Meditation, the Brain and Survival

The mind can be independent of the body and the brain

A report by Piya Tan ©2006, 2008

1 The mind survives brain-death

Despite the exciting engagement in our times between ancient Buddhist wisdom and modern science, there is still one significant divide.[1] While traditional Buddhist teachings do not locate the mind anywhere in the body, least of all in the brain,[2] some modern scientists still hold to the notion that the brain is the seat of consciousness.[3] Buddhists generally view that the mind is trainable,[4] and that it can grow or go beyond the body.[5] Furthermore, while the brain perishes with death, the mind survives the death of the brain.[6] **Parnia and Fenwick,** of the Southampton General Hospital in England, **i**n their 2001 article on brain physiology and function during cardiac arrest as well as its potential relationship with near death experiences during that time opens with this abstract:

> Very little is known about the dying process and in particular the state of the human mind at the end of life. Cardiac arrest is the final step in the dying process irrespective of cause, and is also the closest physiological model of the dying process. Recent studies in cardiac arrest survivors have indicated that although the majority of cardiac arrest survivors have no memory recall from the event, nevertheless approximately 10% develop memories that are consistent with typical near death experiences. These include an ability to "see" and recall specific detailed descriptions of the resuscitation, as verified by resuscitation staff. Many studies in humans and animals have indicated that brain function ceases during cardiac arrest, thus raising the question of how such lucid, well-structured thought processes with reasoning and memory formation can occur at such a time. This has led to much interest as regards the potential implications for the study of consciousness and its relationship with the brain, which still remains an enigma. (Parnia & Fenwick 2001:5)

Pim van Lommel and associates in the Netherlands, in an article in the *Lancet* (2001), discussing scientific findings regarding near-death experience in survivors of cardiac arrest, note that:

> Our results show that medical factors cannot account for occurrence of NDE; although all patients had been clinically dead, most did not have NDE. Furthermore, seriousness of the crisis was not related to occurrence or depth of the experience. If purely physiological factors resulting from cerebral anoxia caused NDE, most of our patients should have had this experience. Patients' medication was also unrelated to frequency of NDE. Psychological factors are unlikely to be important as fear was not associated with NDE.
>
> …**Sabom** [1998] mentions a young American woman who had complications during brain surgery for a cerebral aneurysm. The EEG of her cortex and brainstem had become totally flat. After the operation, which was eventually successful, this patient proved to have had a very deep NDE, including an out-of-body experience, with subsequently verified observations during the period of the flat EEG…
>
> …[I]nduced experiences are not identical to NDE, and so, besides age, an unknown mechanism causes NDE by stimulation of neurophysiological and neurohumoral processes at a subcellular level in the brain in only a few cases during a critical situation such as clinical death. These

[1] For an overview, see eg http://www.horizonresearch.org/mind-brain-problem.html.
[2] See **Meditation & Consciousness** = SD 17.8c(7.2).
[3] See **Meditation & Consciousness** = SD 17.8c(7.1).
[4] See **Meditation & Consciousness** = SD 17.8c(7.3).
[5] See **Meditation & Consciousness** = SD 17.8c(7.4).
[6] See Brahmavamso 2006:197 f.

processes might also determine whether the experience reaches consciousness and can be recollected.

With lack of evidence for any other theories for NDE, the thus far assumed, but never proven, concept that consciousness and memories are localised in the brain should be discussed. How could a clear consciousness outside one's body be experienced at the moment that the brain no longer functions during a period of clinical death with flat EEG?[7] Also, in cardiac arrest the EEG usually becomes flat in most cases within about 10 s from onset of syncope.[8] Furthermore, blind people have described veridical perception during out-of-body experiences at the time of this experience.[9] NDE pushes at the limits of medical ideas about the range of human consciousness and the mind-brain relation. (van Lommel et al 2001:2043 f)

Parnia and his colleagues (2001) come to this interesting conclusion in their study of near-death experiences in cardiac arrest survivors:

The data suggests that in this cardiac arrest model, the NDE arises during unconsciousness. This is a surprising conclusion, because when the brain is so dysfunctional that the patient is deeply comatose, the cerebral structures which underpin subjective experience and memory must be severely impaired. Complex experiences such as are reported in the NDE should not arise or be retained in memory. Such patients would be expected to have no subjective experience (as was the case in 88.8% of patients in this study) or at best a confusional state if some brain function is retained. Even if the unconscious brain is flooded by neurotransmitters[10] this should not produce clear, lucid remembered experiences, as those cerebral modules which generate conscious experience and underpin memory are impaired by cerebral anoxia. The fact that in a cardiac arrest loss of cortical function precedes the rapid loss of brainstem activity lends further support to this view. (Parnia, Waller, Yeates & Fenwick 2001:154)

Such scientific findings continue to underscore the inability to find any satisfactory explanation for the natural occurrences of near-death experiences, that is, the persistence of consciousness after death. They are simply baffled: medical and psychological factors cannot account for the occurrence of NDE since all these patients had been clinically dead!

2 Buddhist view of survival

Posthumous survival or life after death is called "rebirth" (*puna-b,bhava*) in early Buddhism. Of this, the Buddha and the full-fledged arhats have two kinds of knowledge or superknowledge (*abhiññā*), on account of their awakening and mental powers, that enable them to see and understand not only life *after* death,but also life *before* birth (that is, previous lives). This knowledge of previous lives is defined as follows:

The knowledge of the recollection of past lives (*pubbe,nivāsanânussati.ñāṇa*):[11]

With his mind thus *concentrated,* he directs and inclines it to the knowledge of the recollection of past lives.[12] He recollects manifold past existence, that is to say, one birth, two births, three births, four births, five births, ten births, twenty births, thirty births, forty births, fifty births, one

[7] Sabom 1998.
[8] Aminoff et al 1988; Clute & Levy 1990.
[9] Ring & Cooper 1999.
[10] Carr 1981; Sotelo et al 1985; Jansen 1989.
[11] Lit "the knowledge of the recollection of past abidings [existences]."
[12] *Pubbe,nivāsanânussati.ñāṇa*, lit "the knowledge of the recollection of past abidings [existences]." The remainder of this is expanded into 4 sections in **Brahma,jāla S** (D 1.1.31-34/1:13-16 = SD 25.3(76.3)) and 3 sections in **Sampasādaniya S** (D 27.15-17/3:107-112 = SD 10.12). In both cases, each explains how the eternalist view arose.

hundred births, one thousand births, one hundred thousand births, many aeons of cosmic contraction, many aeons of cosmic expansion, many aeons of cosmic contraction and expansion, thus:

'There I had such a name, belonged to such a clan, had such an appearance. Such was my food, such my experience of pleasure and pain, such the end of my life. Passing away from that state, I re-arose there. There too I had such a name, belonged to such a clan, had such an appearance. Such was my food, such my experience of pleasure and pain, such my life-span. Passing away from that state, I re-arose here.'

Thus…he recollects his manifold past lives in their modes and details.[13]

(**Sāmaññ,phala Sutta,** D 2.95/1:81 = SD 8.10; also at D 3:220, 275; A 5:211)

The second superknowledge of the Buddha and the arhats is that of seeing and understanding the way karma works for various individuals (*yathā,kammûpaga ñāṇa*), or "the divine eye" (*dibba,cakkhu*), defined thus:

The knowledge of death and birth (*cutûpapāta ñāna*) or the divine eye (*dibba,cakkhu*):

With his mind thus *concentrated,* he directs and inclines it to the knowledge of the passing away and re-arising of beings.[14] He sees—by means of the divine eye [clairvoyance],[15] purified and surpassing the human—beings passing away and re-arising, and he knows how they are inferior and superior, beautiful and ugly, fortunate and unfortunate, in the heavens, in the suffering states, faring in accordance with their karma:

'These beings—who were endowed with evil conduct of body, speech, and mind, who reviled the noble ones, held wrong views and undertook actions under the influence of wrong views—after death, with the body's breaking up, have re-arisen in a plane of misery, an evil destination, a lower realm, in hell.

But these beings—who were endowed with good conduct of body, speech, and mind, who did not revile the noble ones, who held right views and undertook actions under the influence of right views—after death, with the body's breaking up, have reappeared in a happy destination, in heaven.'

Thus, maharajah, by means of the divine eye, he sees beings passing away and re-arising, and *how they fare according to* their karma.

(**Sāmaññ,phala Sutta,** D 2.97/1:82 f = SD 8.10; also at D 3:220, 275; A 5:211)

These two knowledges in fact constitute the first two of the fully awakened saints' "three knowledges" (*te,vijjā*), the third—that of the knowledge of the destruction of mental cankers (*āsava-k,khaya,-ñāṇa*)—beings the most important, as it entails spiritual liberation.[16] All this shows that the Buddhist view of survival is not mere existential but also ethical. Our lives—past, present and future—are essentially bound and guided by karma.

However, the topic of our discussion here is that of *survival*—that the mind survives the death of the brain, that consciousness continues even after death. As such, the mind cannot be a by-product or activity of the brain. Since consciousness has been scientifically shown in numerous researches to exist even when the brain is no longer functioning, it is clearly evident that the mind can be independent of the brain and the body.[17]

— — —

[13] This knowledge is detailed at Vism 13.13-71/411-423.

[14] *Cutûpapāta ñāṇa,* "the knowledge of the pasing away and rebirth (of beings)," or "knowledge of rebirth according to karma" (*yathā,kammûpaga ñāṇa*), or "the divine eye" (*dibba,cakkhu*): see foll n.

[15] *Dibba,cakkhu*, clairvoyance, not to be confused with the Dharma-eye (*dhamma,cakkhu*) (see n in §104). On the relationship of this knowledge to the 62 grounds for wrong views, see **Brahma,jāla S** (D 1) = SD 25.3(76.3). See prec n.

[16] "The three knowledges" (*te,vijja*) (D 3:220, 275; A 5:211) is a shorthand for "the 6 knowledges" (*cha-ḷ-ābhiññā*) (D 1:82 f, 3:281; A 3:280).

[17] See also ***Viññāṇa-ṭ,ṭhiti*** (SD 23.14) for states of existence that are disembodied and purely mental.

Bibliography

Aminoff, MJ; MM Scheinman, JC Griffing, JM Herre
1988 "Electrocerebral accompaniments of syncope associated with malignant ventricular arrhythmias." *Annals of Internal Medicine* 1988; **108:** 791–96.

Blackmore, SJ; & T Troscianko
1988 "The physiology of the tunnel. *Journal of Near Death Studies* 8 1988:15-28.

Blackmore, SJ
1996 "Near death experiences." *Journal of the Royal Society of Medicine* 89 1996:73-76.

Brahmavamso, Ajahn
2006 *Mindfulness, Bliss and Beyond: A meditator's handbook.* Boston: Wisdom Publications, 2006. Singapore ed, *Happiness Through Meditation,* Singapore: Brahm Education Centre, 2006. Review by Piya Tan: http://dharmafarer.googlepages.com/Brahm.MindfulnessBlissBeyondrevPiyaTan.pdf.

Carey, Benedict
2006 "Mental activity seen in a brain gravely injured. *The New York Times* 8 Sep 2006. http://www.nytimes.com/2006/09/08/science/08brain.html?ref=todayspaper. Also st http://www.dailymail.co.uk/pages/live/articles/news/news.html?in_article_id=404129-&in_page_id=1770, and other media.

Carr, DB
1981 "Endorphins at the approach of death." *Lancet* 1,8216, 1981:390.

Clute, HL, & WJ Levy
1990 Electroencephalographic changes during brief cardiac arrest in humans. *Anesthesiology* 73 1990: 821–25.

French, CC
2001 "Dying to know the truth: visions of a dying brain, or false memories?" *Lancet* 358 (9298) Dec 15 2001:2010-2011. http://www.horizonresearch.org/sdarticlefrench.pdf.

Greyson, Bruce
2003 "Incidence and correlates of near-death experiences in a cardiac care unit." *General Hospital Psychiatry* 25,4 Jul-Aug 2003:269-276. http://www.horizonresearch.org/sdarticlegreyson.pdf.

Jansen, K
1989 "Near death experience and the NMDA receptor." *British Medical Journal* 298, 1989: 1708.

Parnia, Sam, & Peter Fenwick
2002 "Near-death experiences in cardiac arrest: visions of a dying brain or visions of a new science of consciousness." Review article. *Resuscitation* 52 2002:5-11. http://www.horizonresearch.org/resusrv.pdf.
2007 "Do reports of consciousness during cardiac arrest hold the key to discovering the nature of consciousness?" *Medical Hypothesis* 2007. http://www.horizonresearch.org/medhypothesis.pdf.

Parnia S, Spearpoint KS, Fenwick PB
2007 "Near death experiences, cognitive function & psychological outcomes of surviving cardiac arrest." *Resuscitation* 2007. http://www.horizonresearch.org/education-science-articles-available.html.

Parnia S, Waller D, Yeates R, Fenwick P
2001 "A qualitative and quantitative study of the incidence, features and aetiology of near death experiences in cardiac arrest survivors." *Resuscitation* 48, Feb 2001: 149-156. http://www.horizonresearch.org/ndearticle_1_.pdf.

Ring, K, & S Cooper

1999 *Mindsight: near-death and out-of-body experiences in the blind*. Palo Alto: William James Center for Consciousness Studies, 1999.

Sabom, MB
1998 *Light and death: one doctor's fascinating account of near-death experiences*. Michigan: Zondervan Publishing House, 1998: 37–52.

Schwaninger J, & PR Eisenberg
2002 "A Prospective Analysis of Near-Death Experiences in Cardiac Arrest Patients." *Journal of Near Death Experiences* 20,4 2002. http://www.horizonresearch.org/schwaninger.pdf.

Sotelo, J; R Perez, P Guevara, A Fernandez.
1985 "Changes in brain, plasma and cerebrospinal fluid contents of B-endorphin in dogs at the moment of death." *Neurological Research* 17, 1985:223.

Taylor, Jill Bolte
2008 "Jill Bolte Taylor: My Stroke of Insight." TED [Technology, Entertainment, Design], Feb 2008. http://www.ted.com/talks/view/id/229

Blurb: "Neuroanatomist Jill Bolte Taylor had an opportunity few brain scientists would wish for: One morning, she realized she was having a massive stroke. As it happened—as she felt her brain functions slip away one by one, speech, movement, understanding—she studied and remembered every moment...."

van Lommel, P; R van Wees, V Meyers, I Elfferich
2001 "Near-death experience in survivors of cardiac arrest: a prospective study in the Netherlands." *Lancet* Dec 15 358 (9289) 2001:2039-2045. http://www.horizonresearch.org/sdarticle.pdf.

060909; 080418