions of human existence and personal rights.[49] Conversely, when medical facts are understood and accepted by society, logically compelling moral and legal positions will follow. In this paper, a few social considerations with regard to brain death as the standard death criterion will now be discussed.

Death and dying in Jewish law

In terms of Jewish legal tradition, the preservation of human life is of paramount value.[50] This high value that is placed on human life can be found in their religious readings and teachings, as well as in the judgments of the Israeli Supreme Court which has used Jewish law to justify forcing life-saving surgery on a recalcitrant patient.[51] Even the Israeli Patient's Rights Act of 1996 provides for hospital ethics committees to approve coercive life-saving therapy for competent adults.[52] This stance certainly disregards contemporary and western legal principles with regard to patient autonomy in favour of traditional Jewish law and the *halakhic* obligation to preserve

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47 Abram n 21 above at 57.

48 *Id* at 46.

49 *Ibid*.

50 Sinclair 'Dealing with death and the Jewish legal tradition' (2009) 6 *Bioethical Inquiry* 297–305.

51 *Kurtam v State of Israel* crim app 490/85, 31 PD, 673 ff.; Sinclair n 50 above at 297–305.

52 Section 15(2) of the Patient's Rights Act of 1996.

life.[53] The only requirements laid down in this regard are that the treating physicians must be unanimous in their belief that the therapy will be successful; the patient must be informed of all aspects of the proposed therapy (as if he/she had consented to it); and there must be a reasonable expectation that the patient will consent retrospectively.[54]

With regard to terminally ill persons or *goses* – persons who are showing the physical features traditionally associated with dying – traditional Jewish law strictly prohibits the precipitation of death. However, this obligation to preserve life is also tempered by the requirement not to delay death.[55] Under the thirteenth century Sefer *Hasidim* no 722, for example, it is mandatory to remove a wood chopper from the vicinity of the dying as the rhythmic sound of wood being chopped was believed to be instrumental in keeping the soul in the body. It was also not allowed for salt to be placed in the mouth of a dying person as it was believed that salt would also obstruct the release of the soul.[56] Today, the references to wood choppers and salt can be replaced by mechanical ventilators and artificial nutrition. However the underlying principle remains the same – that death may not be precipitated, and that anything impeding it must be removed – the distinction between the precipitation of death and the elimination of elements impeding death has obviously become far more complicated.[57]

While some argue that any non-natural life support may be considered an impediment to death and may be removed in the final phase of life when no cure is possible, traditional Jewish jurists and contemporary *halakhists* argue that there is no difference between natural and artificial life support, and that neither may be discontinued until the determination of death has been made.[58] (Muslim Law, in comparison to traditional Jewish law, accepted brain death at a meeting of the Council of Islamic Jurisprudence held in Amman, Jordan on 16 October 1986, and at the Third International

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53 Sinclair n 50 above at 299.
54 *Ibid*.
55 *Ibid*.
56 *Ibid*.
57 *Id* at 300.
58 Compare Halevy 'Removing a patient with no chance of recovery from an artificial respirator' (1981) 2 *Tehumin* (Heb) 304–305 with Sinclair n 50 above at 301. Ohnuki-Tierney n 19 above at 237.

Conference of Islamic Jurists held in the same year, brain death was equated with heart death.)[59]

Death and dying in Japanese culture

In contrast to the historical and customary nature of the traditional Jewish legal objections to the acceptance of brain death as the standard death criterion, the contemporary trademark of Japan and Japanese culture is the development and acceptance of high technology.[60] The Japanese resistance to the general acceptance of brain death as the standard death criterion, stems primarily from the fact that the new advances in medical science represent life and death, and the body and personhood in a way that is alien to the Japanese (and many other non-Western) culture(s). In addition, the Japanese remain sceptical as to whether brain death can in fact be determined with certainty.[61] In Japanese culture the intactness of the body (*gotai*) during life and death is of the utmost importance, and for the Japanese, the removal of organs from brain dead bodies and organ transplantation 'violate' the integrity of the body of the deceased[62] Japanese people generally reject the concept of brain death as they believe that a warm and moist body cannot be seen as a corpse in that the essence of the human exists not only in one's mind but also in one's body.[63]

It was therefore only in 1997, after much debate and thought, that the Japanese Organ Transplantation Law was finally passed. Against the backdrop of the traditional and cultural objections to organ transplantation, this law provides for pluralism on human death, allowing the individual a choice of whether or not the brain death criterion should apply to him or her. Where people opt for the brain death criterion not to apply, they will be declared dead only once the diagnostic criteria for somatic death have been met.[64] Such provisions are referred to as 'conscious clauses' and can also be

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59 Akrami, Osati, Zahedi & Raza 'Brain death: recent ethical and religious considerations in Iran' (2004) 36 *Transplantation Proceedings* 2883–2887.

60 Ohnuki-Tierney n 19 above at 233.

61 *Ibid*.

62 *Id* at 236.

63 Masahiro 'Reconsidering brain death: a lesson from Japan's fifteen years of experience' (Jul–Aug 2001) 31/4 *The Hastings Centre Report* 41–46, 45; Lock 'Death in technological time: locating the end of meaningful life' (1996) 10/4 *Medical Anthropology Quarterly* 575–600, 584.

64 Masahiro n 63 above at 4–46.

found in New Jersey where it is accepted that a person can only be declared brain dead if his or her religious beliefs and cultural traditions allow for such a diagnosis and for its legal implications.[65] The only difference between the Japanese clause and the New Jersey version, is that brain death is regarded as the default in New Jersey, while somatic death remains the default standard in Japan.[66] Veatch describes these clauses as a new development in public policy governing the declaration of death in pluralistic communities.[67] Conscious clauses have, however, been criticised as inconsistent and irrational, and Alexander Capron referred to them as the problem of a bifurcated legal standard.[68]

The Japanese Organ Transplantation Law stipulates that it must be reconsidered three years after its enactment, and a revised Organ Transplantation Law took effect in July 2010. While it was only permissible to declare a patient brain dead if he or she had personally completed a donor card to this effect and in terms of the first Japanese Organ Transplantation Law, the revised Act allows a patient's family to consent that the patient be declared brain dead and his or her organs be harvested for organ transplantation. This, however, will only be possible where the wishes of the patient are not clear.

Death and dying in African indigenous practices

Despite the strong emphasis in allopathic (western) medicine on intensive care and medical interventions, most people around the world, and especially in Africa, die at home and without medical intervention.[69] Understanding these cultures and their practices is paramount as it creates the context within which individuals experience life and comprehend moral meanings of illness, suffering and death.[70] Very little research has, however, been conducted into how African cultures understand and experience death and dying.

Several myths surround the origin of death in African cultures. In Central, Eastern and Southern Africa it is said, for example, that God sent a chameleon to man with a message of immortality. However, the chameleon

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65 Le Roux-Kemp n 9 above at 266. Masahiro n 63 above at 42.
66 Masahiro n 63 above at 42.
67 *Ibid*.
68 *Ibid*.
69 Blank 'End-of-life decision making across cultures' 2011 *Journal of Law, Medicine and Ethics* 201–214 204.
70 *Id* at 204.

is slow and the lizard, which had overheard the message, overtook the chameleon and arrived first at man with the message of mortality. When the chameleon later arrived with its own message of immortality, nobody believed it.[71] In addition to such myths about death and life, death in African cultures is generally signified by complex, drawn-out rituals and funeral ceremonies and meticulous care is taken to avoid offending the ancestors.[72]

The most important cultural features of life amongst African indigenous groups are consciousness and breathing. Breathing is regarded as closely linked to a person's soul, and once respiratory function ceases, it is generally believed that the person is no longer alive. Similar to Japanese culture, indigenous African groups strongly support natural processes and approaches to dying. In the Zulu culture especially, death is regarded as a continuation of life in the world hereafter, and many traditional Zulus do not, therefore, support notions of brain death and organ donation.[73] It is for this reason that it is regrettable that the brain death criterion was incorporated in the National Health Act 61 of 2003 without any public debate or input. A valuable opportunity to explore and recognise how African indigenous cultures understand and experience death and dying has been lost.

CONCLUSION

Brain death is the standard death criterion today and is generally accepted worldwide although there is no consensus on the diagnostic criteria to be applied in making this diagnosis. Based on the controversies and uncertainties highlighted in this paper, the *modus operandi* suggested in the 1981 Report of the USA President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research, and reiterated in the 2008 Report of the USA President's Council on Bioethics 'Controversies in the determination of death' should rather be followed. The traditional criteria of irreversible cessation of circulatory and respiratory functions should remain as the standard death criterion. Only in those rare cases where mechanical ventilation is used to support the respiration of a severely brain injured individual who meets the criteria of the Harvard

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71 Jali 'The African perception of death, with special reference to the Zulu: a critical analysis'(assignment in partial fulfilment of the requirements for the M Phil degree in applied ethics, Stellenbosch University March 2000) 6.

72 *Id* at 18.

73 *Id* at 78.

Committee, should the irreversible cessation of all functions of the entire brain, including the brainstem, be used.

In questions about life and death, cultural diversity is often marginalised in discussions on medical and bioethical issues, for example, the question whether brain death should be the standard death criterion in all cases.[74] This is regrettable, as anthropologists have long emphasised that death is always culturally defined even though it may be expressed in biological terms.[75] Research has indicated that strong objections to brain death have only come to the fore in countries where a nationwide public debate has been held on the criteria for death – as in Japan, Germany and Denmark. Yet, research suggests that approximately twenty to forty per cent of the population of every country might have some misgivings about the idea that brain death is equivalent to human death. It is argued in this paper that in deciding on appropriate clinical and legal criteria to determine the moment of death, the debate should move away from a brain death analysis to a human relationship analysis, taking into consideration cultural and religious diversity. As early as 1982, Cook and Hirsh warned that the legal system should follow a continuing cautionary approach and that the urgency for judicial resolution of a uniform legal definition of death must be balanced against the concurrent exigency for the development of precise, unambiguous and scientifically reliable criteria.[76]

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74 Blank n 69 above at 204.
75 Ohnuki-Tierney n 19 above at 235.
76 Cook & Hirsh n 27 above at 149.