BRAIN-STEM DEATH: MAKING OUT A CASE FOR THE LEGALIZATION OF REMOVAL OF LIFE SUPPORT SYSTEMS

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Introduction
“To be or not to be” is what cynics often debate upon. Phenomenally, it is argued, death is non-being. The very fact of existence entails activity, purpose and energy. Death is antithesis to life. If life generates its own meaning, death puts an end to it. Thus while the former may seem attractive, the latter may appear to be devoid of merit and relevance. Yet one seems that the answer is not so straightforward. Therefore, when generally there is huge scope for arguing for a living being, making out a case of death often invites vengeance from skeptics. However strong the case for living may be, it does not rule out the existence of certain circumstances which circumscribe death as meaningful and a preferred choice over living, opines the thoughtful opposition. A final answer is, however, more of a perceptual choice and a compromise between conflicting interests rather than an uncontested solution. Incumbent upon legal reforms, the Seventeenth Law Commission of India\(^1\) has deviated from its earlier stand\(^2\) to recommend legalization of ‘euthanasia’\(^3\) in India.

Life or Death: The Debate Summerised

There just isn’t one dimension to this debate behind euthanasia, or ‘mercy killing’ as it is popularly called. Sociological, religious and practical issues cripple a proper addressing to

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1. 196\(^{th}\) Report of the Law Commission of India.
2. 42\(^{nd}\) Report of the Law Commission of India.
3. Distinguishing euthanasia from suicide, Lodha J. in Naresh Marotrao Sakhre v. Union of India1995 Cri L J 96 (Bom), observed, “Suicide by its very nature is an act of self-killing or self-destruction, an act of terminating one’s own act and without the aid or assistance of any other human agency. Euthanasia or mercy killing on the other hand means and implies the intervention of other human agency to end the life. Mercy killing thus is not suicide and an attempt at mercy killing is not covered by the provisions of Section 309. The two concepts are both factually and legally distinct. Euthanasia or mercy killing is nothing but homicide whatever the circumstances in which it is effected.”
its cause. Thus its legal response presupposes a broad categorization of such issues affecting its understanding.

Philosophically as well as sociologically, the matter boils down to a determination of rules of priority determination, as in most cases of conflict of interests, between social needs and desires on the one side and private interest on the other. The latter urges the former to allow the freedom to regulate one’s self and being while the former seeks to encompass the latter’s being and existence in the social paraphernalia surrounding it. Thus those with the background of an individual based society often tend to challenge the superiority of the society to determine the individual’s right of being. Thus stands the debate of mercy killing in today’s sociological context.

There is an economic dimension to it as well. However small the amount may accrue, supporters of the cause often cite the economic advantages of having lesser people requiring continuous and permanent life support (which no doubt is a costly affair globally) and the following outcome of having lesser people to sustain. Thus, an increase in social costs by sustaining individuals who without any productive capacity merely offer more burden to natural resources, is what is aptly quoted by these positivists to make a case for mercy killing or ‘euthanasia’.

Present Issue

Often it is a case with individuals that they are declared ‘brain dead’ and that they continue to remain totally dependent on life-support systems without there being a hint of evidence as to the fact of they being revived back to normal life. In such cases, despite there being lack of any scientific evidence of coming back of life to the dead being, physical death (a term used to distinguish the situation of ‘brain death’ from ‘death’ itself) is not administered, citing legal or socio-religious reasons. This article deals with this lone case of ‘brain death’ and tries to make it out as a valid case for removal of life support system in such cases. For this purpose, a distinction has been sought to be made between such cases of brain death and the condition of vegetative state where the chances of recovery of the patient may be dim but not nil.

Thus the authors venture to explore the thought that “the human capacity to conceptualize time and, therefore, to conceptualize the future underlies the meaning of death”\textsuperscript{5} whereupon the underlying methodology would be an analysis of the scientific and legal issues involved, to the limited extent of their relevance and linkage to the issue at hand.

**When does Brain-Death occur?**

The human brain is the most vital part of the central nervous system and serves as the control center for all of the body’s functions including conscious activities such as walking and talking, and unconscious ones such as breathing, heart rate, etc. It even controls our thought, comprehension, speech and emotion. Thus, any injury to the brain, depending upon the degree of damage and the area/part of brain affected, can disrupt any or all of these functions and can even result in death though certain parts of the body may still be alive.

A human Brain is made up of three main components i.e. cerebrum or higher brain, cerebellum or midbrain, and the brainstem or lower brain, all of which perform distinct functions. This distinction is critical in determination of brain-death as all the three have distinct and significant roles in the functioning of the brain and the damage to any of them would have different consequences.

Of these, for the purposes of ascertaining brain-death, the role and function of brain stem is required to be understood. Brain stem basically acts as a relay station between incoming sensations and the cortex. By connecting the two hemispheres of the brain, the brain stem receives incoming stimuli as it travels through and is received by the cortex in order to generate a response and relay it back through the brain stem to the body. Because of this job as a relay station functions to control consciousness, alertness, and basic bodily functions, brain-stem is considered to be one of the most critical areas and any damage to it can disrupt a person’s life and have long lasting effects, both mentally and physically. A brain-stem injury may cause loss of consciousness, a completely changed memory or personality, paralysis at varying degrees, a vegetative state, as well as other tragic occurrences.\textsuperscript{6}

Brain death occurs when significant damage is caused to the brain stem, which regulates the respiratory and other involuntary functions, such as swallowing, sleep-wake cycles etc.\textsuperscript{7}


\textsuperscript{7} David Forster, \textit{When the Body is Soul: The Proposed Japanese Bill on Organ Transplantations from Brain Dead Donors}, 3 PAC. RIM L.& POL'Y J. 103, 105 (1994); See also Calixto Machado, President of the Organizing Committee of First International Symposium on Brain Death, \textit{Reflections on First International}
This is because when the brain stem ceases to function, the brain as a whole becomes functionless. It stops receiving any blood or oxygen and is dead. The person can no longer breathe, think or feel anything. This is ‘whole-brain’ death or simply ‘brain death’. Death in these terms can be defined as ‘the permanent cessation of functioning of the organism as a whole,’ and the criterion for death then becomes ‘the permanent cessation of functioning of the entire brain’.  

In such a situation, it becomes pivotal to determine the factum of brain death for it is the first and essential question of fact requiring a positive and final determination. To this regard, a Committee of Harvard Medical Association has evolved three tests for deciding whether a particular case is a fit one to dwell upon the issue of brain death.  

They are:

a) Un-receptivity and non-responsiveness,
b) Absence of movements or breathing, and
c) Lack of reflexes.

Thus only when these three tests are satisfied, can an enquiry being made upon the fact whether a particular patient has suffered brain-death. Once these three prima facie ingredients are satiated, does a full fledged clinical inquiry proceeds to this regard. Therein again, two sets of tests need to be conducted in order to come out with a final determination. The first set of tests includes three tests, all of which need to give a positive finding. These are:

1. Cerebral function must be absent i.e. there must not be any behavioural or reflex responses mediated/generated above the spinal cord.

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2. Brain stem functions must be absent. This includes absence of any evidence of functioning of a variety of organs for e.g. un-reactive pupils, absence of ocular responses, facial sensation and motor responses, lack of cough, gags reflexes, etc.

3. The patient must be anemic i.e. there must be absence of spontaneous respiration in response to a hyperbaric stimulus.

The second set of tests envisages detailed testing of particular organs of the human body and the study of reactions thereof. Thus this set of tests is basically meant to confirm the finding arrived at by the first set. What is important here to note is the fact that this second set comes to play only if there is a positive finding in all the three tests in set one. These tests are;

- No pupil reaction to light,
- No response to pain,
- No blinking when the cornea is touched,
- No eye movement when the head is turned,
- No eye movement when ice cold water is put into the ear,
- No gagging response to a stimulus at the back of the throat, and
- No breathing when disconnected from the mechanical ventilation machine.

Additional testing such as an x-ray angiography may also be performed to show that all blood supply to the brain has ceased.

In these circumstances, brain death can safely be said to have occurred when both the two sets of tests give a positive finding of absence of any reaction of the various organs tested upon for finding hints of living reaction.

From the above, the natural conclusion that a reader may arrive to is that brain-death can be ascertained when there is lack of any reaction on the part of various human organs. However such a *prima facie* conclusion is erroneous. This is for the reason that brain-death involves an astonishing fact of nature which might make it difficult to accept or believe. A brain-dead person may appear to be alive. For e.g. the patient may jerk his fingers, arch his
back, or turn his head. This would clearly come as a shock to an average person to conclude that the patient is dead even though there are certain traceable muscular movements. Scientifically these movements have been explained as originating from the spinal cord and not the brain itself. Thus their presence does not in any way reflect upon the functioning of the brain. In such cases, even the body may be warm to touch and also there may be ‘breathing’ with the aid of a ventilator. Further even the heart may continue to work for it is naturally equipped to work without receiving messages from the brain provided supply of oxygen is available. Therefore even when the brain is dead, the heart may continue to beat. In such cases, a human being would nonetheless be dead because once activity has ceased in the brain, the body cannot act as an integrated whole and thus will soon perish if not artificially maintained by life support or other measures.

In India as well, there exists a consensus amongst medical experts that “brain stem death is an irreversible and irrefutable condition”. Therefore, any amount of treatment and resources spent to maintain the life-support systems of such brain-stem dead patients is considered as wastage of resources.

**Vegetative State: Connotation and difference from brain death**

As already seen above, damage to brain-stem can result into non-functioning of the entire body parts. The cerebrum or the ‘higher brain’ primarily controls our consciousness, verbal functions such as speaking, writing, reading, calculating etc. and visual-spatial functions

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11 Robert D. Truog, _Is it Time to Abandon Brain Death?_, 27 HASTINGS CENTER REP., 29, 32 (1997)

12 See Rita Dutta, _Treat brain stem death as death: Experts_, Express Health Care Management, 16th December, 2004. Available at <http://www.expresshealthcaremgmt.com/20041031/coverstory02.shtml> (Last Visited July 31, 2006) who quotes, Dr Bharat Shah, Head of Medicine and Nephrology, Hinduja Hospital, Dr Iyer, Assistant Director, Medical Services and Legal, Hinduja Hospital, Echoes Medico-Legal Expert Dr Gopinath Shenoy, Dr V N Acharya, Member, Maharashtra Confederation for Organ Transplantation and Dr S V Khadilkar, Neurologist, Bombay Hospital.
such as visual memory, copying, drawing etc.\textsuperscript{15} Therefore an injury to this part of the brain may result into the disruption of the above functions and a severe damage to this part of the brain results into a situation which is popularly known as ‘vegetative state’. In such cases of vegetative state, while some of the major functions of the human body are disrupted, not all the organs stop functioning. There may be energy metabolism in the cortex, the reticular activating system (RAS) responsible for sleep-wake cycles may still be functioning etc. The patients in such vegetative state may also make sounds, react to sounds, smile or cry etc. This is because all these functions are primarily reflective in nature and not an outcome of a conscious decision-making.

Another important aspect involved here is the disassociation of brain-stem from cerebral cortex, which makes it possible for the brain stem to remain alive even after the cerebral cortex has died. However the vice versa does not follow because the damage to brain-stem results into non-functioning of the brain as a whole, the supply of oxygen being cut off since brain stem is the connecting force. Thus in a Vegetative State, while the brain-stem continues to function, cerebral being damaged, no conscious decision-making can be undertaken by the patient.

Therefore the difference between brain-death and vegetative state can be summarised as follows;

(i) Vegetative state is caused by damage to the cerebral cortex while brain-death is the outcome of permanent damage to brain-stem.\textsuperscript{16}

(ii) Damage to cerebral cortex (i.e. vegetative state) is curable while permanent damage to brain-stem (i.e. brain-death) cannot be reversed.

(iii) While in a vegetative state though the body may become irresponsible to thought, speech, feeling or for that matter any type of conscious activity, nonetheless there may be some response to the environment, in cases of brain-death, there is no response of any of the organs to any activity as the link between the brain and them having been permanently severed, no nervous reaction can emerge.


\textsuperscript{16} See also Ben A. Rich, \textit{Post modern Medicine: Deconstructing the Hippocratic Oath}, 65 U. COLO. L. REV. 77 at 125 (1993), who discusses the outcomes flowing from the lack of supply of oxygen to the upper brain.
Legal regime providing for brain-stem death

(A) Law in other jurisdictions

Amidst large scale obliviousness, many jurisdictions have enacted specific laws dealing with brain-death. To this regard, it was understood way back in the late 1970s by the neurologists of United Kingdom that “if the brain stem is dead, the brain is dead, and if the brain is dead, the person is dead.”\(^{17}\) In the United States as well, brain death was accepted as being equivalent to death. The Uniform Brain-Death Act of 1978 defined death as "the cessation of all circulatory, respiratory, and brain function, including the brain stem."\(^{18}\) Initially while lower brain death was considered only as an alternative mode of determining the probability of revival,\(^{19}\) today no state in the United States allows the ‘higher brain’ standard of death to be equated with death.\(^{20}\) In some jurisdictions it is legitimized from the perspective of right to die with dignity\(^{21}\) while in others it is simply recognized as an exception to suicide.\(^{22}\) In some states, even persistent vegetative state (a prolonged stage

\(^{17}\) The most celebrated case on this aspect is Airedale N.H.S. Trust v. Bland, [1993] 2 W.L.R. 316 wherein the House of Lords authorized the termination of life-support systems for a brain-dead patient whose parents gave their consent as surrogates. Further, in D v United Kingdom, [1997] 24 ECHR 423, it was held that Article 3 of the European Convention on Human Rights requires that a person not being subjected to inhuman or degrading treatment includes the right to die with dignity.

\(^{18}\) See also Robert D. Truog, Is it Time to Abandon Brain Death?, 27 HASTINGS CENTER REP. 29 at 32 (1997).


\(^{21}\) For e.g. Arizona’s Patient Comfort and Control Act, 2004, Hawaii Death with Dignity Act, 2002, Oregon Death with Dignity Act etc.

\(^{22}\) For illustration, Washington's Natural Death Act of 1979 provides that "withholding or withdrawal of life sustaining treatment" at a patient's direction "shall not, for any purpose, constitute a suicide". Also see Tune v. Walter Reed Army Medical Hospital, 602 F.Supp. 1452 at 1455 (DC, 1985); Downer v. Veilleux, 322 A.2d 82, 91 (Me., 1974) which observes that "the rationale lies in the fact that every competent adult has the right to forego treatment, or even cure, if it entails what for him are intolerable consequences or risks, however unwise his sense of values may be to others"
of vegetative state) is considered as sufficient to allow removal of life-support systems and this decision of removal has been allowed by the United States Supreme Court to be taken by the kin of the patient.\footnote{Cruzan v. Director, Missouri Department of Health, 110 S. Ct. 2841 (1990) wherein the US Supreme Court accepted the 'substituted judgment test' and held that family members could decide the fate of a patient who was incompetent to do so himself.}

\textbf{(B) Legal position in India}

The law as regards brain-stem death is not settled in India. Instead the existing provisions have come to perplex the Indian medical fraternity with conflict provisions under different laws. The same is apparent from a survey of laws, as applicable to brain-stem death in India, as undertaken hereunder.

\textbf{(a) Transplantation of Human Organs Act, 1994}

In India the hitherto prevailing situation was diametrically reversed by the passing of the Transplantation of Human Organs Act in 1994 which defined \textit{‘deceased person’}\footnote{Section 2(e)} as one \textit{“in whom permanent disappearance of all evidence of life” had occurred \textit{“by reason of brain-stem death”}. To this regard the Act of 1994 also defined the meaning of \textit{‘brain-stem death’}\footnote{Section 2(d)} as \textit{“the stage at which all functions of the brain stem have permanently and irreversibly ceased”}. However, and rightly so, the declaration of a brain-stem death was made subject to the certification of a registered medical practitioner. However, the purpose of the Act of 1994 was different. The Preamble to the Act clarified that it was meant \textit{“to provide for the regulation of removal, storage and transplantation of human organ for therapeutic purposes and for the prevention of commercial dealings in human organs.”} Therefore the intent behind framing the Act of 1994 was not any sympathetic considerations towards the deceased. Thus, despite being covered within the definition of a \textit{‘deceased person’} within the meaning of the 1994 Act, even if a person has suffered brain-stem death and is being maintained on life support systems, unless he had earlier consented to his organs being donated and the proper procedure to this regard was
followed, the life support systems may not be legally removed and status quo has to be maintained.\textsuperscript{26}

Thus the Act of 1994 has created anomaly as far as victims of brain-stem death are concerned. While those who had given their consent for donating their organs may be declared dead and their organs be donated, those who are not covered with in the provisions of the Act of 1994 shall have to be maintained on life support systems.

\textbf{(b) Indian Medical Council Act, 1956}

In existing regime under the Indian Medical Council Act, 1956 also incidentally deals with the issue at hand. Under Section 20A read with Section 33(m) of the Act of 1956, the Medical Council of India may prescribe the standards of professional conduct and etiquette and a code of ethics for medical practitioners. Exercising these powers, the Medical Council of India has recently amended\textsuperscript{27} the code of medical ethics for medical practitioners. Thereunder the act of euthanasia has been classified as unethical except in cases where the life support system is used only to continue the cardio-pulmonary actions of the body.\textsuperscript{28} In such cases, subject to the certification by the team of doctors, life support systems may be removed.

\textbf{(c) Indian Penal Code, 1860}

As we have already seen, the provisions of the Act of 1994 are not applicable to situations other than donation of organs. In such cases, therefore, the general position of law applies. Under the provisions of the Indian Penal Code, removal of life support systems – whereupon the entire body would cease to function – would tantamount to an act of murder as under Section 300. Motive being a factor irrelevant for the purpose of commission of the act, the doctor/medical assistant would nonetheless be liable though it may be a different case that the quantum of punishment be reduced.

\textsuperscript{26} See Section 3 of the Act of 1994 providing to this regard.

\textsuperscript{27} See The Gazette of India, April 6, 2002 Part III, Section 4.

\textsuperscript{28} \textit{Ibid}, Section 6.
Further, the exception under Section 300 of the Code\textsuperscript{29} may also not be available, the patient begin not in a position to make a valid consent to this regard. This situation is not new but has come up before a number of courts of this country where the requests for removal of life support systems have been made by the kin of the patients but the judges have found themselves helpless, given the clear position of law.\textsuperscript{30}

Thus the position of law which emerges from a combined reading of the Act of 1994 and 1956 and the Indian Penal Code can be summerised as follows;

(i) In cases where the patient has given his consent for donation of his organs and the prescribed procedure has been followed, upon the certification by a registered medical practitioner, it would be legally permissible to remove the life support systems in case of a brain-stem death.

(ii) Since the definition of ‘deceased person’ under the Act of 1994 is confined to the Act alone, in any case where the Act is not applicable, brain-stem death may not be considered to be death in the eyes of law.

(iii) Under the regulation framed under the Act of 1956, it would not be unethical for the doctor to remove the life support system if they are used only to continue the cardio-pulmonary actions of the body.

(iv) But, as the 1956 Act does not amend the Indian Penal code, the doctor/medical assistant removing the life support systems may, however, be prosecuted for murder for such act for cases falling outside the Act of 1956.

Thus the law is India is analogous to this regard that while is a settled proposition that brain-stem death is death in medical parlance with no chances of recovery, under law it is punishable to remove the life-support system of a person having suffered from brain-stem death unless his case is covered under the Act of 1994. There have been a number of

\textsuperscript{29} Exception 5—Culpable homicide is not murder when the person whose death is caused, being above the age of eighteen years, suffers death or takes the risk of death with his own consent.

\textsuperscript{30} The most recent and hyped case being one of K. Venkatesh before the Andhra Pradesh High Court in 2004.
representations to cure this anomaly but to no avail. To this regard it is apt to quote a member of the Maharashtra Confederation for Organ Transplantation who states, "Neurologists/neurosurgeons are reluctant to ascertain a patient as brain stem dead and withdraw life support as they feel it is not permitted under the law. They think that a patient has to be declared brain stem dead only in the context of organ retrieval."

In these circumstances, it would be appropriate to quote the Constitutional Bench of the Supreme Court in *Gian Kaur v. State of Punjab* wherein one of the question before the Bench was, “One of the points directly raised is the inclusion of the 'right to die' within the ambit of Article 21 of the Constitution, to contend that any person assisting the enforcement of the 'right to die' is merely assisting in the enforcement of the fundamental right under Article 21 which cannot be penal; and Section 306, IPC making that act punishable, therefore, violates Article 21."

Thereupon the Bench observed,

“To give meaning and content to the word 'life' in Article 21, it has been construed as life with human dignity. Any aspect of life which makes it dignified may be read into it but not that which extinguishes it and is, therefore, inconsistent with the continued existence of life resulting in effacing the right itself. The 'right to die', if any, is inherently inconsistent with the 'right to life' as is 'death' with 'life'. “

Thereupon the Bench observed,

“... "The 'right to life' including the right to live with human dignity would mean the existence of such a right up to the end of natural life. This also includes the right to a dignified life up to the point of death including a dignified procedure of death. In other words, this may include the right of a dying man to also die with dignity when his life is ebbing..."

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31 Sunil K Pandya, *Brain Death and our transplant law*, 9(2) Indian Journal of Medical Ethics 2001; See also <http://www.expresshealthcaremgmt.com/20041031/coverstory02.shtml> (Last Visited July 25, 2006) which cites various instances to this regard.

32 Supra note 14.

33 AIR 1996 SC 1257 : 1996 Cri L J 1660

34 Id. at para 23
out. But the 'right to die' with dignity at the end of life is not to be confused or equated with the 'right to die' an unnatural death curtailing the natural span of life."\textsuperscript{35}

Therefore the Court was incumbent to ensure that so long as any trace of human life was present in the patient, death could not be expedited by removal of life support systems. To this end the Court reversed its earlier decision in \textit{P. Rathinam v. Union of India}\textsuperscript{36} wherein the ‘right to die’ was considered as embedded in Article 21. In fact the Court in \textit{Gian Kaur} was categorical in restating that euthanasia was not permitted within the constitutional precincts.

\textbf{Conclusion}

To summerise the above discussion, while under the Transplantation of Human Organs Act of 1994, brain-stem death is considered as death for all legal purposes, this is not so otherwise than the Act. The consequent dilemma and apprehension of criminal proceedings, has led to the medical practitioners to keep the patients on life-support systems despite the fact that they being brain-stem dead, are dead for all medical purposes.

It is evident that brain-stem death is nothing but death \textit{per se} with no medically known possibility of recovery or revival. In such cases discouraging removal of life support systems in cases of brain-stem death on the ground that it is nothing but a form of euthanasia is patently erroneous. Therefore it is incumbent upon the legislature to remove this anomaly and with an aim to avoid un-necessary waste of precious resources being spent on life-support systems.

\textsuperscript{35} \textit{Id.} at para 24

\textsuperscript{36} AIR 1994 SC 1844: 1994 Cri L J 1605