

## Nonlocal Consciousness

### A concept based on scientific studies on Near-Death Experience

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*'To study the abnormal is the best way of understanding the normal'*. William James

According to our current medical concepts, it is not possible to experience consciousness during a cardiac arrest, when circulation and breathing have ceased. But during the period of unconsciousness due to a life-threatening crisis like cardiac arrest patients may report the paradoxical occurrence of enhanced consciousness experienced in a dimension without our conventional concept of time and space, with cognitive functions, with emotions, with self-identity, with memories from early childhood and sometimes with (non-sensory) perception out and above their lifeless body. In my lecture I will discuss the prospective design and the results of our prospective and longitudinal Dutch study on near-death experience (NDE) in 344 survivors of cardiac arrest, as was published in *The Lancet* in 2001. I will discuss into detail several universal elements that can be experienced during NDE, and their implication for our concept, how consciousness and memories could be experienced outside the body during a temporarily non-functioning brain. In four prospective studies with a total of 562 survivors of cardiac arrest between 11% and 18% of the patients reported a near-death experience (NDE), and in these studies it could not be shown that physiological, psychological, pharmacological or demographic factors could explain the cause and content of these experiences. Through many studies with induced cardiac arrest in both human and animal models cerebral function has been shown to be severely compromised during cardiac arrest, with complete cessation of cerebral flow, and electrical activity in both cerebral cortex and the deeper structures of the brain has been shown to be absent after a very short period of time (10-20 seconds). So we have to conclude that in cardiac arrest NDE is experienced during a transient loss of all functions of the cortex and of the brainstem. 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 a flat EEG? How is consciousness related to the integrity of brain function? And is there a start or an end to consciousness? Scientific study of NDE pushes us to the limits of our medical and neurophysiologic ideas about the range of human consciousness and mind-brain relation, because we have to admit that it is not possible to reduce consciousness to neural processes as conceived by contemporary neuroscience.

Since the publication of these prospective studies on NDE in survivors of cardiac arrest, with strikingly similar results and conclusions, the phenomenon of the NDE can no longer be scientifically ignored. It is an authentic experience which cannot be simply reduced to imagination, fear of death, hallucination, psychosis, the use of drugs, or oxygen deficiency, and people appear to be permanently changed by an NDE during a cardiac arrest of only some minutes duration. According to these studies, the current materialistic view of the relationship between the brain and consciousness held by most physicians, philosophers and psychologists is too restricted for a proper understanding of this phenomenon. There are good reasons to assume that our consciousness does not always coincide with the functioning of our brain: enhanced consciousness can sometimes be experienced separately from the body. I have come to the inevitable conclusion that most likely the brain must have a facilitating and not a producing function to experience consciousness. By making a scientific case for consciousness as a nonlocal and thus ubiquitous phenomenon we must question a purely materialist paradigm in science. Moreover, recent research on NDE seems to be a source of new insights into the possibility of a continuity of our consciousness after physical death.

### Articles:

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- Van Lommel, P. Nonlocal Consciousness. A concept based on scientific research on near-death experiences during cardiac arrest. 2013; *Journal of Consciousness Studies*, **20**, No. 1-2 : 7-48.

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