DEFINITION OF DEATH

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THREE ISSUES

- The definition/concept of death
  - Death is the end/opposite/termination of life
    - This has not changed

- The criteria for determining that death has occurred
  - Cardiovascular
    - Permanent cessation of function of heart and lungs
  - Neurological
    - Permanent cessation of neurological activity: brain death

- Clinical tests to determine if criteria have been met
  - Cardiovascular: check pulse, breathing
  - Neurological: absence of pupillary response, confirmed by EEG
Brain death a better indicator of death than cardiovascular criteria

- Respirators can breathe for patients whose lungs have stopped functioning; electric paddles can re-start a heart
  - No way to “re-start” a brain that has flat-lined
- Is brain death more reliable?
- Suzanne Chin (2009)
  - Hong Kong lawyer suffered heart attack, doctors said she had brain stem death, but woke up 3 days later

Organ donation

- Using neurological criteria enables transplant surgeons to remove vital organs fast before they deteriorate and become unusable
- Once the brain dies, all other criteria of death inevitably follow. Why wait, wasting the organs and using respirators for those who cannot benefit from them?
US LAW AND POLICY

- **Beecher Committee of Harvard Medical School (1968)**
  - Patients on life support whose brain function has completely and irreversibly ceased should be declared dead and removed from respirator

- **Uniform Determination of Death Act (UDDA)**
  - Based on report from Presidential Commission (1981)
  - Requires the death of the whole brain, not just brain stem
    - In UK and Hong Kong, brain stem
  - Now whole-brain death the law in all states except NJ
BERNAT’S DEFENSE OF WHOLE-BRAIN DEATH

- Fits best with common, ordinary meaning of death
  - Biological, not social
  - Applies to organisms, not persons
  - An event, not a process; occurs at a moment in time
  - An all-or-nothing concept

- The irretrievable loss of the organism’s emergent functions, including consciousness, control of circulation, respiration and temperature control, produces loss of the critical functioning of the organism as a whole and is therefore the death of the organism

- Since these emergent functions are controlled by brain stem and neocortex, the death of the whole brain results in the death of the organism
CRITICISMS OF BRAIN DEATH

• Doesn’t seem to fit ordinary concept of death
  • “Brain-dead” patients don’t look dead; not cold and stiff

• Idea that the brain is the body’s “critical system” is mistaken (Shewmon)
  • Individuals who are “brain-dead” exhibit several functions of living organisms
    • Digest food, excrete waste, their wounds heal, undergo sexual maturation, some have even gestated fetuses and given birth
  • “Brain-dead” patients retain essential neurological functions, such as regulated secretion of hypothalamic hormones

• Brain death is not biological death
JAHI MCMATH

- 13-year old Oakland, CA girl, suffering from sleep apnea, underwent tonsillectomy
- Went into a coma, then diagnosed as brain dead
- Pronounced legally dead in December 2013
- Family refused to accept that she was dead
  - Deny she’s brain dead
  - Reject brain death as correct criterion
- Moved her to a facility in NJ, which allows families to choose criteria of death, where she remains on life-support today
  - She’s alive in NJ but would be dead in NY
- Is she dead? As good as dead? Not dead at all?
BACK TO CARDIOVASCULAR CRITERIA?

• If brain death is not biological death, should we revert to cardiovascular criteria?

• Could have very bad consequences
  • Could destroy cadaver organ donation, at a cost of tens of thousands of lives worldwide
  • Neurological criteria well established clinically and in law

• Is there a way to acknowledge that brain death is not biological death and keep neurological criteria?
BRAIN-DEAD ARE AS GOOD AS DEAD

- Truog and Miller suggest analogy with “legally blind,” defined as corrected visual acuity of 20/200
  - Someone who is legally blind can see; not literally blind
  - For legal purposes, we treat them as if they were blind

- We can treat those who are brain-dead as if they were biologically dead
  - Brain-dead are permanently unconscious; have lost what is valuable in life
  - They are as good as dead, though not literally dead

- More honest to acknowledge that they are not really biologically dead
PROBLEMS WITH AS GOOD AS DEAD

- Seems to apply not only to brain-dead but also PVS patients, who are also permanently unconscious, have lost what’s valuable in life.

- Some accept this implication; offer radical redefinition of death as absence of personhood.
  - Supported by some, e.g., Robert Veatch, Jeff McMahan, but nowhere accepted in law.

- Slippery slope
  - Anencephalic infants? Other severe congenital anomalies? Is there a principled way to draw the line?
THE DEBATES

• Cardiovascular vs. neurological criteria

• Within neurological criteria
  • Whole-brain vs. brain stem
  • Either of these vs. higher-brain (neocortex)

• Can neurological criteria be defended on biological grounds? Bernat v. Shewmon, Truog and Miller

• Should neurological criteria be defended on utilitarian grounds: organ donation

• Is death a primarily biological phenomenon or cultural/religious/philosophical?

• Individual or social decision? Do we need a uniform standard?
• Debate over criteria for death dependent on conceptions of our nature
  • Are we human organisms?
    • Our death is no different from that of other animals
    • Or are we basically persons, that is, conscious, feeling, thinking beings?
      • Once the capacity for consciousness permanently lost, the life of the person is at an end

• Thus, debate over the definition of death raises philosophical questions about personal identity, or when an individual human being begins and ends