

NEAR-DEATH EXPERIENCES

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Abstract

Since the 1970s, near death literature has proliferated on library shelves and even the shelves of Lutherans. In recent years some of these books, such as *90 Minutes in Heaven* and *Heaven is for Real*, have enjoyed widespread fame. Because science and Scripture leave such experiences open as possibilities, one needs to be careful in addressing the issue. This paper demonstrates how most near death experiences can be explained scientifically. This paper also highlights some points to consider in counseling someone who has had a near death experience.

In 1999 a working mother from Atlanta, Georgia was in the throes of a very busy life, when everything changed. Pam Reynolds began having symptoms that revealed a very serious underlying problem. Pam was experiencing dizziness, loss of speech and even difficulty moving her body. A brain scan revealed a large brain aneurism deep in her brain at the base of the skull. The neurologist she was referred to gave her little to no chance of survival at all. The only hope she had was 2,000 miles away at the Barrow Neurological Institute in Phoenix, Arizona.

Though the odds were stacked against her, a neurosurgeon, Dr. Spetzler, agreed to take on her case. The surgical plan was ambitious, but Pam agreed to have the surgery. But, during the surgery, Pam had an experience which she recounts,

I don't remember an operating room. I don't remember seeing Dr. Spetzler at all. I was with one of his fellows. After that, nothing, absolutely nothing. Until the sound. And the sound was unpleasant, it was guttural. It was reminiscent of being in a dentist's office. And I remember the top of my head tingling and I just sort of popped out of the top of my head. And then I was looking down at my body. I knew it was my body, but I didn't care. My vantage point was sort of sitting on the doctor's shoulder. I remember the instrument in his hand. It looked like the handle which my electric toothbrush [sic]. Um, I had assumed they were going to open the skull with a saw, I had heard the term saw. But what I saw looked a lot more like a drill than a saw. It even had little bits that were kept in this little case that looked like the case which my father stored his socket wrenches when I was a child. And I remember distinctly hearing a female voice saying, 'We have a problem, the arteries are too small.' 'Try the right side.' It seemed to come from further down on the table. I do remember wondering, 'what are they doing? Because this is brain surgery.' ...

I felt a presence. I sort of turned around to look at it. And that's when I saw a very tiny pinpoint of light. And the light started to pull me and there was a very physical sensation to the pulling...rather like going over a hill real fast...and I went toward the light. The closer I got to the light, I began to discern different figures, different people. I distinctly heard my grandmother call me, she has a very distinct voice and I immediately went to her. And it felt great. And I saw an uncle who passed away when he was only 39 years old...and I saw many many people I knew and many I didn't know. But I knew that I was somehow and somehow connected to them. I asked if god was the light. And the answer was 'no, god is not the light. The light is what happens when god breathes.' And I distinctly remember thinking, 'I am standing in the breath of god.'

At some point in time I was reminded that it was time to go back. Of course, I had made my decision to go back before I ever laid down on that table. But, you know, the more I was there, the better I liked it. And, my uncle was the one who brought me back down to the body. But then I got to where the body was and I looked at the thing and I for sure did not want to get in it; because, it looked pretty much like it was. As in, void of life. And I knew it would hurt, so I didn't want to get in. And he kept reasoning with me... 'what about the children?' 'You know what? I think the children will be fine.' He pushed me,

he gave me a little help there. It's taken a long time, but I think I'm ready to forgive him for that.

I landed. I saw the body jump...and I felt it do this number [flinch].¹

With her experience, Pam joins millions of people claiming to have had a near death experience (NDE). Indeed, books on near death experiences have flooded the market and topped the best seller lists since about the 1970s. Many pastors and laypeople report loved ones seeing angels just before they die. Though slightly different, those too deserve a place in the conversation about near death experiences.

Near death experiences have been around for centuries. The Tibetans have their *Bardo Thodol, or, Book of the Dead*. The Egyptians, too, had their *Book of the Dead*. Even Plato wrote about the topic. In book ten of *Republic* Plato writes about a soldier named Er who awoke at his own funeral and describes his journey into the afterlife.² Not to mention our own book, The Holy Bible, which stands on a whole different plane than all other resources. The Bible is replete with descriptions and analogies of life after death.

Because the Bible and science leave them open as possibilities we must be careful in the way we speak about them. This paper will examine near death experiences through the lens of current scientific knowledge on the brain in crises. This paper will demonstrate that current working theories on the brain in crises seem to offer a viable explanation for the near death experience. However, this paper will also show that near death experiences are not impossible. Some cases may be legitimate near death experiences. Finally, application will be made for those in counseling professions. The approach of counseling a person convinced of a near death experience must take into account the type of experience, the elements contained in the experience, and the overall spiritual and mental condition of the patient.

Before beginning the investigation into near death experiences, mention must be made about the areas of near-death studies which will not be examined. These areas may prove profitable for further study. Firstly, this paper will not examine the elements which psychedelic drugs have on the brain and their similarities/dissimilarities to certain aspects of the near death

¹ Maksimonus. "BBC: Pam Sees God. NDE Pam Reynolds. Amazing! Full Version!" Filmed [2002]. Youtube video, 10:57. Posted [April 6, 2009]. www.youtube.com/watch?v=WNbdUEqDB-k

²Plato's Republic book 10

experience. There are drugs used in current trauma treatments which have been known to bring about experiences which contain certain near death experience elements. For example, ketamine, a powerful tranquilizer, has been known to produce a feeling of disassociation from one's body. As will be seen later in this paper, the out of body experience (OBE) is a common feature of NDEs.

Secondly, this paper will not examine the emergence of near death studies in the field of philosophy or apologetics. Although this paper will examine some of the fallout of NDEs, that is to say, the aftereffects it has on the survivor, it will not examine NDE as philosophical proof of the afterlife. Furthermore, there have been recent developments in apologetics to apply near death experiences. Apologist Gary Habermas, quoted later in this paper, is a leading figure in the apologetics of the resurrection of Jesus Christ. There seems, therefore, to be at least a philosophical/apologetic connection between NDEs and the resurrection.

NDE Defined

What is a near-death experience? Like most elements in near-death studies, definitions are very hard to arrive at. Simply put, there is no agreed-upon definition of a near-death experience. NDE researcher Jeffrey Long writes,

There is no uniformly accepted definition of near-death experience. Definitions of NDE with some variability have been used throughout the 35 plus years that NDE has been the subject of scholarly investigation. For my retrospective investigations, an NDE was required to have both a near-death and an experience component. Individuals were considered to be "near-death" if they were so physically compromised that if their condition did not improve they would be expected to irreversibly die.³

Long does not categorically state a definition of near-death experience. He only offers the loose definition which he used to filter out subjects for use in his research. Note that his definition is not connected with the actual moment of death. This is probably because the moment of death is very difficult to arrive at, as will be seen later in this paper.

³ Long, Jeffrey. "Near-Death Experiences Evidence for Their Reality." *Missouri Medicine*, 2014.1.

Though there is no agreed uniform definition, there are recurring aspects of NDEs which can point to one having occurred. P.M.H. Atwater offers this overall pattern for a near-death experience,

1. **A sensation of floating out of one's body**, often followed by an out-of-body experience where all that goes on around the "vacated" body is both seen and heard accurately in detail.
2. **Passing through a dark tunnel** or a black hole or encountering some kind of darkness. This is usually accompanied by a feeling or sensation of movement or acceleration. "Wind" may be heard or felt, or a swooshing sound may predominate.
3. **Headed toward and entering into a light at the end of the darkness**, a loving light full of warmth and brilliance, with the possibility of seeing people, animals, plants, lush outdoors, and even cities within the light.
4. **Greeted by friendly voices, people, or beings**, who may be strangers, loved ones, or perhaps religious figures. Conversation can ensue, information or a message may be given as part of the "scenario."
5. **Seeing a panoramic review of the life just lived**, from birth to death or in reverse order, sometimes becoming a "reliving" rather than a dispassionate viewing. The person's life can be reviewed in its entirety or in segments. This is often accompanied by a feeling or need to assess gains or losses made during the life, so the individual can be aware of what was learned or not learned. Other beings can participate in this assessment or offer advice. It is possible for such "memories" to be open-ended and to include all existent knowledge, not just personal revelations.
6. **A different sense of time and space**, discovering that time and space do not exist, along with losing the need to recognize such measurements as either valid or necessary.
7. **A reluctance to return to the earthplane**, but invariably coming to realize that either one's job on earth is not finished or a mission is yet to be performed before one can return to stay.
8. **Disappointment at being revived**, feeling a need to shrink or somehow squeeze to fit back into the physical body. There can be unpleasantness, even anger or tears, at the realization that one is now back in his or her body and no longer on the Other Side. Fear of death either subsides or disappears altogether.⁴

Lists of NDE have differed from the one Atwater proposes here. Any differences seem to be minor, however. Many of these features are repeated in Raymond Moody's work *Life After Life*, which is the book that launched the field of near-death studies. One feature that doesn't appear on Atwater's list is the experience of oneness. Often associated with the warm, loving light is the feeling of all people being interconnected and "one."

⁴ Atwater, P. M. H. *Beyond the Light: What Isn't Being Said about Near-death Experience*. New York: Carol Pub. Group, 1994, 8-9.

Long, and others, are quick to point out that not every experience is exactly the same. In this regard NDEs are akin to snowflakes. Each one shares much in common, but no two are exactly alike. Some experiences may include more aspects of the experience, and others may include significantly less. Atwater, therefore, includes four types of near-death experiences.

Initial experience (sometimes referred to as the “non-experience”) Involves elements such as a loving nothingness or the living dark or a friendly voice. Usually experienced by those who seem to need the least amount of evidence for proof of survival, or who need the least amount of shakeup in their lives at that point in time. Often, this becomes a “seed” experience or an introduction to other ways of perceiving and recognizing reality.

Unpleasant and/or hell-like experience (inner cleansing and self-confrontation). Encounter with a threatening void or stark limbo or hellish purgatory, or scenes of a startling and unexpected indifference, even “hauntings” from one’s own past. Usually experienced by those who seem to have deeply suppressed or repressed guilt, fears, and angers and/or those who expect some kind of punishment or discomfort after death.

Pleasant and/or heaven-like experience (reassurance and self-validation). Heaven-like scenarios of loving family reunions with those who have died previously, reassuring religious figures or light being, validation that life counts, affirmative and inspiring dialogue. Usually experienced by those who most need to know how loved they are and how important life is and how every effort has a purpose in the overall scheme of things.

Transcendent experience (expansive revelations, alternate realities). Exposure to otherworldly dimensions and scenes beyond the individual’s frame of reference; sometimes includes revelations of greater truths. Seldom personal in content. Usually experienced by those who are ready for a “mind-stretching” challenge and/or individuals who are more apt to utilize (to whatever degree) the truths that are revealed to them.⁵

Atwater’s list seems to be fairly comprehensive in offering general categories for the various types of near death experiences. One area in which he probably overstates the category is in stating to whom the experience applies. For example, it doesn’t seem to be categorically true that negative experiences usually happen to someone with repressed guilt, fear, etc. Other researchers have gone so far as to say that there is no telling which type of experience will happen to a given individual.

Since the field of near-death studies emerged, researchers have found a need to rank near-death experiences on some sort of scale as a way to measure how profound or deep the experience went. The first undertaking was by K. Ring and his development of the Weighted

⁵ P.M Atwater. Beyond the light, 19-20.

Core Experience Index (WCEI).⁶ This scale, however, turned out to be somewhat unreliable as it offered less weight to some less common experiences and greater weight to the common ones. This is inverse to reason because those experiences which are less common are indicative of a deeper experience and should receive greater weight. Bruce Greyson undertook extensive research in an attempt to construct a new near-death experience scale. For his research purposes, Greyson included people in his studies who scored a 7 or higher. Greyson's scale can be found in appendix C. These features of NDE tended to be consistent cross-culturally and regardless of age group or gender.

Negative NDEs

Not all NDEs are positive experiences. Though they are rarer, estimated anywhere from one to fifteen percent of all NDEs⁷, they do occur. There is no agreed upon definition of a distressing near death experiences because there are almost no reports of an entirely negative experience. That is to say, NDEs with negative aspects also tended to have positive aspects. Some “negatives” even had a greater number positive aspects than negative. Such experiences make it difficult to decide how to classify them. Researches have, therefore, put in this category any experience which had a negative aspect to it, whether actual or perceived. Grey, a leading NDE researcher, defined negative near-death experiences as “characterized by feelings of extreme fear or panic, emotional or mental anguish, desperation, intense loneliness, and desolation.”⁸ There are generally three accepted subdivisions of this category which have been identified by Nancy Bush and Dr. Bruce Greyson. They are listed in order from most common to least common.

The first type of distressing experience often involves the phenomenological features of prototypical peaceful near-death experiences, such as a bright light, a tunnel, a sense of being out of the body, and a life review, but is interpreted by the individual as terrifying rather than comforting. Often the individual identifies loss of ego control as the terrifying aspect of the experience.⁹

⁶ Ring, K. *Life at death: A Scientific Investigation of the Near-Death Experience*. Coward, McCann & Geoghegan, New York, 1980 as referenced by Greyson, Bruce. *The Near-Death Experience Scale*.

⁷ https://iands.org/images/stories/pdf_downloads/distressing.pdf

⁸ Bush, Nancy, and Bruce Greyson. "Distressing Near-Death Experiences: The Basics." *Missouri Medicine* 111, no. 5 (2014), 97-98

⁹ *Ibid*, 99

The second type of distressing experience involves a paradoxical sensation of ceasing to exist entirely or of being condemned to a featureless void for eternity. Sometimes this type of experience includes a sense of despair that life as we know it not only no longer exists but in fact never did, that it was all a cruel joke. Unlike the first type of distressing experience, these generally contain fewer features of the prototypical peaceful near-death experience and do not appear to convert to the peaceful kind with time.¹⁰

A smaller number of individuals report a distressing near-death experience that includes more graphic hellish symbolism, such as threatening demons or falling into a dark pit. As with the second type of distressing experience, this kind generally contains fewer features of the prototypical peaceful near-death experience and appears not to convert to a peaceful one with time.¹¹

We may be tempted to lend more weight of evidence to these negative experiences. The concept of dreading a life review or being terrified by what one encounters after death seems to make sense. Especially when one considers that almost every example of negative experience that Bush and Greyson offer in this paper comes from confessed unbelievers. For example, consider the un-religious woodworker who attempted to commit suicide by hanging himself in his back yard:

From the roof of the utility shed in my back yard I jumped to the ground. Luckily for me I had forgot the broken lawn chair that lay near the shed. My feet hit the chair and broke my fall, or my neck would have been broken. I hung in the rope and strangled. I was outside my physical body. I saw my body hanging in the rope; it looked awful. I was terrified, could see and hear, but it was different – hard to explain. Demons were all around me; I could hear them but could not see them. They chattered like blackbirds. It was as if they knew they had me and had all eternity to drag me down into hell to torment me. It would have been the worst kind of hell, trapped hopeless between two worlds, wandering lost and confused for all eternity.¹²

There are elements of this account that seem credible. Is it beyond belief that an avowed unbeliever would experience such torment at the hands of demons as he is dying? Most certainly not. However, he mentions some aspects that may not agree with what the Bible says about hell. For instance, the Bible speaks of hell being a place of fire and its occupants feeling anger. This man describes wandering between two worlds and feeling lost and confused. Though it doesn't totally rule out every feature of this account, it does give the reader reason to be cautious before

¹⁰ Bush, Nancy, and Bruce Greyson. "Distressing Near-Death Experiences: The Basics." 101.

¹¹ Ibid, 105.

¹² Ibid, 105.

lending too much credibility to these distressing experiences. In fact, it can be argued that there are just as many unscriptural features in negative experiences as there are in positive ones.

There is one positive feature of these distressing experiences: the change which they produce in the life of the survivor is encouraging. Rather than just becoming more “spiritual” like those who had a positive NDE, those who have had a negative NDE seem to go searching for real answers. Most end up moving into a more religious dogmatic community. In fact, in social worker Kimberly Clark Sharp’s words, “All the people I know who have had negative experiences have become Bible based Christians...they might express it in various sects. But they all feel that they have come back from an awful situation and have a second chance.”¹³ However, not all end up as Bible-based Christians. It depends on their reaction to their negative NDE.

Some have seen the negative experience as a wake-up call. The event serves to warn the individual that if they don’t get their life in order they will permanently end up in the place that they experienced. NDE researcher Barbara Rommel says, “A classic response to profound spiritual experience is conversion, not necessarily changing one’s religion but in the original sense of the Latin *convertere* meaning ‘to turn around.’ The NDE is interpreted as a warning about unwise or wrong behaviors, and to turn one’s life around...”¹⁴

A second reaction to a negative near-death experience is called reductionism. In this instance the person having the experience attempts to explain away the experience. Though it may be a legitimate explanation for what occurred, the experiencer is still troubled by the experience. The explanation serves as a way to try to bury the experience so as not to have to make sense of it. This is not a healthy approach because it doesn’t allow the person to process their thoughts or feelings in a meaningful way. Some have described being perturbed by the event some decades later.

¹³Sharp KC. In: Flynn CF. After the beyond: Human Transformation and the Near-Death Experience. Englewood Cliffs, NJ: Prentice-Hall 1986. In: Bush, Nancy, and Bruce Greyson. "Distressing Near-Death Experiences: The Basics." 373.

¹⁴Rommel B. Blessings in Disguise: Another Side of the Near-Death Experience, St. Paul, MN: Llewellyn 2001. In: Bush, Nancy, and Bruce Greyson. "Distressing Near-Death Experiences: The Basics." 373.

The third reaction is marked by people asking the question, “Why me?” These experiencers live somewhere in between the first and second reactions.

This group is often articulate people haunted by the existential dimension of their NDE, searching for a cognitively and emotionally grounding explanation. They find a literal reading of the event intellectually unacceptable, but reductionist explanations only assign a cause without addressing meaning. They struggle to make sense of the distressing NDE without destroying them (and their trust in the workings of the world) in the process.¹⁵

This group, more than any other, require counseling and psychotherapy. However, most therapists dismiss the account out of hand and simply prescribe medications. The author notes that most clergy do not know what to say and/or dismiss the account out of hand. Furthermore, these experiencers are not likely to lose their fear of death, as are those who have positive experiences.

In short, negative NDE experiences do exist, though they are rare. Upon examination, no greater evidence can be given to support the legitimacy of these claims from a theological standpoint. Though we may expect negative NDEs to occur more often or have more theologically accurate experiences, this isn't the case. There are plenty of elements of negative NDEs which do not agree with Scripture. Furthermore, there is no telling who will have a negative experience. There have been reports of Bible-believing Christians having negative or hellish experiences. Likewise, there have been reports of the irreligious and atheists having pleasant experiences.

The real benefit from these negative experiences is in their aftermath. Because those having undergone negative NDEs have a deeper urge to seek answers, they may offer a point of contact. Though a larger section of application will be included later in this paper, mention can be made here of some application. Counselors who listened to the account carefully and didn't dismiss it as illegitimate had the greatest success with the experiencers. When counseling someone who has had a negative experience, the goal is to offer them reassurance to soothe their conscience. That is done by sharing with them the story of Jesus Christ crucified for them. As

¹⁵Bush, Nancy, and Bruce Greyson. "Distressing Near-Death Experiences: The Basics." 375.

contact with the experiencer continues, there will be opportunities in the future to correct any false doctrine.

Near-Death experience aftereffects

The aftereffects of an NDE in the life of the experiencer can be as wide-ranging as the experience itself. Some who have had positive experiences speak of feeling cursed at having had such an episode. Others who have had negative experiences are overjoyed at feeling like they have new insight. The real impact of the near-death experience is found not in the experience itself, but in its aftereffects.

Above are offered some aftereffects of those having a negative experience. Of the two types of experience, positive and negative, it would seem from an outsider's perspective that negative experiences are really more desirable. They are more desirable not because the experience is enjoyable, but because those who have negative experiences tend to become Bible believing Christians. That is not to say that there are no positive aftereffects of positive experiences.

Those who underwent a positive experience showed drastic changes in their psyche and behavior. For instance, men became more thoughtful, caring and emotionally expressive.¹⁶ Both men and women tended to become more spiritually focused and recorded changes in employment, life priorities, goals and values.¹⁷ Matamua Tassell, of Massey University in New Zealand write,

...Major studies consistently reveal a pattern of positive sequelae [results from the event] from those who have NDEs, which typically include but are not limited to: an increased concern or feelings of compassion for others; a greater appreciation for life; a positive self-attitude and clearer sense of self-identity; less concern with consumerism and materiality; less general anxiety; an increased "thirst" for knowledge; and an enhanced sense of spirituality.¹⁸

Studies also report an increased emphasis on love. This is usually brought on by the experience of "oneness" in the NDE. Though there really is no scriptural basis for saying that all

¹⁶Atwater, 122.

¹⁷Tassell-Matamua, Natasha. "Near-Death Experiences and the Psychology of Death." *Omega* 68, no. 3 (2013), 266.

¹⁸Tassell-Matamua, 266

human beings are “one,” it can still be included on the list of positives in so far as it serves the greater good from a civic perspective.

There are actually relatively few negative aftereffects of a positive NDE, secularly speaking. Tassell points to only two: initial stressful changes and a higher divorce rate.¹⁹ The stressful changes are brought on with the change in priorities. As experiencers’ tended to change their priorities they also tended to sever old relationships and acquaintances. These two negatives, stressful changes and divorce, surely go hand in hand.

Probably the most significant change comes in the form of people’s attitudes toward death. Those who had a positive near-death experience had either a reduction in their level of fear toward death or lost their fear of death altogether. Though for some these changes tended to fade as time distanced them from the experience, the majority of experiencers changes remained permanent and some even became more pronounced as time passed.

Though there is much good to be said of NDEs civically, the same cannot be said about them spiritually. Though persons having positive experiences tended to become more spiritual, it does not appear that they became more Bible-based, especially when compared to those who had negative experiences. Atwater points out that for those who had positive NDEs,

Sensitivities enhance and expand, the intuitive opens up the psychic. There is no denying the fact that if not psychic before, the experiencer becomes so afterward; if psychic before, he or she became even more so after. Out-of-body episodes can continue, the light beings met in death can become a daily part of life routines, the future is often known before it occurs, extrasensory perception becomes *normal* and *ordinary*!²⁰

The aftereffects of a NDE can serve both good and bad purposes. Secularly speaking, positive NDEs seem more desirable. However, spiritually speak, positive experiences hold far more danger for the experiencer. The experience itself is not where the risk lies. Rather, the interpretation of the experience poses the risk. Inversely, the negative near death experience theoretically holds less risk, if the experiencer is guided in their interpretation. More on that point can be found in the application section at the end of this paper.

Defining death

¹⁹Ibid, 266

²⁰Atwater, 120.

History is rife with examples of people being buried alive or being otherwise declared dead while life still remained in the body. In his essay Keith Mant of Guy's Hospital in London included this account,

An old lady who had been found lying on some common ground was brought to hospital [sic] by ambulance. A doctor summoned from the Casualty Department felt that she was cold, and he was unable to feel a pulse of heart beat when he placed his hand on her chest. It was only after she had been undressed and placed on the mortuary table that it was noticed that she was still breathing.

That account was originally reported in 1965 from Taylor's *Principles and Practice of Medical Jurisprudence*. Of note in the account is the manner in which the old lady was declared dead. The litmus test was simply that her body was cold and no heartbeat was felt. As late as 1965 doctors were still accustomed to rather rudimentary measurements to declare death.

However, even the parameters used in that case are a far cry better than the definition of death offered by Smith in his book *Principles of Forensic Medicine* written in 1821:

If we are aware of what indicates life, which everyone may be supposed to know, though perhaps no one can say that he truly and clearly understands what constitutes it, we at once arrive at the discrimination of death. It is the cessation of the phenomena with which we are so especially familiar – the phenomena of life.²¹

Smith doesn't offer any real test for death. He simply assumes that when a person sees a body devoid of the characteristics usually associated with life, that person can be declared dead. Such a loose and vague definition has undoubtedly contributed to premature declarations of death and even burial. It is interesting to note that the United Nations' modern definition of death closely reflects the definition offered by Smith. They say death, "... is the permanent disappearance of all evidence of life at any time after live birth has taken place." This definition was written in 1953 but appears again in 1973 and 2001.²²

Though other writings of Smith's era listed some signs of death, they left an equal amount of room for interpretation and mistakes. Common practices were to hold a feather or a mirror in front of a person's nose. If the feather moved or the mirror glass fogged, the person was

²¹ Mant, Keith A. *The Medical Definition of Death*. In: Shneidman, Edwin S. *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 218.

²²<http://unstats.un.org/unsd/demographic/products/dyb/techreport/mortality.pdf>

not dead. However, in states of suspended animation the body often does not produce enough breath to move a feather or fog a mirror. One author even went so far as to suggest that burial should not take place until the early signs of purification had occurred.²³

Medical definitions of death have varied across the centuries. The religious and philosophic view in Western culture holds that death occurs when the soul departs the body. However, arriving at the conclusion that such a separation has happened is difficult. Secular man traditionally held that death occurred with the cessation of the flow of bodily fluids and respiration.²⁴ This view holds the flow of fluids as essential to man.

The medical definition of death later progressed to distinguish between somatic death and cellular death. Mant writes,

Somatic death is the cessation of all vital functions such as the heart beat and respiration. Molecular or cellular death follows. Many cells in the body will continue to live for some time after somatic death...The rate at which cellular death occurs varies in different organs. The more specialised (sic) the organ, the more rapidly its cellular death follows somatic death.²⁵

The time delay between somatic death and cellular death is of pivotal importance in the medical community. It shows that death is not usually an instantaneous event. Rather, death is a process in which cellular death progresses at a varied pace throughout the organs of the body. Furthermore, this process is reversible to a certain extent. People may be revived and the process of death stopped. There is, however, a point at which the process of death is irreversible. That point has been called biological death. When too many vital cells have died in vital organs, rendering the organ itself dead, resuscitation is no longer possible. As will be seen, there are NDE reports from varying “levels” of death. However, there are no reports beyond the level of biological death.

a. Development of clinical death – cardio respiratory to brain death

Using somatic death as a definition for bodily demise is insufficient. Even after the heart and respiration have stopped, other organs are still functioning. Therefore, something more

²³Mant, Keith A. *The Medical Definition of Death*. In: Shneidman, Edwin S. *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 221.

²⁴Veatch, Robert. *Brain Death*. In: *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 235.

²⁵*Ibid*, 226.

definitive than somatic death or “heart death” is needed. In the 20th century, something more definitive came in to use thanks to the electroencephalogram (EEG). Instead of being able to only measure heart and respiration levels as markers for death, doctors can now measure brain activity.

Because the brain provides the signals which allow other organs in the body to function, if the brain fails, so do the other organs. Brain death, therefore, is tantamount to decapitation. In the past, it was assumed that brain death would necessarily follow heart death. That is still true to a certain extent. However, modern resuscitation methods make it possible to have brain death precede heart death. In such a case, somatic functions are only operating with mechanical assistance via respirators, dialysis machines, etc. This makes it all the more difficult to determine when a person is truly dead.

It has been known for a long time that if certain brain cells, the more recently specialised (sic), are deprived of oxygen for more than a few seconds they die and can never recover their function, as there is no regeneration of brain tissue. The more primitive parts of the brain, those that control the vital functions, can put up with far greater insults, and, therefore, under circumstances, the individual may lose personality, that part of the brain which deals with thought and voluntary movement, and yet survive as a vegetable because the vital centers are intact. Thus one might conclude that if there is a flat E.E.G. reading, that is to say a complete absence of brain function, for five minutes, that life is extinct. In fact, some biologists accept one minute as incontrovertible proof of death. In a normal case this is acceptable, but as with other signs of somatic death there are exceptions.²⁶

There are those who challenge this “brain death” definition of death. Robert Veatch, former director of the research group on death and dying at the Hastings Institute for Society, sums up the argument for those opposed to “brain death” as the only definition of death,

They ask why is it that one must identify the entire brain with death; is it not possible that we are really interested only in man’s consciousness: in his ability to think, reason, feel, experience, interact with others, and control his body functions consciously? This is crucial in rare cases where the lower brain function might be intact while the cortex, which controls the consciousness, is utterly destroyed.²⁷

²⁶Mant, Kieth. *Brain Death*. In: *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 229.

²⁷Veatch, Robert. *Brain Death*. In: *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 235.

Evidence for this argument against “brain death” as incontrovertible proof of biological death comes from an experiment done by Dr. White. In this somewhat medieval experiment, the heads of live monkeys were severed from their bodies and transplanted on to another artificially-sustained headless body. After the transplant, the monkeys were assumed to be conscious. John Lizza, from the philosophy department of the University of Pennsylvania in Kutztown, applies this situation to a hypothetical person,

Suppose a certain human being, Waldo, underwent White’s operation, but that his decapitated body was also artificially sustained. Where’s Waldo? Following Gert, Culver and Clouser [challengers to decapitation as an infallible sign of death], Waldo would be identified with the transplanted conscious head, not his former decapitated, artificially sustained, integrated body... moreover, Waldo’s death occurs only when the psychophysical integration present in the sustained head irreversibly ceases. If his former artificially sustained, headless, integrated organism lost its organic integration, this would not mean Waldo’s death. Thus, in such circumstances, decapitation is not an ‘infallible sign and sufficient condition for death’.²⁸

Lizza sums up the argument: “The decapitation gambit is best understood formally as a reduction ad absurdum of the argument that, as long as circulation and respiration continue in a living human organism, albeit artificially maintained, the individual has not died.”²⁹ Those who oppose “brain death” as a working definition of biological death identify the essence of life or human existence with a functioning body. We, however, know that man is not merely a body, but also a living soul which God has put into it. At this juncture it is important to point out that most who oppose NDEs as possibilities do so because they are skeptical of an existence beyond this life.

Finally, the decision as to what death is, is not a medical or scientific one. Veatch, includes in his essay *Brain Death*, the decision of the Harvard Ad Hoc Committee to Examine the Definition of Brain Death,

The...committee...established operational criteria for what it called irreversible coma, based on very sound scientific evidence. These four criteria are: 1. Unreceptivity and unresponsively; 2. No movements or breathing; 3. No reflexes; 4. Flat electroencephalogram (“of great confirmatory value”). What the Committee did not do, however, and what it was not capable of doing, was establishing that a patient in

²⁸Lizza, John. "Where's Waldo? The 'Decapitation Gambit' and the Definition of Death." *Journal of Medical Ethics* 37, no. 12 (2011). doi:10.1136, 744.

²⁹ Ibid, 744.

irreversible coma is “dead,” i.e., that we should treat him as if he were no longer a living human being who is the possessor of the same human moral rights and obligations as other human beings. While it may be the case that a patient in irreversible coma, according to Harvard criteria, has shifted into that status where he is no longer considered to be living, the decision that he is “dead” cannot be derived from any amount of scientific investigation and demonstration. The choice among the many candidates for what is essential to the nature of man and, therefore, the loss of which is to be called “death,” is essentially a philosophical or moral question, not a medical or scientific one.³⁰

There is every reason to trust current medical thought that brain death is synonymous with biological death. Those who oppose brain death are in the minority in the medical community and operate from an older definition of death. Aside from overly hypothetical discussions there is really no circumstance in which a decapitated person could continue to survive. Therefore, “brain death” is a good working indicator for biological death. It must be noted, however, that seldom is this definition of death employed, because an EEG is seldom hooked up to a patient. There really is no uniform standard definition of death used in the west either in theory or in practice.³¹³²

The discussion on the definition of death has an important place in the conversation about NDEs. If death is a process, rather than an event in time, then there is a possibility that the body still receives input from its immediate environment. Even though a person may have experienced somatic death, their sense of hearing, for example, may still be active. If revived from their somatic death or state of suspended animation, it should not be a surprise if they report hearing conversations while dead. Their sense of hearing was never lost, even though they were experiencing somatic death.

Furthermore, at what point does a person actually lose all consciousness? That is to say, at what point do they stop receiving physiological input from their immediate surroundings? If a person is still receiving input well into their “death” experience, their still-conscious existence could explain why they experiences visions, auditory hallucinations, etc. It could be explained as

³⁰ Veatch, Robert. *Brain Death*. In: *Death: Current Perspectives*. Palo Alto, Calif.: Mayfield Pub., 1976, 235-236

³¹Habermas, Gary. “Near-Death Experiences: Evidence for an Afterlife?.” *Veritas Forum* video, 01:12:11. January 29, 2003. <http://veritas.org/talks/near-death-experiences-evidence-afterlife>.

³² Gary Habermas, uses four “levels” of death. Near-death, heart death, brain death and biological death. There are no reports whatsoever that come from the biological death level. “And if there is”, says Habermas, “then it isn’t biological death.”

a brain in crisis attempting to make sense of the input it is receiving. Kevin Nelson, of the department of Neurology at the University of Kentucky says,

A great deal has been made of the fact that sometimes the precise instant of brain death may be unmeasurable, thus leaving open the possibility that experiences can happen when the brain is dead...there exists a continuum between one neuron and all neurons dying, and the borderland that a brain can enter and then viably return from is large and murky.³³

With the possibility that the brain can still receive input while in the process of death, attention is now turned back to the case of Pam Reynolds. Pam accurately reported a conversation between the doctors that occurred during her operation as well as accurately describing the tools which were used. This is truly remarkable when one considers these additional details of her case which are reported by Terence Nichols in his book *Death and Afterlife*,

What makes this account extraordinary is the detail, including her descriptions of the scene in the operating room. Dr. Michael Sabom, who was involved in the case, testifies that he at first thought her description of the tool the surgeon used – the bone saw – must be wrong. But he sent for a picture of the saw and in fact it looked just like an electric toothbrush (or a high-rpm handheld drill). It also had many attachments, which were contained in a case that looked just like a socket wrench set. Reynold's description of this tool and its attachments, therefore, was accurate. She had expected to see a saw, the tool she actually observed did not look like a saw. But at the time she observed the tool in use, her body was under general anesthesia, her eyes taped shut, her ears plugged, and her brain was inactive. She also described a conversation in the operating room when the surgeons were trying to drain the blood through her femoral artery...Dr. Spetzler testifies that Reynolds could not have known what the saw and what its attachments looked like before the operation because these instruments were locked up until just before use to retain their sterile conditions. Nor could she have heard the conversation about her arteries being too small through normal sensory channels.³⁴

Reynolds could not have possibly heard the conversation because she had special earplugs in her ears which emitted a clicking sound to help test the auditory nerve in the brain stem. Even if she hadn't been under anesthesia at the time, it is unlikely that she would have been able to hear the conversation. Furthermore, the surgery required that Pam's blood be drained from her body and her body cooled. Her heart was stopped and her brain function was

³³ Nelson, Kevin. "Near-Death Experience: Arising from the Borderlands of Consciousness in Crises." 2014. doi:10.1111, 112-113.

³⁴ Nichols, Terence L. *Death and Afterlife: A Theological Introduction*. Grand Rapids, Mich.: Brazos Press, 2010, 94-95.

arrested as well. At the time, she was hooked up to an EEG, which showed a flat line. Pam was “dead” according to every definition given above. There were no measurable outputs from her body. In theory, Pam should have no recollections of any kind during this period.

The Brain and Reality

Central to neuroscience is the maxim that all human experience arises from the brain.³⁵ Here there is room for discussion on the role of the brain in determining reality. Does the brain create reality, or merely filter it? By means of understanding the difference between creating reality and filtering reality one can consider input from the five senses. Consider a person who touches a hot stove. Immediately, the hand is withdrawn as an involuntary action. The heat from the stove is a reality independent of the individual’s brain. The physical body received the input of heat and the brain, filtering that reality, caused the hand to recoil. Indeed, the stove would remain hot even in the absence of a brain to consider its heat. Simply put, the brain cannot serve to create its own legitimate reality.

That is not to say that the brain is totally incapable of creating its own reality. A person who isolates himself from contact with the outside world and rather indulges in a fantasy world may become convinced of a reality independently created. Likewise, an elderly person suffering from the effects of Alzheimer’s may become convinced of a reality which does not actually exist. Such a person, however, is said to be “out of his/her mind.” Though the brain has created a reality, that reality is illegitimate.

It also cannot be said that every healthy brain is an accurate filter of reality. Consider the image in appendix A. Are the dots at the intersections of the square black or white? The answer is “yes.” Though there are various theories as to why this “scintillating grid illusion” effects our eyes the way it does, it still remains a mystery. For the purposes of this discussion, the point is that our senses are not always accurate determiners for reality. Take appendix B as another example. Can you find a meaning in it? Your brain will work to find a pattern and once it does you are unlikely to see anything else in the picture. Your brain has created a reality which attempts to incorporate the fragmented bits of the drawing into something that makes sense.

³⁵Kandel ER. A new intellectual framework for psychiatry. *AmJpsychiatry* 1998; 155:457-469. In: Nelson, Kevin. "Neuroscience Perspectives on Near-Death Experiences." *Missouri Medicine* 112, no. 2 (2015), 95.

Our senses can be deceived. Our brain is always working to create a reality which makes sense of all input. This deception of the senses may be one explanation that raises serious questions as to the reality of these NDEs. Are they real, or simply illusions? There is strong evidence to suggest that NDEs are illusions of a brain in crisis.

REM Sleep and NDE

There seem to be strong connections between the body's arousal system and NDEs. The arousal system is the function of the brain which rouses the body out of REM sleep and into waking. As the body goes through that transition, either into REM sleep or out of REM sleep, there is a borderland of consciousness. Similar to the difficulty in determining death, there are difficulties in determining consciousness and conscious states. This borderland can be triggered by normal events such as sleep or crises events such as trauma.

Dr. Kevin Nelson, points out,

Harmless syncope [falling asleep] produces features indistinguishable from near-death, syncope itself commonly triggers near-death, and only half of those experiencing near-death are medically in peril. Linking near-death to clinical death erroneously implies near-death experiences happened when the brain has died and the neurons have lysed, a hallmark of brain death. Near-death is not *a return from death experience* (italics original).³⁶

Leviticus 17:14 points out that the life of a creature is in its blood. Nowhere is this more apparent than in brain functioning. Everything that happens to a person and in a person is filtered and regulated by blood flow. The brain requires a steady source of oxygen and glucose to operate. When the flow of oxygen to the brain is interrupted, consciousness wanes. Scientifically speaking, if blood flow to the brain drops below 23mL/100g of brain/minute, the cerebral cortex fails and loss of consciousness will occur within approximately ten seconds. However, blood pressure can rise and fall above this threshold which means that loss of consciousness is not always clear. If cerebral blood flow drops to 17-18 mL/100g of brain/min the neurons in the brain will begin to die. ³⁷As blood flow to the brain lags and unconsciousness begins to set in, the brain goes into a survival mode which includes a fight or flight response. This process can be

³⁶Nelson, Kevin. "Near-Death Experience: Arising from the Borderlands of Consciousness in Crises." 112.

³⁷Ibid, 112.

triggered by either a crisis event or simply falling asleep, as both events affect blood flow to the brain.

When the body is in a survival mode, it receives epinephrine and norepinephrine from the locus coeruleus (LC) located in the Pons. The Pons is part of the brainstem. Epinephrine and norepinephrine have an excitatory effect on the brain which causes the brain to be active. The LC constantly discharges during wakefulness at varying rates. The LC contributes to the brain's attentiveness to its environment. Nelson writes,

Low discharge rates correspond to low arousal, with the animal [referring to a specific study done on gorillas] inattentive to the world around it. Moderate rates (with synchronized bursts) are seen with focused attention. High LC discharge rate correlate to the animal visually scanning the environment and rapidly shifting its attention. Swiftly directing attention to meet the demands of an often hostile world is an essential role for the LC.³⁸

It is easy to see how this high discharge rate in the LC contributes to the fight mechanism in survival. As the LC discharge rate increases, the body becomes almost hyper-sensitive to its surroundings, enabling the individual to react to their environment and confront danger effectively. Of course, if there were no mechanism to counteract the LC's discharge of epinephrine and norepinephrine, creatures would not be able to sleep. Therefore, the systems promoting rapid eye movement (REM) sleep are the strongest inhibitors of the LC.

During REM, pontogeniculooccipital (PGO) waves travel widely, originating in the pons before propagating to the lateral geniculate nucleus of the thalamus, and then to the visual cortex. Cerebral cortical activation similar to wakefulness and atonia of nonrespiratory muscles also distinguish the REM state. The most frequent and complex dreaming takes place during REM sleep in cortical regions far removed from the pontine brainstem, triggering REM.³⁹

There are a few things which are important to note about REM. Firstly, it is not a state of unconsciousness, but of REM consciousness. The brain isn't totally inactive, but functioning on a totally different level than during wakefulness. Pontogeniculooccipital waves are active during both wake and sleep periods but are most prominent right before REM sleep.⁴⁰ Finally, note that these PGO waves travel to the lateral geniculate nucleus of the thalamus and the visual cortex.

³⁸ Nelson, Kevin. "Near-Death Experience: Arising from the Borderlands of Consciousness in Crises." 113.

³⁹ Ibid, 114-115.

⁴⁰ https://en.wikipedia.org/wiki/PGO_waves

The significance is that REM sleep affects what we see as is known by anyone who has had a vivid visual dream.

As the body comes and goes from consciousness, these features of REM can fragment and blend with wakefulness. Nelson continues,

The blending of REM and waking consciousness takes the form of complex visual and auditory hallucinations, as well as the atonia of sleep paralysis or cataplexy. This borderland is unstable, lasting seconds or minutes before reverting to a more stable conscious state. How can REM and waking consciousness influence each other? The REM consciousness switch located near the LC shifts the brain between REM and wakefulness; the switch has several components. Some elements tilt consciousness to REM and others tilt to wakefulness. Almost, but not always, the switch operates in an all or none, flip-flop fashion, moving the brain completely between REM and waking.⁴¹

It seems counterintuitive that REM consciousness would have any place in the discussion of fight-or-flight. However, fight or flight may be a misnomer. Perhaps a third category needs to be added. That category might well be called "surrender." Part of the REM switch, the ventrolateral portion of the periaqueductal gray (vlPAG), usually tilts consciousness toward waking and away from REM. However, the vlPAG reacts differently in crises. It is stimulated by pain, hypoxia and moderate blood loss and acts to dampen the peripheral adrenergic nervous system which causes a low blood pressure to fall even lower. This serves to take the fight out of an agitated person or animal and causes them to effectively disengage from the fight. The subject becomes quiet and still. This reaction would be perhaps due to a severe injury where more movement would do greater damage.⁴²

These findings are significant with regards to the investigation of NDE. The blending of REM and wakefulness not only happens in crises situations but can happen in the everyday course of waking up and falling asleep. Dr. Nelson conducted a study in which he found that the REM switches in those who had reported a near-death experience were already predisposed to entering the borderland between REM consciousness and waking consciousness. In his investigation, he found that 60% of his subjects who reported REM also had REM intrusion at some point in their life. These manifestations of REM intrusion included sleep-paralysis and

⁴¹Nelson, Kevin. "Near-Death Experience: Arising from the Borderlands of Consciousness in Crises." 2014, 114.

⁴²Ibid 114

narcolepsy. Furthermore, individuals with narcolepsy are prone to an out-of-body experience.⁴³ Nelson sums up the application of his discovery to NDEs:

The REM intrusion hypothesis was first investigated by discovering that those with a near-death experience have a 2.8 times greater incidence of lifetime REM intrusion than age and gender matched controls. Near-death subjects possess a pontine REM switch so astoundingly predisposed to REM intrusion that the incidence of sleep paralysis does not differ between near-death and the sleep disorder of narcolepsy. Furthermore, for those who have been near death, REM intrusion happened with the same frequency before as after their near-death experience, telling us that near-death is but a single episode in a lifetime of REM intrusion.⁴⁴

It is beyond the scope of this paper to fully present all of Dr. Nelson's findings. Below is a bullet-point list of Nelson's findings, titled *summary of Evidence that REM Consciousness Contributes to Near-Death*.⁴⁵

- Those with a near-death experience are strongly predisposed to life-long REM intrusion
- Arousal electroencephalogram recorded after cardiac arrest
- REM switch components linked to survival behavior that includes during systemic hypotension
- Many clinical conditions provoke REM intrusion into waking consciousness
- REM switch is part of the brainstem instrumental to the cardiovascular response to crises (e.g. syncope/cardiac event)
- Vagal nerve electrical stimulation briskly provokes REM intrusion
- REM consciousness in situational context leads to many near-death features (e.g. out-of-body, paralysis, visual hallucinations, narrative, paralysis)

Arguments against arousal system

Although there appears to be a strong connection between REM intrusion into wakefulness, it is by no means the end of the conversation. In a paper written in response to *Does*

⁴³Nelson, Kevin, Michelle Mattingly, Sherman Lee, and Frederick Schmitt. "Does the Arousal System Contribute to Near-Death and Out-of-Body Experiences?" *Nuerology* 66 (2006).

⁴⁴Nelson, Kevin. "Neuroscience Perspectives on Near-Death Experiences." 97.

⁴⁵Ibid, 96.

the Arousal System Contribute to Near-Death and Out-of-Body Experiences, Jeffrey Long and Janice Holden question many of Nelson's findings.

After bringing up many issues which seek to discredit Nelson's test groups and survey questions, the authors cite examples which contradict Nelson's findings. Firstly, there are situations in which the survival system did not have time to activate. If the NDE is triggered by a life-threatening situation or fear which triggers the survival instincts of the brain, then all situations should include that element. However, there are cases where the fight or flight response never executed, such as with sudden and unexpected blows to the head resulting in immediate unconsciousness. This argues against fear as being a necessary preexisting psychological state.⁴⁶

The authors, however, take for granted that the fight or flight response must take place before the event of fear rather than after. Is it possible that the brain can trigger the survival instincts after the trauma has already occurred? Can the brain, even in an unconscious or altered state work to make sense of a traumatic event and thereby initiate fight or flight responses? Such an investigation is beyond the scope of this paper.

Secondly, the authors cite seemingly more convincing evidence in the form of NDEs of people born blind and yet report vision in their NDE. These blind people report that in their waking life they have never seen anything, not even blackness. Furthermore, their dreams contain elements from all other senses except sight.

Corresponding to these people's subjective absence of dream vision, research has shown that they have no actual rapid eye movement while they dream. Nevertheless, when such people have NDEs, their experiences contain the typical NDE elements, often including sight. It is difficult to imagine how, under life-threatening circumstances, even a dysfunctional arousal system could generate a subjective perception that the person had never experienced and that was, in fact, neurologically impossible. Such cases provide further strong evidence that REM intrusion does not "underlie" NDEs.⁴⁷

Lastly, the authors cite situations which are similar to NDEs in blind people; those who are under the effects of medications which suppress REM. There are cases in which people who have

⁴⁶Long, Jeffrey, and Janice Holden. "Does the Arousal System Contribute to Near-Death and Out-of-Body Experiences? A Summary and Response." *Journal of Near-Death Studies* 25, no. 3 (2007), 153.

⁴⁷ Long, Jeffrey, and Janice Holden, 153.

overdosed on barbiturates have reported a NDE. One might categorize those are under general anesthesia in this group of people.

Here, the authors cite the case of Pam Reynolds, who was mentioned earlier in this paper. Pam's arousal system was suppressed by general anesthesia which would prevent REM from intruding into wakefulness. However, Pam still accurately reported the scene in the operating room while she was on the table.⁴⁸

Although REM intrusion into wakefulness does not answer every aspect of the NDE, it does remain a legitimate argument. Dr. Long and Holden seem to only be interested in a scientific approach which can answer all aspects of NDE. Suffice to say, no such approach has been discovered. However, REM intrusion need not be a "baby with the bathwater" situation. Because it answers so many aspects of NDE, REM intrusion should be seriously considered. This approach seems to rule out a large number of NDE cases. Those which it doesn't necessarily rule out have a higher likelihood of being legitimate or, can be described by some other scientific process. Another such plausible explanation is presented by Susan Blackmore.

Dying Brain Theory

In her book *Dying to Live*, Blackmore develops what she calls the "dying brain" theory. At the heart of this theory is the understanding that at some point in a death experience, the brain will grow short on oxygen. No matter the onset of the death event, the brain will always suffer from anoxia, absence of oxygen, or hypoxia, the shortage of oxygen. This shortage of oxygen can have any number of adverse effects on various areas of the brain as the cells slowly suffocate and even die.

Oxygen is pivotal to brain functioning and active cells use more oxygen than inactive cells. As the brain focuses on a task at hand, those cells which are responsible for carrying out that action are the most active; they are excited. In contrast to these excited ones other cells, which are not imperative for the task at hand, are inhibited. The quieting down of other cells is of great importance so that a person can focus at the task at hand. For example, it is very difficult to read and comprehend a book while listening to a favorite song. That is too much action for the brain. The cells required for reading and comprehension need to be excited while other cells,

⁴⁸ Ibid, 153-154.

such as those for hearing, need to be inhibited. When there is a lack of oxygen in the brain, the whole balance is thrown off. But not always in the way we might expect:

One might imagine that anoxic cells would simply stop firing, but it does not work that way. There is now evidence that what actually happens is a shift in the balance between excitation and inhibition. Inhibitory connections between brain cells are very important for normal functioning. Neurons interact with each other by sending chemical signals across the fine gaps, or synapses between them...Studies of rat brain cells have shown that in anoxia inhibitory potentials are abolished before excitatory ones. If this can be generalized to a living brain we would expect to find inhibition becoming less effective. This 'disinhibition' would mean that a lot of cells that should not be firing would start to fire.⁴⁹

As brain cells become deprived of oxygen, they don't immediately die. Rather, it seems that they send signals across the synapses to other brain cells, which cause them to become active. Rather than an immediate cessation of brain activity, it seems that there is an elevation of activity. Cells that normally wouldn't be active suddenly become hyperactive. Multiple areas of the brain become engaged and active, which may give rise to a whole host of hallucinations and other effects that are almost indistinguishable from predominant NDE features. For instance, the light at the end of the tunnel.

Hallucinations have occurred in almost every culture throughout history. Artists of the nineteenth century often used the drug hashish to produce mental hallucinations which seemed to be real, even projecting themselves out into the surrounding environment. The Native Americans often employed peyote to produce visions. In all of these instances there have been reports, in the form of verbal accounts, cave drawings, paintings etc, which include tunnels. One researcher, Heinrich Kulver, of University of Chicago, recorded the effects of mescaline. The drug produced vivid images which repeated themselves through various hallucinations. He called these "form constants".⁵⁰ Various forms of a tunnel are ubiquitous to hallucinations that can be brought on through the use of drugs and even in sensory deprivation. In fact, many people in situations of sensory deprivation have reported many complex hallucinations. One such example is found in the story of three miners who were trapped underground for six days. They reported visions of

⁴⁹ Blackmore, Susan J. *Dying to Live: Near-death Experiences*. Buffalo, N.Y.: Prometheus Books, 1993, 65.

⁵⁰Kulver, H., Mescal Visions and eidetic vision, *American Journal of Psychology*. 37: 502-515. In: Blackmore, 69-70.

gardens, staircases, doors, and women. These are accompanied by a reduction of blood flow in the relevant area.⁵¹ Blackmore relates these tunnel visions to NDE:

If the tunnel is a hallucination caused by the physiological effects of nearly dying we would expect to find that it appears more often in serious conditions. This is exactly what we found. Canadian psychologist Kevin Drab collected well over a thousand accounts of ‘other world’ experiences and seventy-one of them included a tunnel. These occurred in cases of cardiac arrest, severe stress (such as near-drowning, coma, severe blood loss, serious illness or traumatic shock), mild stress (he included here minor injuries and pain, fear, fatigue, mild fever and migraines) and normal conditions (including relaxation, sleep, meditation and hypnosis).⁵²

These tunnel visions are also known to accompany the out-of-body aspect of NDEs. At this point it is interesting to note the overlap with the theory of REM intrusion. Both sleeping and near-death involve aspects of sensory deprivation, which is known to cause hallucinations. Furthermore, Drab’s category of “normal conditions” specifically includes the category of sleep. NDEs do not only occur in cases of near-death or crises. The experience can be triggered by the use of drugs or even simple syncope. It seems that this tunnel experience is produced by disinhibition triggered by anoxia somewhere in the cortex or visual system.

The dying brain theory may also explain feelings of euphoria or peace. If the flight or fight response is triggered, as mentioned by Dr. Nelson, then those cells are the most active in the brain and are using the most oxygen. If anoxia starves those cells of oxygen they are the first to die.⁵³ Therefore, the cells associated with fear, stress, anger, etc. all die first, leaving other cells active and even disinhibited. It is not surprising, therefore, that feelings of peace and euphoria may result. Not to mention that the fight or flight response often produces a flood of endorphins into the brain to block out overwhelming feelings of pain or panic, thereby allowing the body to respond to a threat. The combination of these two theories correlates with the reported strong feelings of euphoria often experienced in NDEs

The fact that these experiences are called near-death experiences may be a misnomer. As Nelson’s and Blackmore’s approaches show, the elements of NDEs can occur in situations other than death or near-death. Though these approaches can answer a majority of the questions which

⁵¹ Blackmore, 70-71.

⁵² Blackmore, 73.

⁵³Ibid, 63.

NDEs raise there are some phenomena, such as those reported in Pam’s case, which remain inexplicable as of yet. That doesn’t mean there isn’t a rational scientific explanation for them, only that such an explanation hasn’t been discovered yet. Indeed, there is much more that is unknown about the human brain than is known. If that is true for a normally functioning brain, it could be doubly true for a dying brain or a brain in crises. When the brain is in crises, medical professionals are usually working to correct the problem rather than standing by and measuring it.

It does no harm to leave those inexplicable phenomena in the realm of the unexplained or even to affirm them. Most who attempt to explain away every detail of dying or near-death experiences typically do so because they do not believe that any part of us survives the death experience. Consider this quote from Susan Blackmore, “We are biological organisms, evolved in fascinating ways for no purpose at all and with no end in any mind. We are simply here and this is how it is. I have no self and ‘I’ own nothing. There is no one to die. There is just this moment, and now this and now this.”⁵⁴

Scripture teaches otherwise. Scripture teaches that man does not merely consist of this worldly, fleshly body, but is a special creation. But what exactly does Scripture say about man’s composition? In some places, man is referred to as body, soul and spirit. In other places man is referred to as body and soul. This has led many to investigate Scriptures to determine if man is composed of two parts or three. The logical place to start is with the Genesis account of man’s creation.

Body and Soul

When God created man, he included a special act. Genesis 2:7 reads, “And the LORD God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being.” All other creatures were spoken into existence by God. With men, however, God took special care to create him out of the dust and to breathe into him the breath of life. With that act, God gave man a dual nature, physical and spiritual natures. On face value, then, man consists of two parts, body and soul.

⁵⁴Blackmore, 263-264.

Difficulties arise, however, later in Scripture. A quick survey of the Bible reveals that man is often referred to as having a body, soul and spirit. It would seem that man actually consists of three parts. It is assumed that there is little debate about the physical aspect of man. The physical nature is that which can be seen, felt, and measured. Attention is therefore turned to the difference or similarity between man's other aspect. Specifically, what are the characteristics of this second half of man? Is the soul itself capable of seeing, hearing and remembering? Or, do those faculties reside in the spirit of man? A survey of Scriptures might reveal the difference between man's soul and spirit.

It would seem sufficient to say that man has a soul and a body. God took special care in distinguishing man from all other creatures when he breathed the breath of life into him. Therefore, one would expect that the rest of living creation (the animal kingdom) would not be spoken of as having a soul. To this point, Shedd, in his *Dogmatic Theology* writes, "Man is composed of a rational soul, an animal soul, and a body. An animal soul has intelligence in its lower forms, but no reason, or the power of intuitive perception in mathematics, morals and religion."⁵⁵ Shedd's conclusion is that man is composed of three parts, body, soul (נַפְשׁ in Hebrew, ψυχή in Greek) and spirit (רוּחַ in Hebrew, πνεύμα in Greek) whereas animals consist of only two, namely, soul (ψυχή) and body.⁵⁶

However, the Bible isn't consistent in using the terms in the way Shedd describes. Pastor Huhnerkoch writes,

Rather animals, too, are spoken of as having bodies, souls, and sometimes as having spirits. Think of the passage from Psalm 104 again, "How many are your works, O Lord! In wisdom you made them all; the earth is full of your creatures...when you take away their breath (spirit – ruach), they die and return to the dust. When you send your Spirit (ruach), they are created." Genesis 6:17 says, "I am going to bring floodwaters on the earth to destroy all life under the heavens, every creature that has the breath (ruach) of life in it." The words are used too many ways to find in them a neat division.

⁵⁵ Shedd, William. *Dogmatic Theology*. Vol. II. Grand Rapids, Michigan: Zondervan Publishing House, 1969, 656.

⁵⁶ Huhnerkoch, Herb, "The Distinction Between Body, Soul and Spirit" (paper presented at the Florida Spring Pastoral Conference, Miami, Florida, April 23, 1979), 5.

If the difference is not to be found in the words themselves (and it is not), then it must be found in their usage and the extent of what they describe in each instance. When soul (nephesh or psyche) or spirit (ruach or pneuma) is used in reference to a human being you just have to know that it is describing much more than when used for an animal.⁵⁷

Pastor Huhnerkoch finds no basis in the New Testament for a distinction between the soul and spirit of man. His conclusion is simply that the context must determine the meaning. No one can deny the difference between man and animal. Therefore, when speaking of the soul or spirit of man we are talking about those characteristics which make him that which he is, i.e., a man and not an animal. We cannot speak of man's soul as being a lower "animal-like" aspect which drives him to hunt, reproduce, etc. Likewise, we cannot definitively say that man's spirit is that which considers higher elements, nurturing relationships, seeking God, etc. The Bible is not clear or consistent in drawing the lines in such a way.

Perhaps the division between soul and spirit can be found in the characteristics or functions ascribed to each. After a long list of biblical references that show various functions of man assigned to both soul and spirit, Professor Vogel concludes,

In our word study, we have seen abundant evidence of this [bringing out two features of the same concept]. You will recall that intelligence, emotions, affections etc., were ascribed in some passages to the spirit, in other to the soul. We find identical expressions, some of which use nephesh, others ruach...this interchangeability of terms is not particular to OT usage, but is paralleled in the NT as well, where many more similar pairs of passages could be found, some using ψυχή where others use πνεύμα. From these terms it must be concluded that the two terms are essentially the same, since either one can be used in any of these ways.⁵⁸

Professor Vogel and Pastor Huhnerkoch find themselves in solid company on their conclusions. Martin Luther saw man as dualist in nature, as opposed to a tripartite division:

There is yet another division of these three [body, soul and spirit], and the whole of man, into two parts, which are called "spirit" and "flesh." This is a division, not of the nature of man but of his qualities. The nature of man consists of the three parts – spirit, soul and body; and all of these may be good or evil, that is, they may be spirit or flesh. But we are not now dealing with this division. The first part, the spirit, is the highest, deepest and noblest part of man. By it he is enabled to lay hold on things incomprehensible, invisible, and eternal. It is, in brief, the dwelling place of faith and the word of God...The second part, the soul, is this same spirit, so far as its nature is concerned, but viewed as

⁵⁷Huhnerkoch, 6.

⁵⁸Heinrich, Vogel. "The Old Testament Concept of the Soul." *Wisconsin Lutheran Quarterly* 61 (1964), 54.

performing a different function, namely, giving life to the body and working through the body. In the Scriptures, it is frequently put for the life; for the spirit may live without the body, but the body has no life apart from the spirit... To these two parts of man the Scriptures ascribe many things, such as wisdom and knowledge – wisdom to the spirit, knowledge to the soul; likewise hatred, love, delight, horror, and the like.”⁵⁹

Though Scripture does, at times, speak of a threefold division of man, it does not do so consistently. Furthermore, in almost every situation where it does speak of such a division there is a good case that features such as synonymous parallelism or repeating for emphasis is being employed. Therefore, we speak of man not as having three aspects, but only two, namely, body and soul or body and spirit. Scripture also has much to say about the heart of man. But, here again, Scripture is not teaching a threefold division. The “heart” really belongs to that second category of man’s composition (henceforth referred to as the “spiritual nature”). Each time soul, spirit and heart are spoken of, it refers to the total person; it is what makes a person himself. But what characteristics can be attributed to that second part of man, the soul or spirit? The WLS Dogmatics note offer a comprehensive list of characteristics.

To the soul (*nephesh* or *psyche*): Emotions, affections, inner feelings; All functions which give and sustain life, namely, gets thirsty and hungry, fasts, gets full, gets refreshed, delights in the richest of fare, can pollute itself with defiled food, can be killed, devoured, demanded or asked for, risked or forfeited, redeemed, renewed, relieved and feared for. To the spirit (*ruach* or *pneuma*): unrest, sorrow and vexation, patience and pride, despair and inner thoughts. The spirit may be an emotion or attitude that governs the actions such as a spirit of jealousy, a spirit of prostitution, spirit of dizziness, spirit of timidity, power, love and self-discipline. To the heart: Love, joy, heaviness, sorrow, despair and fear. The heart is also spoken of as the seat of thoughts, concepts, motivation, inclination, determination, planning, understanding and wisdom. The word “heart” is also used to describe the moral life of a person.⁶⁰⁶¹

Scripture teaches that the spiritual aspect of man is immortal. That thought is central to understanding Paul’s words in 2 Corinthians 5:1-8. Without that understanding of the soul, Paul’s words do not make sense. Matthew 10:28 says, “Do not be afraid of those who kill the body but cannot kill the soul...” Those who hold to a high view of Scripture and believe it to be

⁵⁹Luther, Martin. *Luther's Works*. Edited by Jaroslav Pelikan. [American ed. St. Louis, Missouri: Concordia Publishing House, 1956, 303.

⁶⁰WLS dogmatic notes. Anthropology, 369-380.

⁶¹ WLS dogmatics notes quote Scripture passages in support of every characteristic offered of the soul, spirit and body.

the infallible word of God know the soul is immortal. The Scriptures speak in many places about the resurrection of the dead and life everlasting, which is granted to all believers in Christ.

Scripture also speaks of all aspects of the spiritual nature as surviving the physical death experience. In fact, mankind was never created to die. Rather, mankind was created in perfection and intended to live for eternity. As recorded in Genesis, the fall into sin introduced death into the world. Death is unnatural; the body and soul were never supposed to separate.

Furthermore, Scripture attributes all the characteristics of the ego, the self-aware “I,” to the spiritual nature of man. To the thief on the cross, Jesus said “Today you will be with me in paradise.” Jesus does not speak of only the thief’s soul being in paradise, but the whole man. Pastor Huhnerkoch simply says, “In eternity, the soul is a whole person, only without flesh for a time.”⁶² Everything that constitutes the self-awareness of a human resides in his spiritual nature and this spiritual nature is immortal.

If, therefore, the aspects of human intellect, will, and emotion are predicated to the part of man which survives the death experience, it seems logical that individuals might be aware during and after the death event. Since such a monumental separation is occurring between body and soul, it seems logical that one would be aware that the separation is taking place. It also seems logical that the spiritual aspect of man is aware of its immediate surroundings, if only for a time.

It is at this point that the investigation is safest to end. Territory further down the line really gets into speculation. The Bible doesn’t offer deep insight into what occurs at the moment of death. The exact time that a soul departs from the body is still unknown. What each person may or may not be aware of during the death experience is unknown. What is known is only that which the Bible reveals, and it is more than enough. Through his redemptive work, Christ has earned an eternal life for every believer. That redemption is not just for a part of the believer, but for his whole essence. Indeed, even the body will be raised from the dead and be reunited with the soul to enjoy eternity forever in the presence of the Father.

Conclusions

⁶²Huhnerkoch, 8.

It has been said that the study of death and near-death raises more questions than answers. This paper proves as much. There are really no definitive conclusions to be drawn. However, there are some good takeaways from this investigation. First and foremost is this: both science and Scripture allow for the possibility of near-death experiences with visions of the afterlife. Though that is the case, we should be very slow in attributing legitimacy to any claims. It appears as though science and medicine can explain a majority of the cases in terms of visions or hallucinations produced by a brain in crises. As has been noted, there are some phenomena which cannot be explained. Such anomalies need not be alarming because we know the self-conscious aspect of human beings does not perish along with the body.

Secondly, near-death experiences in and of themselves offer no threat to either doctrine or a person's soul. Rather, the threat is recognized in the interpretation of the event. Though the event may impact someone profoundly, it need not negate all that the Scriptures reveal to be true.

Lastly, there is no need in determining the source of any visions or experiences. The question of whether an experience was brought by the devil or God is a moot point. Positive experiences can serve to comfort the believer on his death bed. There are many stories of believers seeing heaven or angels before they leave their body. Positive experiences have also caused many to wander off the path to heaven in pursuit of religions which are akin to pantheism. Likewise, negative experiences can serve as a wake-up call to drive individuals to the Bible for answers. Negative experiences can also confirm people in their atheism and belief in total annihilation or nothingness after death. Some have stated simply that positive experiences must be from God while negative experiences come from Satan.

One aspect of NDE deserves special mention here. It is arguably the most overlooked aspect, secularly speaking. It is the only aspect of the near-death experience that is forbidden in Scripture. The concept of speaking with or consulting the dead is an act forbidden early in the pages of Scripture and is repeated throughout. The only instance of someone speaking with the dead in a positive way was when Jesus spoke with Moses and Elijah on the Mount of Transfiguration. In the Old Testament, Saul also consults the spirit of Samuel. He did this clandestinely and against God's command.

There are many NDE accounts of individuals seeing and speaking with family members who have passed away. Even though these experiencers didn't intentionally seek out counsel

with the dead, they should be very suspicious of any encounter, no matter the situation. That is doubly true in cases where the supposed dead have reported unscriptural claims to experiencers in their visions. Indeed, if one has interaction with the dead, everything should agree with what is written in Scripture. Because Scripture is sufficient, however, no new revelations from the dead are needed. Jesus himself said as much in Luke 16:29-31, “Abraham replied, ‘They have Moses and the Prophets; let them listen to them.’ ‘No, father Abraham,’ he said, ‘but if someone from the dead goes to them, they will repent.’ He said to him, ‘If they do not listen to Moses and the Prophets, they will not be convinced even if someone rises from the dead.’”

Research shows that overall there is room for such experiences to occur. Medically and scientifically speaking, these experiences can’t be ruled out as impossibilities. Furthermore, they cannot be ruled out biblically. However, inexplicable phenomena are exceedingly rare, as most aspects have a rational explanation. For the features of NDE which are not explicable medically, there are two conclusions at which to arrive. Firstly, they may still be explicable but not with current knowledge. There may be still some as-yet-undiscovered medical explanation. Indeed, we may never be able to fully explain visions at near-death. Secondly, they may be legitimate experiences. If that is the case, there should be no new revelations that disagree with what is already presented in Scripture. Any visions at near-death that disagree with what Scripture says could still be supernatural in their cause, but from a sinister source.

Application

The way in which clergy and counselors respond to those with a near-death experience will account for how they react. Whether an experience was positive or negative, the experiencer’s opinion will largely be shaped by the analysis of the experience, not by the experience itself. In this vane, a few words of counseling application seem appropriate. Consider, for example, Raymond Moody’s conclusion,

I can only say this. It seems to me that the best way of distinguishing between God-directed and Satan-directed experiences would be to see what the person involved does and says after his experience. God, I suppose, would try to get those to whom he appears

to be loving and forgiving. Satan would presumably tell his servants to follow a course of hate and destruction.⁶³

Moody's conclusion is sound, though it seems his premise is a bit faulty. He equates a near-death experiences with the way God reveals himself. Though that is possible, God has chosen to reveal himself through his Word, not through near-death experiences. The real benefit in Moody's quote is that he identifies significance not in the event itself but in the interpretation of the event.

In a counseling session with a person who has had a near-death experience the counselor is likely going to encounter high emotions in the experiencer. Many experiencers report that the event seemed so real. Such a realistic and, at the time, traumatic event is likely to make an impact on a person's emotions. One of the best approaches in such a situation is simply to listen, not to correct.

Experiencers may also be struggling to find meaning behind the experience. Here the Christian counselor is in a unique position to assist in guiding the experiencer toward a meaning centered on the Bible. Those who have had a positive experience usually lose their fear of death and become more spiritual, good-natured people. These are definitely positive outcomes if applied correctly. In such an instance the counselor will allow the facts of the experience to stand but point to the real reason there is no need to fear death. Fear of death is not ultimately conquered in a positive near-death experience but in the news that Christ has promised that all believers go to heaven. Likewise, becoming more "spiritual" need not be simply a greater awareness that a spiritual realm exists with which we interact. Becoming more spiritual should take the form of greater involvement in the Church's mission in spreading the good news and a deeper, richer devotional life.

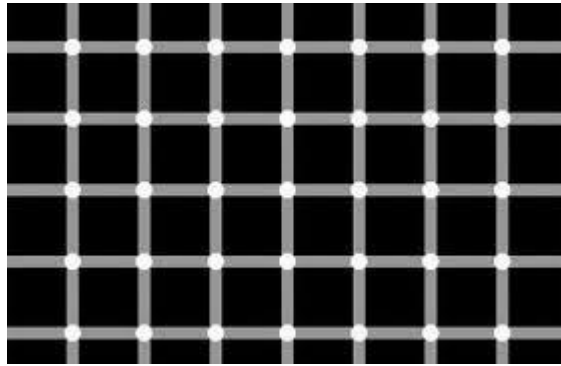
Those who have had a negative experience may require more counseling. If the experiencer is terrified that his experience is evidence he is heading to hell, it may help to point to some of the medical facts presented in this paper. The conscience can be quieted when one realizes that their visions may have simply been hallucinations of a brain in crises. The conscience is ultimately quieted, though, through the promises offered to the believer in

⁶³Moody, Raymond A. *Life after Life: The Investigation of a Phenomenon -- Survival of Bodily Death*. Toronto: Bantam Books, 1981, 156.

Scripture. No matter what the content of the experience was, it does not overthrow the truth that Christ has died and earned eternal life in heaven for all people; believers benefit from this through faith.

*I know that my redeemer lives,
and that in the end he will stand on the earth.
And after my skin has been destroyed,
yet in my flesh I will see God;
I myself will see him
with my own eyes—I, and not another.
How my heart yearns within me!
Job 19:25-26*

Appendix A⁶⁴



Appendix B⁶⁵



⁶⁴ Schrauf, M., Lingelbach, B., Lingelbach, E., and Wist, E.R. "The Hermann Grid and the Scintillation Effect." *Perception*, 24, suppl. A: 88-89, 1995

⁶⁵ Taub, Morris. *Abstract Window*. May 25th, 2013. Accessed November 8th 2015.
<http://www.morrystaubphotography.com/p1054543395/h678ad7e2#h678ad7e2>

Appendix C⁶⁶

Cognitive	
Did time seem to speed up?	2=Everything happened all at once 1=Time seemed to go faster than usual 0=Neither
Were your thoughts speeded up?	2=Incredibly fast 1=Faster than usual 0=Neither
Did scenes from your past come back to you?	2=Past flashed before me, out of my control 1=Remembered many past events 0=Neither
Did you suddenly seem to understand everything?	2=About the universe 1=About myself and others 0=Neither
Affective	
Did you have a feeling of peace or pleasantness?	2=Incredible peace or pleasantness 1=Relief or calmness 0=Neither
Did you have a feeling of joy	2=Incredible joy 1=Happiness 0=Neither
Did you feel a sense of harmony or unity with the universe?	2=United, one with the world 1=No longer in conflict with nature 0=Neither
Did you see or feel surrounded by a brilliant light?	2=Light clearly of mystical or other-worldly origin 1=Unusually bright light 0=Neither
Paranormal	
Were your senses more vivid than usual?	2=Incredibly more so 1=More than usual 0=Neither
Did you seem to be aware of things going on elsewhere, as if by ESP?	2=Yes, and facts later corroborated 1=Yes, but facts not yet corroborated 0=Neither
Did scenes from the future come to you?	2=From the world's future 1=From personal future 0=Neither
Did you feel separated from your physical body?	2=Clearly left the body and existed outside it

⁶⁶ Greyson, Bruce 372

	1=Lost awareness of the body 0=Neither
Transcendental	
Did you seem to enter some other, unearthly world?	2=Clearly mystical or unearthly realm 1=unfamiliar, strange place 0=Neither
Did you seem to encounter a mystical being or presence?	2=Definite being, or voice clearly of mystical or other-worldly origin 1=Unidentifiable voice 0=Neither
Did you see deceased spirit or religious figures?	2=Saw them 1=Sensed their presence 0=Neither
Did you come to a border or point of no return?	2=A barrier I was not permitted to cross; or “sent back” to life involuntarily 1=A conscious decision to “return” to life 0=Neither.

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