

# **Mind and consciousness - is materialism true?**

Exploring theories about the mind-body problem and evidence for the non-physical  
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## Introduction/synopsis

This paper investigates the various theories that try to explain consciousness using empirical evidence. Every theory mentioned in this research paper is provided with criticism and proof. The aim is not to select the most probable theory that fits our empirical view of the universe but to prove the existence of the non-physical. The predominant view regarding consciousness is that it originates wholly through natural means. I aim to take the other under-represented perspective in this paper and view it through the lens of the scientific method. It goes without saying that if the aim is to discuss consciousness through the other perspective, we must first talk about the perspective we're countering. Hence, this paper's first part, Part I, discusses materialism. Having said that, I aim to write a paper that is as unbiased as possible. If there is truly no evidence to support the other side of the spectrum, I would not be writing this paper. Part II proposes solutions to the mind-body problem that are not materialism. Part III of this paper goes into evidence for a non-physical reality. This evidence talks about NDEs, their proposed materialistic explanations and the criticisms of these explanations. Then, I handpicked three strong NDE cases that I believe show empirical evidence for the persistence of consciousness beyond death (At least for a short period). I have also added less medically verifiable anecdotal NDEs in this paper to support the major 3. I have also commented on the lack of clarity about what precisely this persistence is or for how long it exists. Then, I talk about paradoxical lucidity with a focus on terminal lucidity. To me, paradoxical lucidity is just supplementary proof to

NDEs and is not a strong argument for the non-physical alone. This is not to discredit paradoxical lucidity, as the experience itself is more straightforward to explain and suggests the non-physical as soon as one hears of this experience and that it is a scientifically accepted experience. However, as of 2024, terminal lucidity is not considered a medical term, and there is no official consensus on the identifying characteristics. There is no doubt, however, that this phenomenon does exist, as there are well-documented cases of it occurring. The paper then finally concludes with a beautiful quote that Dr Bruce Greyson said was said by one of the people who had an NDE and tried to explain it, and my final thoughts on NDEs and terminal lucidity.

## **Materialism**

Materialism falls into a school of thought called “substance monism.” Substance monism is the belief that all existing things can be reduced to changes in one singular substance and that the “one singular substance” is the only fundamental thing. Thales of Miletus (sometimes called the first philosopher) believed in substance monism. He believed that “water” is the only ingredient for all that exists. When we talk about materialism, the fundamental substance that we talk about is “matter.”

Materialism asserts that all things, mind, consciousness, space, and sometimes even time, can all be reduced to the fundamental substance called “matter”. There are many types of materialism, and many schools of thought related to materialism—eliminativism, non-reductionism, etc. For this paper, and in reality, the one thing that these schools of thought mostly always agree on is that the physical is all that exists and that the supernatural need not be invoked.

Thankfully, attacking this one core belief is all that matters for this

paper. The purpose is to show that matter may not be the only core substance, mind may not “emerge” completely from matter, and that there may exist the supernatural. In essence, if we can show that there needs to be an explanation greater than matter for consciousness, we’ve established our purpose.

### **Criticisms and Support for Materialism**

The most common support for materialism is that when the brain is under anaesthesia or when certain parts of the brain are damaged, consciousness doesn’t precisely “function” like it usually does, making the argument that consciousness is, thus, dependent upon the brain. The criticisms against this argument are many. The one that is usually cited is that - “just because consciousness is dependent upon the brain, does not mean that it is generated by it.”

“Emergence” is sometimes given as an answer to how consciousness emerges. In essence, neurons firing in the brain form a complicated system that integrates into consciousness. In other words, smaller, less complex entities (neurons) combine to create a more difficult process (consciousness), and the more complicated process is much unlike its smaller processes. It is also noted that consciousness is referred to as an “emergent” and not a “Resultant” because consciousness is not the sum of neurons. It is a much more complicated process emerging from it. The argument against emergence and emergentism in the case of explaining how the mind works is that, so far, there has been no straightforward way of explaining how exactly these bunches of neurons generate consciousness. Another argument against emergence is that we have evidence that complexity doesn’t generate consciousness. The evidence is artificial intelligence.

Another “proof” of materialism is Occam’s Razor. One must ask oneself, “What is the simplest explanation?” What is the need for invoking the supernatural? That just creates more problems for us. Materialists often cite the argument of “God of the gaps”, which means that humans have tended to explain things that we don’t understand by saying that “God did it”. Examples of this are lightning, earthquakes, etc. We used to say that God’s anger caused earthquakes and lightning. The main principle of Occam’s razor is that the theory that assumes the least is probably correct. Intuitively, this seems to be materialism. This is because materialism fits in like one of the final puzzle pieces to the puzzle we call science. This argument is criticised for being more about why materialism should be true than about why it is true.

Another question that we must ask is, “Can materialism prove consciousness is generated in the brain, then?”

The first thought that comes to mind is that if we can prove the perspective of emergence in the theory of mind, as in establishing precisely how the neurons integrate to form the complex process of consciousness, then materialism can prove consciousness. Some may call this wishful thinking. Instead, if we can replicate consciousness on a computer or artificial intelligence, materialism can be proved. This is because if consciousness is simple enough that humans can create it artificially, there is no need to invoke the supernatural to explain how it is made.

## **Conclusion**

The proofs and intuitions for consciousness are satisfactory. Having said that, the criticisms against materialism also cannot be ignored. It is safe to say right now that materialism isn’t scientifically verified. There are, however, a couple of ways by which it could be verified. For

example, if we can make artificial intelligence conscious, it proves that there's nothing "non-physical" about consciousness. The argument that there's no need to believe in something other than the physical has intuitive appeal. Part II of this paper will try to disregard this and prove there is reason to believe in things other than the singular fundamental substance, matter.

### **What, then, is the correct solution to the mind-body problem?**

Discussing the problems with materialism is easy. The problem comes when we try to discuss what the solution to consciousness should be if we reject materialism. I will discuss some of the proposed solutions, but this paper will focus on proving that there is reason to believe, in general, that there exists other than the physical; I will not single out precisely what.

### **Dualism**

Dualism, technically speaking, refers to the belief that philosophical monism is not true and that there are two fundamental substances—mind and matter. Sometimes, however, it just means that mental phenomena are non-physical.

When discussing arguments for dualism, most people think of the "zombie argument" by David Chalmers. The zombie argument asks us to imagine p-zombies (philosophical zombies), molecule-to-molecule copies of a human being but do not have consciousness. These p-zombies are conceivable and, thus, are metaphysically possible. In other words, we can imagine a world where these p-zombies are the ones existing and not conscious human beings. Chalmers suggests

that the simple fact that these creatures are metaphysically possible points to the fact that consciousness is non-physical. He means that if molecule-to-molecule copies of human beings that don't have consciousness can be made, then consciousness is added to these p-zombies after the construction of the zombies has been done to turn them into humans.

A common refutation of the zombie argument is that p-zombies are logically incoherent. What this means is that if a molecule-to-molecule copy of humans was made, it would have consciousness. Hence, p-zombies are not metaphysically possible.

## **Idealism**

Idealism is the belief that reality is constructed from a single substance called the "mind." It preaches that reality is a mental construct and that matter does not exist. This idea is preached throughout many religions. Divine idealism is an example of Idealism, which holds that everything exists inside God's mind and that there is no such thing as a mind-body problem. Three types of idealism are usually mentioned: ontological, epistemological, and absolute idealism. There are few supports and many criticisms for all three of these beliefs. For this paper, I will provide an intuitive appeal for idealism as a solution if materialism isn't true. No evidence for idealism can be counted as "scientific".

The intuitive appeal comes from the fact that idealism is, in essence, the hard opposite of materialism while still sticking to monism. If all that exists comes from a fundamental substance called matter, if this theory is not valid, why not say, "All that comes is from a fundamental substance called mind?"

This argument is criticised for not being proof at all. There are multiple

logical thought experiments for idealism, but this paper is focused on trying to prove that something other than materialism is true. That is why going into these thought experiments would be a waste of time. This section of the paper presents some ideas proposed to solve the mind-body problem, some ideas that are not materialism. The next part of the paper is solely focused on the main objective of this paper.

## **Evidence for the non-physical?**

This section of the paper will focus on two key aspects: NDEs (Near-Death Experiences), usually referred to as REDs (Recalled Death Experiences) in the NDE scientific field, and the phenomenon known as terminal lucidity.

### **NDEs (REDs)**

#### **Introduction**

REDS are (allegedly) spiritual and profound experiences that have been reported by people often after being resuscitated after (but not limited to) cardiac arrest. In these experiences, people report seeing a tunnel of light, warmth, the feeling of being “home”, euphoria, and other positive experiences. NDEs are not always positive, though. There are NDEs where people have reported seeing hell, car crashes, etc. NDEs are medically and scientifically verified to exist. The debate is on the explanation of how NDEs happen.

The reason why NDEs are so believable is that these can occur when people are clinically dead. This means no electrical activity is going through the person's brain, and the brain is not receiving nutrients or oxygen. Dr Sam Parnia, on multiple occasions, has referred to this as not a play of words, but literally, in the true meaning of “literally” they



are dead. Yet, they still produce lucid, “even more real than real” experiences. During recovery after cardiac arrests, there is a period of amnesia. NDErs still recount clear, vivid experiences of their NDEs even after this period of amnesia. There are cases of NDEs where people have, from a location apart from their physical bodies, accurately described their resuscitation. I have mentioned some of these cases in this paper. Then, there are NDEs where people who were born blind described seeing consistent with typical NDEs. There are NDEs where the NDErs have spoken information they possibly couldn’t have known while in the NDE. For example, encountering people who were dead while the NDEr was having an NDE but could not have gotten the information that they were dead before the NDE. Then, there’s also the fact that NDEs are cross-cultural. Multiple studies concluded that non-western NDEs are more similar to Western NDEs than dissimilar. I feel that the best way to prove the existence of the non-physical through NDEs is to target a specific type of NDE and write about the well-documented NDEs of that type. In my paper, I am targeting specifically OBE-type NDEs, where people leave their bodies and talk about information upon coming back that happened during the time of the NDEs that they couldn’t have known (Veridical NDEs). Ps- “NDEr” in this passage simply means someone who has had/is having an NDE.

### **Explanations and criticisms**

There have been many explanations for NDEs that have been debunked.

This includes anoxia, a condition where the brain has little oxygen to no oxygen. It was proposed as an explanation for why NDEs occur. The thought process was that NDEs were a hallucination caused by anoxia. It was later debunked because it was proved that NDEs can occur even when there is a proper level of oxygen going to the brain.

Another explanation was Biochemicals like DMT are released in the brain and cause their hallucinative trippy effects, which have been reported to be similar to some NDEs. It was then proved that NDEs sometimes occur during clinical death. Clinical death is when neurons stop firing in the brain, the brain is not receiving oxygen or nutrients, and the cells begin to die. DMT, and even specific serotonin receptors that are responsible for hallucinogenic experiences, can not function without oxygen, nutrients and rapid cell depletion.

There are also explanations like “a burst of electrical activity in the first 30 seconds after cardiac arrest/death by cardiopulmonary criteria may cause NDEs.” and “the so-called OBE sensation may be an illusion caused by a dysfunction at the temporoparietal junction.” (Quotes from a website mentioned in the bibliography)

Sam Parnia's peer-reviewed article in the QJM (Marked as \*\*\* in the bibliography) criticised this.

The first criticism stated that a rigorous study has yet to prove a causal relationship (or even a relationship to begin with) between NDEs and the “proposed physiological intermediaries.”

Parnia also points out a bias. It is humans' inherent bias to associate experiences with ones that we have had before. Here, he pointed out that our bias to assume that any experience that even mildly is analogous to a hallucination is subconsciously deemed to be one before discussion of the experience even starts. We should keep this bias in mind when discussing NDEs.

The third criticism is that a study was conducted that showed that the brain waves in NDEs were processed similarly to memories of real-life

events, unlike brain waves during hallucinations.

## **The problems**

At least a hundred reasonable and rational models explain NDEs that aren't entirely debunked. These include but are not limited to the birth model, false memories, neuroanatomic models, etc. I cannot review all of them and their criticisms in this paper. However, I believe that some NDEs may defy explanation completely. I will mention some of them in this paper.

Another problem with NDEs is that the general masses listening to this story are usually either hardcore skeptic-scientists rejecting the experience due to previous experiences with illogical material or those who do not take research and evidence that seriously and are completely fine with accepting anecdotes like "the experiences in NDEs feel much more "real" than experiences during DMT." By saying this, I am not denying that they might feel more "real" than a DMT experience. I am not denying that NDEs may feel like they are there experiencing the NDE and controlling themselves in it. My point is that this is an anecdote and not "evidence" for or against an NDE.

Hence, we have to remember that we must consciously realise our biases. Hard skeptics must acknowledge NDEs and view them without a dismissive attitude. We must also be careful not to engage in wishful thinking because NDEs may provide proof for the non-physical and an afterlife. We must carefully note our biases and be as unbiased as possible when discussing this profound and awe-inspiring experience.

## **The NDEs that "defy explanation"**

**NDE of a retired Air Force pilot (marked as \* in the glossary) By Dr. Michael Sabom Et al.**

Notes for this NDE -

- i) Clinically dead- this implies that the unconscious person cannot hear, see, or even process anything.
- ii) The patient only knew that the researchers were interested in the NDE *after* he gave his account.
- iii) This case is selected from Dr. Sabom's study and falls under the label of "unconscious before being brought into the OR and typically is unfamiliar with the personnel, equipment, or specific procedures used during surgery" (Quote from the article)

Summary - The patient is a retired Air Force pilot who is giving the recount of his NDE five years after it happened to Sabom

Evidences for the non-physical in this NDE -

- a) correctly pointed out the defibrillator and its features and functions
- b) Correctly described that the meter had two needles, one fixed and one which moved, and accurately described how it moved down to minute details

Notes - He could not have described the movements of the two needles down to the details like-

"The first time it went between one-third and one-half scale. And then they did it again, and this time it went up over one-half scale, and the third time it was about three-quarters. I think the fixed needle moved each time they punched the thing, and somebody was messing with it. And I think they moved the fixed needle and it stayed still while the other one moved up."

-Until and unless he had actually seen the two needles in movement. Also, in the words of Dr Sabom, “This charging procedure is only performed immediately prior to defibrillation, since once charged, this machine poses a serious electrical hazard unless it is correctly discharged in a very special manner.”

Also, Dr Sabom stated that the meters described were not found in the newer Defibrillator models when the pilot was interviewed.

With all this evidence, we can safely rule out the possibility that the pilot faked his story or made it up on the spot. One thing that we must note is that the pilot told this story five years after the event. This is both positive and negative proof. One way to interpret it is that the effect of the NDE on the brain is clearly powerful, just like every other NDEr’s brain. The other way is to say there was more time to fake his story; the latter is an improbable outcome, looking at the evidence.

The only possible materialistic explanation for this **ONE** NDE is that the doctors at the surgery somehow contacted him and told him to say all of this. The doctors and surgeons were probably unaware of the phenomena of NDEs and were definitely unaware of Dr Sabom’s study until it was completed.

### **Pam Reynold’s case**

Notes -

- 1) She was clinically declared dead
- 2) Claimed to have an OBE

Summary - Pam’s **eyes were taped shut**, and she had a **very loud sound (100-decibel clicks and white noise masking in her ears and being under heavy anaesthetic) ticking in her ear throughout**

**the entire surgery** through the use of earphones. She was also under deep anaesthesia.

Despite this, Reynolds was able to recount the medical team's conversation accurately. She heard a female voice saying that the size of her veins was “too small” and that they needed to use other veins. She also heard the conversation about finding an appropriate artery to place an arterial line.

She was also able to accurately describe the Midas Rex bone saw, which she said looked like an “electric toothbrush.” She could also describe a distinct “Natural D” note despite a very loud sound ticking in her ear.

Her medical team verified all these details. This means that all the conversations she recounted, the voices she heard of the medical team, and the descriptions of the Midas Rex bone saw descriptions were declared to be as accurate as what had actually occurred.

It should also be mentioned that Pam Reynolds was a singer and songwriter. Her profession as a musician is well-documented and widely acknowledged in discussions of her case.

One of the common materialist explanations for Pam’s case is Anaesthesia awareness and the claim that she somehow had medical knowledge. Not only is there proof against anaesthesia awareness in this case (“She was under deep anaesthesia, which included a combination of barbiturates, hypothermia, and cardiopulmonary bypass. This level of anaesthesia is far deeper than typically associated with anaesthesia awareness.” This quote is from Dr. Sabom’s book “Light and Death: One Doctor's Fascinating Account of Near-Death Experiences,” and at one point, Pam Reynold's Body

temperature was reduced to 50 degrees Fahrenheit to put her in a state of deep hypothermia during the surgical process. Research suggests that even if Patients are not as deeply cooled as Reynolds was, they do not exhibit signs of conscious awareness.), anaesthesia awareness doesn't even begin to explain the details that Reynolds was able to accurately describe because it is undebatable that she could not see and could not hear (refer \*.\* in bibliography or bold letters in the Pam Reynold's case)

### **The case of Al Sullivan**

Notes - Not clinically dead; however, He was given a local anaesthetic for the insertion of an intra-aortic balloon (used to help the heart pump sufficient blood) and then a general anaesthetic for the surgery itself. This means he was fully unconscious during the critical parts of the operation. Thankfully, the main feature of this NDE occurs under general anaesthesia.

- addressing the claim of anaesthesia awareness under the general anaesthesia period, The depth of anaesthesia required for major heart surgery like a quadruple bypass is significant, making typical anaesthesia awareness (where a patient can hear and see specific details) highly unlikely.

- claimed veridical OBE NDE

Even if we account for the case where there is anaesthesia awareness (which there is no need to do here), in rare cases of anaesthesia awareness, patients might recall vague sounds or sensations but detailed visual or auditory perceptions like those described by Al Sullivan (mentioned below) are exceedingly rare and typically not

observed under deep general anaesthesia like in this case and Pam's case.

#### Summary -

Mr Sullivan (a 56-year-old Van driver at the time of his NDE) had told his Cardiologist, Dr Anthony LaSala, about the experience shortly after he regained consciousness following the surgery. Apart from this, one of UVA's research papers (\*\*^ in the bibliography) also stated that two important witnesses corroborated to them an unusual event seen by Mr. Sullivan during his NDE, and one of them also corroborated to them that Mr. Sullivan told him about the event shortly after it occurred.

Al is also behind a drape that blocks vision, and his eyes are taped shut.

#### The features -

Mr Takata (the cardiovascular surgeon) admitted to flapping his hands during surgeries (a unique thing that he only does). Dr Takata could not confirm that he had flapped his elbows during Mr Sullivan's surgery in particular, but he did confirm that this is a regular habit. This is not so much a detriment to our case because the question of how he could know such a specific thing is essential to answer.

The next concern is that this flapping may have occurred when Mr Sullivan was under local anaesthesia. When Mr Sullivan was asked to expand on when he saw his arms flapping, he said that "he saw Dr Takata standing alone over his opened chest, which was being held open by metal clamps, and he also saw two other surgeons working



over his leg. He recalls being puzzled at the time about why they were working on his leg when the problem was with his heart, but he now knows that at this point in the surgery, the surgeons were stripping the vein out of his leg to create the bypass graft for his heart.” (A quote from the UVA paper)

A materialistic explanation for this NDE would require one to presume that Mr Sullivan (a 56-year-old Van driver) somehow had a premed level of knowledge (if we logically include the specific details of CABG knowledge), lied about being puzzled about "why they were working on his leg when the problem was with his heart", and lied about when the flapping had occurred and saw it during the local anaesthesia state. All these assumptions do not make sense, and I do not see the possible motivations.

However, the fact that a materialistic explanation is possible that says more than "everybody just lied", "Coincidences", or "Could hear when 100-decibel clicks and white noise are masking in her ears and being under heavy anaesthetic" for a veridical NDE, makes it weaker than the other two I mentioned above. That being said, the assumptions that must be made for the materialistic explanation are still too much and unverifiable, making this NDE a solid addition to our list.

### **Some other lesser verifiable cases**

These cases are a bit weaker than the three mentioned above. There are multiple reasons why I say so, but some of the reasons are as follows -

1) These are anecdotes from one person; sometimes, others also vouch for this anecdote. However, this is weaker than an entire medical team verifying the "anecdote."

2) Time gap - Unlike the cases mentioned above, some cases I mention below will have a significant time gap (multiple decades) between the NDE occurring and the interviewer receiving the NDE.

3) Lack of proper review of medical documentation - Unlike the ones above, these cases don't have medical documentation proving the medical procedures that occurred during the NDEs.

4) Lack of skepticism due to being relatively unpopular and anecdotal - These cases don't get much attention from popular skeptic websites due to their anecdotal, unverifiable, and less evidence-based rigorous approach.

### **The Case of the Rev. L. J. Bertrand**

Mr Bertrand was an experienced mountain climber. He was climbing the Titlis in the Alps when he had this veridical NDE. He reported it 30 years after it occurred when he sent a letter to William James on October 10, 1891. He was the group leader, but at one point, he was exhausted. Hence, he instructed his peers on how to reach the summit alone. These instructions were -

i) climb the peak on its left side and come down on its right side (there was a dangerous cut on the left)

ii) his strongest student was to take the position at the rope's end.

However, Mr. Bertrand started freezing to death and became drowsy.

This is when he had this OBE. He noted -

i) the climbing party going up by the right side of the mountain

ii) the strong pupil who should've been at the end of the rope was neither at the beginning nor the end but away from it altogether.

Apart from this, he also saw -

i) The guide drank from Mr Bertrand's bottle of Madeira and ate a

piece of Mr Bertrand's chicken.

ii) his wife, who had told him she would not be travelling until at least a day later, was coming to meet him in Lucerne with a party of four. Mr Bertrand saw them in a hotel that fell on the way from their home to Lucerne.

When the climbing party came back, they were able to rescue him. Mr Bertrand was able to infer from the reactions of his guide upon confrontation that they had gone up the right slope rather than the left, that two of the pupils had left their appointed places on the rope and that the guide had eaten some Mr Bertand's chicken and drank some of his Madeira. Mr Bertrand also confirmed (by confronting his wife) that his wife had set off for Lucerne with four travelling companions earlier than planned and that she had stayed at the hotel where Mr Bertrand had seen her.

### **The Red MGB**

This is a veridical NDE, which is not an OBE. I stated that we would primarily focus on veridical OBE NDEs, but this is a compelling case by Dr. Greyson. This is a story about a person called Jack who was hospitalised in his mid-20s. There was a nurse who worked with him every day, and the nurse was named Anita. One day, she told him that she would take the weekend off. While Anita was gone, he had a respiratory arrest in which he had an NDE. While in the NDE, he met Anita, who told Jack to tell her parents she was sorry that she had recked the RED MGB. Jack then woke up back in his body in his hospital bed. He told this story to the first nurse he saw as soon as he woke up from his NDE. It was then confirmed that her parents gave Anita a Red MGB for her birthday. It was also confirmed that she crashed into a telephone pole and died just a few hours before Jack's NDE.

## **The sauce on tie incident**

This is another veridical OBE NDE. This was Dr Bruce Greyson's first-ever encounter with NDEs that got him interested in NDEs. This specific case happened to him just a few weeks into his training. There was a patient who had overdosed. The paper regarding this patient was shown to Dr Greyson when he was having his dinner. He was startled by this patient's case and ended up dropping his fork and spilling spaghetti sauce on his tie. He couldn't wipe it off, so he covered it with a lab coat so nobody could see it. He then went down to the patient's roommate and talked to her. He unbuttoned his coat there because he was sweating due to the lack of air conditioning in the 70s. The patient finally became conscious in the morning, and Dr Greyson decided to see her and introduce himself to her. This is when the patient stopped Greyson and said, "I know who you are. I remember you from last night." She then said that she saw Greyson talk to her roommate. She gave an accurate description of the conversation, along with where they were sitting while talking. She also went on to mention that Dr Greyson had a striped tie with a red stain on it. Dr. Greyson confirmed that the patient had not talked to her roommate since she came to the hospital and that she was the only one who saw the red stain.

## **The final big problem**

Let us say that we accept this burden of proof and accept that materialism is false. NDE OBEs show us that the person truly was observing the operation from above. No part of the brain can somehow make our (acknowledging the lack of a better word) "soul" detach from our body and look at it from another perspective.

My point in saying all of this is that NDEs (and even terminal lucidity that I mention below) will never be **concrete** proof of the afterlife/before life. Recently, there has been scientific discourse about how much electrical activity goes on in the brain during clinical death. While there is a scientific consensus that the majority of electrical activity ceases, there is some evidence that some electrical activity, such as gamma waves, may still be observed temporarily even after the heart has stopped. This means that the brain is definitely not capable of overall function, but every sign of “life” has not disappeared at the point of clinical death, at least for a short while. The heart has stopped, the brain is not getting oxygen and nutrients, and the electrical activity has also stopped, at least for the most part. It is to be noted that these gamma waves are very short-term and disappear quickly during clinical death (\*. in Bibliography).

The implication is that clinical death is not the final stage of death, as there is evidence of some detected brain activity after the heart stops for a short while. Another fact to consider is that throughout our history when it was not possible to resuscitate someone from clinical death, it was considered the final stage of death. If someday we are able somehow to resurrect someone from brain death (complete, irreversible cessation of brain activity) and even biological death, those would not be the final stages of death, either.

Hence, the argument that one “came back from death and told his story” will never make sense because it forms an intuitive logical paradox. If someone is dead, how can they come back to life?

Hence, I believe that we should focus on veridical NDEs, try only to prove the existence of the non-physical, and not bother trying to figure out what this non-physical (the afterlife/before/consciousness) is.

Note- it should also be noted that death is a process and not a moment. For example, should the moment the heart stops beating really be considered clinical death, or should the moment the alleged gamma activity stops surging be called clinical death? I raise this point because the second the heart stops beating, consciousness and electrical activity don't instantly disappear and start dissipating, making death more of a process than a moment.

### **Terminal Lucidity**

Terminal Lucidity is a subset of experiences called "paradoxical lucidity". Terminal lucidity is defined as an unexpected return of consciousness, lucidity, memory, and mental clarity shortly before death involving patients with severe psychiatric and neurological disorders. This differs from paradoxical lucidity as that is a bigger term that includes all experiences involving a return to mental clarity (after having psychiatric diseases).

There is no scientific consensus or even any satisfying explanations as to how Terminal lucidity and paradoxical lucidity occur.

It should be mentioned that only 6% of the paradoxical lucidity cases did the person live longer than a week. This is to say that 94% of the cases where the person has a return of mental clarity are cases where they die soon after. Hence, this is a majorly death-related phenomenon.

However, since there are documented cases of paradoxical lucidity (especially in Dr. Fenwick's research) where people regain clarity for more than one week, it cannot be called entirely a deathbed phenomenon.

One of the best examples of paradoxical lucidity is the case of Anna Katharina Ehmer.

Anna was a 26-year-old woman. She had severe mental disabilities, lived in an institution for people with mental disorders, and had allegedly never spoken a single word during her life. However, shortly before her death, she unexpectedly sang a church hymn clearly and coherently. Her Caregivers and medical staff at the asylum were witnesses to this miracle.

There are multiple well-documented cases like this. For example, The case involving a 91-year-old woman with advanced Alzheimer's disease who experienced terminal lucidity is documented in the research conducted by Dr. Alexander Batthyány. There are also multiple cases in Dr Peter Fenwick's research where people with severe psychiatric and neurological disorders have come back with mental clarity for a short time before death and conversed with their family members.

There are some explanations for terminal lucidity. I will explain the criticisms to a couple of them. One is the electrical surge of gamma activity that occurs after the heart stops beating. This electrical activity lasts for a short time. This is not a reasonable explanation for veridical OBE NDEs, the reasons I have already stated above. However, when it comes to terminal lucidity, a case could be made that this activity is at least related to the experience. However, it should be noted that "this electrical abnormality could just be cell membrane losing activity because of lack of oxygen. Neuromodulation was also proposed as a theory to explain Terminal lucidity. However, it is an untested hypothesis. Another theory was by Johannes Friedreich. He suggested that the causes of Parkinson's disease and Alzheimer's

disease reversed at a time just before death, allowing for mental clarity. He stated that this could have happened due to fever. However, none of the terminal lucidity cases include a high fever.

## **Conclusion**

As I pointed out in the “What, then, is the correct solution to the mind-body problem?” section, my sole purpose in writing this paper was to give what I believe to be empirical evidence for the non-physical. The first part of this paper was to provide a clear introduction to the mind-body problem and the proposed solution to both sides, but my primary purpose was to prove that materialism was not valid. I would also like to clarify that the other two perspectives that I mentioned, dualism (in the sense that matter and mind are two of the fundamental substances) and idealism, are probably not the entire story either, but an introduction to a set of ideas that could hypothetically fit in our scientific model given that we acknowledge NDEs and terminal lucidity as empirical evidence for the existence of the non-physical.

“It’s like trying to draw an odour with a crayon.” In this paper, I consciously decided not to focus much on the “more real than real” aspect of NDEs that people who have gone through NDEs talk about even when there is no electrical activity going on in their brains to generate the lucidity of their experiences that they talk about. I chose not to talk about “colours, sounds, and music that could not be described with words” and “cannot be replicated on Earth” claims. I would like to address why.

While these claims happen often in NDEs and are statistically reported to be a majority of people, they are anecdotal and unverifiable. I firmly believe that trying to make someone understand an experience



without them experiencing the experience themselves is impossible through words. I believe this for something as simple as happiness, sadness, anger, etc. For example, is it possible to make someone who has never experienced anger (hypothetically) understand it just through the use of words? Try as we will, it is not possible to describe anger perfectly through words. What use is it, then, trying to explain experiences that are “more real than real”?

The second and most important reason is that claims like that are purely anecdotal and hold no scientific validity. The reason I specifically chose veridical OBE REDs is because the NDEr has details that happened during the surgery that he could not have known unless he saw it or heard it himself.

The three NDE cases that I have stated are handpicked cases that I see as almost flawless in demonstrating this aspect of veridical REDs. This knowledge proves the initial purpose of this paper: that something non-physical exists, at least for a short amount of time.

As for Terminal Lucidity, Although 94% of the paradoxical lucidity patients end up dying less than a week later, the fact that there are even 6% of cases where the patients end up living longer than a week seems to point to the fact that it may very well just be something generated by the brain. Whenever I introduce the concept of terminal lucidity to people, they either say that they will find an explanation for it and never contact me back or wholeheartedly accept that it is an intended phenomenon by God. As I did with NDEs, I will do here again. I believe that we should stand in the middle of these two extremes. Skeptical about the fact that such an experience can indeed be introduced by nature, but also doubtful of the explanation of “God did it to give people happy endings.” Why, then, doesn’t every Alzheimer’s disease, Parkinson’s disease, or schizophrenic patient have paradoxical lucidity or even terminal lucidity? Why did God

choose this specific minority to have this return of mental clarity? There is no well-documented study explicitly investigating the correlation between religious beliefs and the occurrence of terminal or paradoxical lucidity in psychiatric patients. However, it is well-documented and recognised that NDEs are cross-cultural. That is to say, atheists have NDEs, too, and they aren't hellish NDEs either (Not to say that atheists have never had hellish NDEs. Studies on NDEs, such as those by Bruce Greyson and Kenneth Ring, have documented both positive and negative experiences across a wide range of individuals, regardless of their religious beliefs or atheism.

Relating back to Terminal lucidity, there is no evidence at all to suggest that God specifically gives the religious ones NDEs and terminal lucidity. In fact, there is strong evidence against it. Returning to the "Terminal lucidity is caused by nature" explanation, there is no medical consensus on what causes terminal lucidity, and the criticisms for every explanation are strong. Acknowledging the fact that there is an argument that could be made from the psychological and evolutionary perspective, i.e., such a mechanism could be seen as beneficial for both the individual and their social group. For the individual, a peaceful death could reduce suffering. For the social group, witnessing a loved one die peacefully might mitigate grief and provide a sense of closure. However, until and unless we explain how the brain could defeat diseases like Alzheimer's and Parkinson's by itself, and coincidentally usually at the end of life, we will not be able to satisfactorily dismiss Terminal lucidity as evidence for the non-physical, either.

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## **SPECIFICALLY NDEs**

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(limited knowledge of some of the scholarly articles in this due to my limited understanding of med. Science. Most of the things I

**state are direct quotes/ paraphrases of what the doctors have said and their reasonings that make sense to me.)**

**Books that I have read which relate to the topic:**

**Philosophical investigations - Ludwig Wittgenstein**

**Culture and value - Ludwig Wittgenstein**

**Light and Death: One Doctor's Fascinating Account of Near-Death Experiences" - Michael Sabom**