

Understanding Near-Death Experience

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Near-death experiences (NDEs) are by now a widely-known phenomenon. They are reported by about 18% of people who have been clinically 'dead' before being reanimated by cardiopulmonary resuscitation (CPR), and it also occurs in people who are in good health yet in grave danger. There is a common pattern: sense of peace and quiet, out-of-body experience (OBE), moving through a dark tunnel, emerging in light, meeting a being of light and/or dead relatives or friends, life review, coming back. It appears to occur in children as well as in adults. Only a few percent of those who had a NDE report a negative, frightening experience, usually remaining stuck in darkness.

The phenomenon raises scientific as well as theological questions, and should therefore be of interest to those engaged in the science-theology dialogue. The major scientific question is whether NDE is 'real' or a neurophysiological artefact induced by the extreme conditions due to cardiac arrest. The major theological question is what NDE might contribute to eschatology, particularly the theology of life after death.

The first book on NDE was published in 1975 by Raymond Moody, a physician-philosopher.¹ He reports dispassionately and cautiously on 150 cases of NDE collected by him. Moody's second book,² published in 1978, shows the results of more thinking and discussion. Other authors³⁻⁷ report similar findings, and NDE is found to occur worldwide in different cultural-religious settings.⁶

Dutch cardiologist Pim van Lommel has conducted a study of 344 patients, who had undergone CPR after cardiac arrest. This study stands out for two reasons: 1. it was a prospective study, meaning that all patients with a CPR were interviewed after the event without the interviewer knowing whether or not they had a NDE; 2. the results of the study were published in a regular medical journal.⁸ The patients were interviewed within a few days after the CPR and again after 2 yrs. and 8 yrs. NDE occurred in 18% of these patients; none had a distressing or frightening NDE. Persons with NDE had a significant change in religious and social attitudes, including a marked increase in belief in afterlife. They could recall their NDE almost exactly after 2 and 8 yrs. More recently Van Lommel published a book on his findings, in which he not only describes his findings in much greater detail, but also attempts to provide an explanation of NDE.⁹

Is NDE merely a neurophysiological artefact?

This possibility has been extensively discussed by Mark Fox.¹⁰ Like other authors,^{1,3,5,6,9} he concludes that medical factors (clinical death, cerebral anoxia, carbon dioxide excess, medication) or psychological factors cannot account for the occurrence of NDE, particularly the panoramic life-review, the subsequent life transformation and the perfect recall after eight and more years. NDE is quite unlike a hallucination, which has no basis in reality and occurs in psychotic or schizophrenic persons, after drug abuse, or as a withdrawal symptom in alcoholics. Neither can it be seen as a dream in terms of clarity, ease of recall, and the hyper-alertness typical of NDE.¹¹

Michael Shermer,¹² editor of *Skeptic* magazine, happily notes that the problem has been solved: electric stimulation of the right temporal lobe induces OBE so he says: "part of the brain generates these illusions, another part then interprets them as external events." However, OBE is only a part of NDE. He also fails to consider the possibility that temporal lobe stimulation simply opens the mind to the same experiences as induced by cardiac arrest and other extreme conditions. Psychologist Susan Blackmore claims that a massive release of endorphin in the temporal lobe could explain the peace, bliss and painlessness experienced during NDE,¹³ but again, this does not account for the other aspects typical of NDE. She then proposes a 'multiple factor theory', in which for instance the dark tunnel is ascribed to the effects of anoxia on retina or visual cortex. However, blind persons report seeing objects and persons that they were unable to see before and after NDE (shoe on ledge of hospital window, patient in adjacent room).¹⁴ This indicates that they 'saw' without use of the visual system.

All this means that attempts to explain NDE as a neurophysiological phenomenon (or a set of such phenomena) have failed and that we must try to find a different type of explanation.

Van Lommel's explanation of NDE

His starting point is that during cardiac arrest and CPR the electroencephalogram (EEG) becomes 'flat,' which, he says, means that there is no cerebral activity. However, the appearance of a flat EEG on the screen cannot exclude that a few percent of normal activity is left, yet this might not represent a physiologically relevant brain activity. Based on dubious calculations by a computer expert,¹⁵ he further makes the unwarranted assumption that our brain has insufficient capacity to store all our long-term memory. These two points lead him to the bold con-

clusion that our consciousness is not located in the brain but somewhere else in the universe. But this would require a connection between our brain and our extracorporeal consciousness. He believes that the connection is provided by the quantummechanical phenomenon of 'entanglement'.

In explanation: when from a single source two particles, such as electrons or photons, are shot in different directions, then these particles keep influencing each other (e.g., in spin condition) through the exchange of a mysterious 'quantum information', even at distances of many kilometers. However, the bond is weak, because the moment one of the particles is manipulated, entanglement is lost. However, mysterious the entanglement phenomenon may be, its reality is demonstrated by the fact that entanglement is being applied in the development of a quantum computer.

However, I believe that Van Lommel's application of quantum theory to explain extracorporeal consciousness (if such exists) encounters two serious problems. First, this theory is only applicable at the microlevel of elementary particles, such as electrons and photons, where Newtonian laws fail to describe the orbits of electrons around an atomic nucleus. For larger particles or structures, such as the neuronal networks through which our brain operates, quantum behavior turns into Newtonian behavior. This has been observed for 'buckyballs', conglomerates of 70 carbon atoms.¹⁶ A stream of buckyballs, shot at a diffraction grating, at 1000 °K shows interference, indicating wave-like quantum behavior. When the temperature is raised to 3000 °K, interference disappears, indicating particle-like Newtonian behavior. The much larger neuronal networks operating in our brain will undoubtedly obey Newtonian rather than quantum laws. Secondly, our brain is constantly subject to so many influences from the rest of the body and from the outside world that any entanglement can be expected to be quickly abolished.

The problem is that in his quantum mechanical theorizing on the relation between brain and consciousness, Van Lommel builds speculations on those of quantum physicists, who speculate on the possible meaning of quantum theory for the interpretation of life. All this is done without the availability of pertinent experimental evidence. It only seems to leave Van Lommel with the term 'endless non-local consciousness', which he keeps repeating without using it to attempt an explanation of NDE. Moreover, he seems to forget that the consciousness during NDE is of an entirely different order than that in daily life, as is shown in the numerous reports in his book and (to a variable extent) in the ten elements of NDE listed in Table 7.3 on p.136 of his book. NDE is clearly of a transcendental nature, which means that for understanding it, we have to call on theology, in particular the theology of death and afterlife.

Theology of death and afterlife

In the Old Testament (OT) we see a gradual development from an emphasis on tribal survival to a belief in a personal existence after death. The dead go to Sheol, the abode of the dead, where darkness and silence exists and from which no return is possible (Gen.37:35; Job 10:21-22; 11:8; Ps.115:17; Isa.38:18-19). A hesitant belief in a personal survival appears during the Greek period (300-100 b.C.), with as the only canonical texts Isa.26:19 (*Your dead shall live, their corpses shall rise*) and Dan.12:2 (*Many of those who sleep in the dust of the earth shall awake; some to everlasting life, and some to shame and everlasting contempt*). The New Testament (NT) contains no explicit statements about the period between death and the last day (except in Heb.4:9, which speaks about *a sabbath rest for the people of God*), probably because the return of Christ was expected in the near future..

The dead will be subject to 'judgment' by God (OT: Gen.18:25; Ps.9:8; Ps.94:2; Isa. 30:18; Ezek. 7:27b; NT: Heb.9:27; 1Pet.1:17; 1Jn.4:17; Rev. 16:5-7). In the NT judgment is thought to take place on the last day and to be exercised by Christ (Mt.25:31-46; Jn.5:22, 27; 1Cor.4:4b) after the resurrection of all (Jn.6:40; 1Cor. 1:8; 2Thess.1:10). The basis of judgment will be our response to the will of God, defined in the summary of the law and starkly described in Mt.25:31-46.

What can be learned from NDE

The 'life review', experienced by 13% of those with NDE, compares with the biblical account of 'judgment' as described in the previous section, with two important differences: 1. the life review deals with a preliminary judgment, preceding the final judgment on the last day in the biblical accounts; 2. in the latter God or Christ judges humans, while in the life review we judge *ourselves* in the heavenly light where feigning is impossible. This self-judgment comes close to Jn.12:48 (*on the last day the word that I have spoken will serve as judge*). The idea of self-judgment appeals to me, because it expresses the great esteem in which God holds his human creatures.

The interim period between death and the last day, on which the bible remains silent, has been described in a rather gloomy way in the doctrine of purgatory. This doctrine was developed by Clement of Alexandria and Origen (c. 200 AD) on the basis of a single apocryphal text (2Macc.12:39-45), was elaborated by Augustine (c. 400 AD), and affirmed by the Roman-Catholic church at the Councils of Lyons (1274) and Florence (1439). The life review, the encounter with previously deceased persons, and the transformation of subsequent life, characteristic of many NDE reports, suggest a more positive image of a period of spiritual growth and

development. This would imply that during NDE a glimpse of the interim period is received. The dark tunnel, which is traversed, would seem to represent the worm-hole through which the mind, after leaving the body, reaches the transcendent realm, and through which it has to return to be incorporated in the body upon reanimation. I use here the term 'mind', defining consciousness as the living mind at work.

But how?

How can the mind that has moved out of the body during NDE receive transcendental experiences, memorize them and later communicate them to others, while the brain was inactive during NDE? Both on biblical and neurobiological grounds it is reasonable to assume a unity of body and mind as the basis of our consciousness during earthly life.¹⁷ In the resurrection Christ receives a resurrection body, which in some sense is like his earthly body as he was recognized by his disciples (Mt. 28:9; Jn.20:19f.). In other ways it is different from his earthly body, as the resurrected Christ can appear and disappear at once and walk through closed doors (Jn.20:19).

We shall likewise receive a resurrection body (Lk.20:36: *being children of the resurrection*; 1Jn.3:2: *we shall be like him*; 1Cor.15:49: *we will also bear the image of the man of heaven*). It takes the place of our earthly body that is degraded in the grave or by cremation. Paul calls this the 'spiritual body' (1Cor. 15:44), by which he means that it meets the needs to unite with our resurrected mind. It has the qualities of imperishability, glory, and power (1Cor.15:42-43). This is what is affirmed in the Apostles' Creed in the words 'the resurrection of the body'. It is a resurrection of the body-mind unity that we were during our earthly life. There is no immortality of the mind; the complete body-mind unity dies. But then the essence of the body-mind unity must in some way be preserved for resurrection. On this both bible and science remain silent. The well-known story in Ezek.37 tells us that the bones came to life through the breath of God, i.e. the Holy Spirit. But nothing is said about the mind, which cannot have remained in the bones. We cannot escape the assumption that the essence of the living person must be stored transcendentally during the interim state between death and resurrection. During the interim state there appears to be communication between God and the dead (1Pet.3:19, 4:6; Rev.6:10, 7:10), suggesting the opportunity for further spiritual growth.

In metaphoric form, I suggest that during our earthly life an imaginary webcam makes a continuous video of our body-mind unity that is digitally stored in a heavenly computer. The special feature of the webcam is that it can record both our

bodily characteristics and our mental activities. On the last day the video is transformed into a resurrection body, in which our mind and thus our individual personality is incorporated. Finally, this resurrection body is brought to life by God's Spirit.

During NDE the human mind leaves the body, reaches the location of the interim state and makes observations with a transcendental mind, which are also recorded by the webcam. After reanimation, the mind returns to the body. The Spirit reanimates the body-mind unity and transfers the experiences received in the transcendental state to the reactivated brain. There they can be memorized and recounted to others (with the difficulty of translating transcendental experiences to others with an earthly mind, as noticeable in many NDE reports).

I like to believe that in this metaphorical account I have combined the findings of Van Lommel and others about the NDE process with biblical-theological and scientific data without making unwarranted assumptions or incorrect use of scientific theories.

The webcam metaphor can also explain how we on earth may in certain cases receive communications from the dead. In these cases God would permit the Spirit to release from the heavenly computer a message from the dead person and to relay it to us.

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