

On Defining ‘Near-Death Experience’, ‘Near-Death Memory’ and ‘Near-Death Report’

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Abstract: In 1975, the physician Raymond Moody published the bestseller *Life after Life*. Moody introduced the term ‘near-death experience’ in his book to describe specific experiences of people who have survived a life-threatening situation. Meanwhile, measuring instruments for the operationalization of near-death experiences have been developed and numerous, partly prospective, clinical studies have been conducted to investigate these experiences. While empirical research is already conducted on a high scientific level, there is still room for a systematic foundation for a philosophical and ontological interpretation of near-death experiences. Difficulties associated with the interpretation of near-death experiences are partly caused by the fact that the term ‘near-death experience’ is not used consistently in literature, but ambiguously and vaguely. Following the tradition of Analytic Philosophy, the aim of this work is to lay the linguistic foundations for a philosophical and ontological discussion of near-death experiences. In this context, we will distinguish between a near-death experience, a near-death memory and a near-death report, and present precise definitions of these terms. Finally, different ontological positions that can be formulated with the provided definitions will be presented.

Keywords: Near-Death Experience, Near-Death Memory, Near-Death Report, Near-Death Experience Scale

1. Introduction

In his bestseller *Life after Life* (1975), Raymond Moody presented a qualitative psychological research study, in which he interviewed people who had been revived after being clinically dead [1]. Surprisingly, the interviewees reported that they had certain experiences during their life-threatening condition. To describe the specific experiences of people in those extreme situations, Moody introduced the term ‘near-death experience’ (NDE) [2-4]. “During the past few years I have encountered a large number of persons who were involved in what I shall call ‘near-death experiences’” [5]. To make the contents of NDEs understandable, Moody describes a theoretical and “ideal” near-death experience that contains all the typical elements. This frequently quoted example should also be mentioned here:

“A man is dying and, as he reaches the point of greatest physical distress, he hears himself pronounced dead by his

doctor. He begins to hear an uncomfortable noise, a loud ringing or buzzing, and at the same time feels himself moving very rapidly through a long dark tunnel. After this, he suddenly finds himself outside of his own physical body, but still in the immediate physical environment, and he sees his own body from a distance, as though he is a spectator. He watches the resuscitation attempt from this unusual vantage point and is in a state of emotional upheaval.

After a while, he collects himself and becomes more accustomed to his odd condition. He notices that he still has a ‘body’, but one of a very different nature and with very different powers from the physical body he has left behind. Soon other things begin to happen. Others come to meet and to help him. He glimpses the spirits of relatives and friends who have already died, and a loving, warm spirit of a kind he has never encountered before – a being of light – appears before him. This being asks him a question, non-verbally, to make him evaluate his life and helps him along by showing him a panoramic, instantaneous playback of the major events

of his life. At some point he finds himself approaching some sort of barrier or border, apparently representing the limit between earthly life and the next life. Yet, he finds that he must go back to the earth, that the time for his death has not yet come. At this point he resists, for by now he is taken up with his experiences in the afterlife and does not want to return. He is overwhelmed by intense feelings of joy, love and peace. Despite his attitude, though, he somehow reunites with his physical body and lives.

Later he tries to tell others but he has trouble doing so. In the first place, he can find no human words adequate to describe these unearthly episodes. He also finds that others scoff, so he stops telling other people. Still, the experience affects his life profoundly, especially his views about death and its relationship to life” [5].

Moody identifies 15 recurring elements that are repeatedly mentioned in the accounts of people who had a near-death experience: (1) the ineffability of the experience, (2) hearing that one is declared dead, (3) an intense feeling of peace, (4) the perception of noises, (5) the crossing of a tunnel, (6) the separation of consciousness from the physical body, (7) encountering deceased people, (8) meeting a being of light, (9) a life review, (10) reaching a border, (11) returning to one’s body, (12) trying to communicate, (13) after-effects on one’s life, (14) a new view of death, and (15) the corroboration of the reality of the experience [5, 6]. The described phenomenology of NDEs was largely confirmed by other authors in later studies [7-9].

Reports of near-death experiences are particularly astonishing, since shortly after circulatory arrest, (higher) brain activity is stopped and the brain can no longer function due to lack of oxygen. According to the current materialist paradigm, the human brain is the physical source of human consciousness. Therefore, conscious experiences are considered simply impossible without a functioning brain. So if NDEs were real experiences, this would have serious implications for our understanding of the human brain and consciousness.

2. Operationalization

After Moody provided a phenomenological description of NDEs, it was still necessary to operationalize these experiences. In contemporary research, the two most influential instruments for measuring NDEs are the Weighted Core Experience Index (WCEI) [10] and the Near-Death Experience Scale (NDES) [11].

2.1. Weighted Core Experience Index

A first attempt to develop an instrument to assess the occurrence and intensity of near-death experiences was made by Kenneth Ring [12]. The purpose of Ring’s WCEI is (1) to determine whether a person actually had a NDE and (2) to measure the depth or intensity of the NDE. Ring’s WCEI has been used in numerous empirical studies [7, 10, 13, 14].

As in Moody’s list of elements, the WCEI includes 10 components that occur repeatedly during NDEs. According to

Ring, a person had a NDE if he or she mentions a certain number of the following weighted components in his or her report.

Table 1. Weighted Core Experience Index [10].

No.	Component	Weight
1	Subjective sense of being dead	1
2	Feeling of peace, painlessness, pleasantness, etc.	2-4
3	Sense of bodily separation	2-4
4	Sense of entering a dark region	2-4
5	Encountering a presence/hearing a voice	3
6	Taking stock of one’s life	3
7	Seeing, or being enveloped in, light	2
8	Seeing beautiful colors	1
9	Entering into the light	4
10	Encountering visible “spirits”	3

If the components 1 and 5 to 10 occur in a report, the corresponding score depicted in the column “Weight” is assigned to the experience. A score of either 2 or 4 is assigned to the components 2 to 4, depending on the intensity of the experienced component. As a result, any report on a potential near-death experience can be rated with a WCEI-score of 0 to 29. According to Ring, a “real” NDE or “core experience” has occurred if a person achieves a score of at least 6 for his or her experience. A score of 6 to 9 indicates a moderate NDE (“moderate experiencers”), and a score greater than 9 points to a deep NDE (“deep experiencers”) [10].

Compared to Moody’s list of elements, Ring’s WCEI includes only components that are integral parts of a near-death *experience*. Other elements, such as changes in attitudes or behavior after the NDE, are not mentioned by Ring. This is quite understandable for a systematic empirical research on NDEs. Only if an instrument can determine which persons had a NDE (experimental group) and which did not (control group), can it be empirically investigated whether the experimental group actually differs from the control group in its attitudes and behavior.

Ring has provided a first operational definition of the term ‘near-death experience’ with the WCEI and the cut score of 6. This was an essential step for the measurability of NDEs. In favor of Ring’s operational definition, he (and others) succeeded in actually showing differences between an experimental group (WCEI score of 6 to 29) and a control group (WCEI score of 1 to 5) [10].

Nevertheless, the WCEI raises some questions and potential points of criticism. For example, Ring does not specify the criteria according to which he has weighted the individual components of his index. Without an empirical foundation, the arbitrary determination of the components and their weighting may be criticized. “Ring constructed a Weighted Core Experience Index (WCEI), based on the presence of 10 arbitrarily weighted items” [11]. Furthermore, the WCEI has not been tested for statistical criteria such as internal coherence or reliability prior to its publication and, according to Greyson, shows a low level of discriminant validity. For example, many suicide attempts are accompanied by a kind of life review and a strong sense of

peace, without showing any further characteristics of a NDE as defined by Moody. According to the WCEI, however, a total score of 7 would be assigned to the experience, and a suicide attempt might therefore be erroneously classified as NDE [11]. Because of these points of criticism, Bruce Greyson developed a new and improved instrument for the measurement of NDEs in 1983 – the Near-Death Experience Scale (NDES).

2.2. Near-Death Experience Scale

The NDES is an instrument that has been developed to measure the occurrence and intensity of NDEs on a statistically sound basis. “The ‘gold standard’ in assessing

whether a person has experienced an NDE and the depth of the experience is the Near-Death Experience Scale” [15]. As a result, the NDES has established itself in empirical research on NDEs and is most commonly used in empirical studies [16-23].

Contrary to the WCEI, the NDES contains closed-ended questions that can be answered independently by the test subjects. The NDES consists of four components: a cognitive, an affective, a paranormal and a transcendental component. Each of the four components again contains four questions about the potential NDE, with three weighted response options for each question.

Table 2. Near-Death Experience Scale [11].

No.	Question	Weighted Response
Cognitive Component		
1	Did time seem to speed up?	2 = Everything seemed to be happening all at once; or time stopped, or lost all meaning 1 = Time seemed to go faster than usual, or slower 0 = Neither
2	Were your thoughts speeded up?	2 = Incredibly fast 1 = Faster than usual 0 = Neither
3	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
4	Did you suddenly seem to understand everything?	2 = About the universe 1 = About myself or others 0 = Neither
Affective Component		
5	Did you have a feeling of peace or pleasantness?	2 = Incredible peace or pleasantness 1 = Relief or calmness 0 = Neither
6	Did you have a feeling of joy?	2 = Incredible joy 1 = Happiness 0 = Neither
7	Did you feel a sense of harmony with the universe?	2 = United, one with the world 1 = No longer in conflict with nature 0 = Neither
8	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 Component		
9	Were your senses more vivid than usual?	2 = Incredibly more so 1 = More so than usual 0 = Neither
10	Did you seem to be aware of things going on elsewhere, as if by extrasensory perception?	2 = Yes, and facts later corroborated 1 = Yes, but facts not yet corroborated 0 = Neither
11	Did scenes from the future come to you?	2 = From the world's future 1 = From personal future 0 = Neither
12	Did you feel separated from your physical body?	2 = Clearly left the body and existed outside it 1 = Lost awareness of the body 0 = Neither
Transcendental Component		
13	Did you seem to enter some other, unearthly world?	2 = Clearly mystical or unearthly realm 1 = Unfamiliar, strange place 0 = Neither
14	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
15	Did you see deceased spirits or religious figures?	2 = Saw them 1 = Sensed their presence 0 = Neither

No.	Question	Weighted Response
16	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

Depending on the answer given, test subjects can achieve a score of 0 to 2 points for each question. This results in a potential total score of 0 to 32 on the NDES. According to Greyson, a person experienced an NDE if he or she achieves a total score of at least 7 on the NDES [11, 24]. The cut score of 7 also serves as an operational definition: “A score of 7 or higher [...] defines an experience as an NDE” [25].

Greyson’s cut score of 7 is generally accepted in empirical research on NDEs and is used by numerous other authors [8, 26-30]. The cut score for the occurrence of a NDE was not arbitrarily determined by Greyson, but rests on a statistical and content-related basis. In an empirical study, the NDES was distributed to individuals who claimed that they had a NDE. These persons achieved an average score of 15 points on the NDES, with a standard deviation of 8 points. The cut score of 7 points is exactly one standard deviation below the mean. “A cut-off point 1 SD below the mean should include 84 per cent of all positive cases” [11]. In addition, almost all people with a score of at least 7 points on the NDES stated that their experience was definitely a near-death experience, and not a dream or something similar (unlike people who scored less than 7 points on the NDES) [11]. Greyson’s operational definition is therefore a more precise description of the term ‘near-death experience’ – a term that has been used rather vaguely in the past (e.g. as used by Moody).

In accordance with Ring’s WCEI (and unlike Moody’s list of elements), the questions used in the NDES refer exclusively to experiences during a near-death *experience* (and not, for example, to lifestyle changes after a NDE). In contrast to Ring’s WCEI, the NDES has been tested for various statistical criteria and shows high internal consistency, high split-half reliability and high test-retest reliability. In addition, the NDES correlates highly with the WCEI [11, 31].

Operational definitions (as presented by Ring or Greyson), where the occurrence of a certain phenomenon (a NDE) is inferred from a certain number of experiential qualities accompanying the experience, are not unusual in psychology or medicine. Especially in clinical diagnostics, diseases such as bipolar disorder, Parkinson’s disease, ADHD or schizophrenia are inferred from a (certain) number of typical symptoms [32].

Certainly, a NDE is not an illness; however, since it is usually physicians and psychologists who deal with this phenomenon, the development of test procedures common in these disciplines is perfectly understandable. Nevertheless, operational definitions – even if used in a profitable and knowledge-generating way in empirical sciences – always run the risk of restricting a phenomenon to the experiential qualities occurring in the test procedure. A completely different experience would therefore not be considered as NDE for definitional reasons – even if the experience occurs during circulatory arrest and differs considerably from normal

sensory perception. In addition, instruments such as the NDES must not be used to ontologically infer the existence of NDEs. It is important to consider that people reporting NDEs can only be interviewed *after* the potential NDE has occurred. The issue, whether a person actually experienced an NDE or whether the memory of the alleged experience was perhaps constructed afterwards by the diseased brain, remains unsettled. In order not to draw false (ontological) conclusions, a conceptual differentiation is provided in the next section.

3. Definition

Existing operational definitions of the term ‘near-death experience’ are particularly suitable for empirical research: put into practice, operational definitions make it quite simple to distinguish between the experimental group and the control group [33]. However, operational definitions are less suitable for an ontological interpretation of NDEs. A major problem is that operational definitions more or less assume the existence of NDEs. If people, by definition, had a NDE if they score at least 7 points on the NDES, and there are, in fact, people with a total score of at least 7 points, the question regarding the existence of NDEs seems already decided. Achieving a certain total score on a scale, however, does not prove the actual existence of NDEs. At best, it suggests that some people *believe* they had a NDE.

An appropriate definition of the term ‘near-death experience’ should thus not make any ontological assumptions in this matter and should also allow us to express different ontological positions, for example, rejecting the existence of NDE, equating NDEs with hallucinations, or interpreting NDEs as real events. The matter is further complicated by the fact that there is no universally accepted definition of the term ‘near-death experience’ [34]. For this reason, definitions that do not make ontological assumptions about the existence of NDEs and differentiate conceptually between a near-death experience, a near-death memory, and a near-death report are presented in the following section.

3.1. Near-Death Experience

Moody used the term ‘near-death experience’ to refer to experiences that (a) occurred during clinical death or (b) occurred in a condition in which a person was very close to physical death. Moody points out that he deliberately did not limit himself to experiences of the first category, since there were no significant differences between the experiences of the two categories [5]. Because of the uniform phenomenology of these experiences, Moody applied the term ‘near-death experience’ to both experiences that occurred during clinical death and experiences that occurred when a person was “only” close to death. Almost all researchers of NDEs subsequently adopted this lack of

linguistic differentiation [20, 35-38]. Numerous other authors even go so far as to speak of 'near-death experiences' when the person concerned was neither clinically dead nor in any way close to death, as, for example, in the case of traumatic events [7, 39].

Mixing experiences with different attendant circumstances due to their similarity is understandable for practical purposes. Far fewer people were clinically dead and resuscitated than people who were close to death or experienced a traumatic event. To conduct an empirical study with people of the first category is therefore much more difficult than with those of the second category. However, for a philosophical approach and ontological interpretation of NDEs, we should aim for a higher degree of differentiation.

After all, it makes a difference whether people experience certain things during clinical death or while they are still alive. The first type of experiences would have a much stronger influence on the mind-body problem, and the latter experiences could much more easily be reduced to hallucinations or something similar. For philosophical purposes, we will therefore distinguish between NDEs in the narrower sense and NDEs in the broader sense.

3.1.1. *Near-Death Experience in the Narrower Sense*

The term 'near-death experience in the narrower sense' refers to conscious experiences during clinical death. Our criterion for clinical death is – as usual in medicine – the lack of blood circulation in the body, i.e. a circulatory arrest [12, 26, 32, 40].

Def. 1 A person x has a near-death experience in the narrower sense during a time span z if and only if:

- (1) x has a circulatory arrest during z ;
- (2) x consciously perceives something during z .

We deliberately use the term 'circulatory arrest', not 'cardiac arrest', in the first condition of definition 1. Medical treatment methods (such as cardiac massage) can at least partially maintain blood circulation during cardiac arrest. In this case, the criterion of a complete circulatory arrest, as required in condition 1, is not satisfied. The second condition is very general in order not to exclude any experiences by definition. Our aim is to include the entire spectrum of human perception, both external sensory perception and internal perception (e.g. emotions). It is essential that the individual him- or herself is the perceiving subject, in other words, there has to be conscious experience. Unconscious perception and reaction to stimuli without conscious perception by the individual would therefore not meet the criteria for the occurrence of a NDE in the narrower sense. It is important to understand that definition 1 (like all other definitions) is only a linguistic specification of a particular term, without assuming the existence of NDEs in the narrower sense. Different opinions on the existence or nonexistence of NDEs in the narrower sense are therefore equally compatible with definition 1.

Definition 1 further shows that the term 'near-death experience in the narrower sense' also involves considerable terminological difficulty. Strictly speaking, people with

circulatory arrest were not just close to death, but were actually (clinically) dead [26, 41]. For this reason, Parnia and Young suggest that instead of using the term 'near-death experience (in the narrower sense)', it is more appropriate to use the term 'actual-death experience' [42]. Nevertheless, we will use the term 'near-death experience in the narrower sense' in this paper, since Parnia and Young's suggestion to use the term 'actual-death experience' has not yet asserted itself in empirical research on NDEs.

3.1.2. *Near-Death Experience in the Broader Sense*

Definition 1 provides a specification and precise definition of the first category of experiences mentioned by Moody – experiences during a period of clinical death. The explication of the second category of experiences (experiences when a person is close to death) requires some preparatory work. First, we need to clarify what it means to be close to death. Moody only mentions a few examples that may put a person in a situation where he or she is close to death – including accidents, serious injuries or illness [5]. However, what degree of injury or stage of a terminal illness can be considered "close to death"? Is a person also "close to death" if he or she barely escapes a car accident that would have ended in a deadly crash? These questions show that people have different intuitions that are very difficult to combine in one single definition without mixing categories. Without doubt, a deep coma without any brainstem reflexes is completely different from barely escaping a car accident.

Therefore, it is important for our definition of the term 'near-death experience in the broader sense' that the required physical condition can be determined relatively easily from a medical point of view. As definition 2 will show, a NDE in the broader sense requires a loss of consciousness (in its traditional sense). "NDEs are defined as an altered state of consciousness that occurs during an episode of unconsciousness" [43]. To be more precise, the occurrence of a NDE in the broader sense should require a deep state of unconsciousness – i.e. a comatose state. The most widely used tool to assess the depth of a coma is the Glasgow Coma Scale (GCS). The GCS was developed by Teasdale and Jennett in 1974 and was slightly modified later on [44]. A total score up to 7-8 points on the GCS usually indicates a comatose state and severe brain damage [45-48]. Accordingly, we will assume a comatose state if a person scores less than 8 points on the GCS. This specification allows us to define the term 'near-death experience in the broader sense'.

Def. 2 A person x has a near-death experience in the broader sense during a time span z if and only if:

- (1) x is in a comatose state during z ;
- (2) x consciously perceives something during z .

Definition 2 is structured the same way as definition 1. The only difference is that the first condition of definition 2 requires a comatose state and not – as in definition 1 – a circulatory arrest. Again, the second condition of definition 2 is deliberately kept very general in order not to exclude any experiences by definition.

From a medical point of view, every person with

circulatory arrest is also in a comatose state. Shortly after circulatory arrest, all organs, including the brain, stop functioning [12, 43]. This is why people suffering circulatory arrest achieve the lowest total score on the GCS. It follows that every person with a near-death experience in the narrower sense (definition 1) also has a near-death experience in the broader sense (definition 2), yet the reverse is not true. Near-death experiences in the narrower sense are thus a subset of near-death experiences in the broader sense.

3.1.3. Classic Near-Death Experience

The second condition of definition 1 and definition 2 was kept very general in order not to restrict NDEs (in the narrower or the broader sense) to a certain set of experiences. However, many researchers are interested in investigating only a certain type of near-death experiences – for example, the NDEs described by Moody. Likewise, the WCEI and the NDES are restricted to very specific NDEs. Therefore, it makes sense to conceptually specify these experiences – we will call them 'classic near-death experiences'. As already mentioned, the NDES is the most commonly used instrument to measure NDEs. Accordingly, we will use the cut score of 7 points on the NDES for our next two definitions. First, we will define the term 'classic near-death experience in the narrower sense'.

Def. 3 A person x has a classic near-death experience in the narrower sense during a time span z if and only if:

- (1) x has a near-death experience in the narrower sense during z ;
- (2) x achieves at least 7 points on the Near-Death Experience Scale for his/her experience during z .

According to definition 3, a person has a classic NDE in the narrower sense if he/she has a NDE in the narrower sense (condition 1) and achieves at least 7 points on the NDES for his/her experience (condition 2). This makes classic NDEs in the narrower sense a subset of NDEs in the narrower sense. In an analogous manner, we will explicate the term 'classic near-death experience in the broader sense' in definition 4.

Def. 4 A person x has a classic near-death experience in the broader sense during a time span z if and only if:

- (1) x has a near-death experience in the broader sense during z ;
- (2) x achieves at least 7 points on the Near-Death Experience Scale for his/her experience during z .

Definition 4 is structured the same way as definition 3. It follows that classic NDEs in the broader sense are a subset of NDEs in the broader sense. Possible examples of NDEs that are not classic NDEs are distressing or hellish NDEs that have an extremely negative and disturbing effect on those affected [49, 50]. Little is known about the frequency of this type of NDEs [51]. First, most NDEs are positive, not negative, experiences. Second, measurement tools such as the WCEI or the NDES are the most commonly used instruments in the scientific investigation of NDEs. As a result, there is usually no distinction between NDEs and classic NDEs, and NDEs are equated with classic NDEs. For this reason, non-classic NDEs are frequently not considered "real" NDEs,

and consequently not discussed in further detail. An important advantage of the presented definitions is that different types of NDEs can be differentiated linguistically.

3.2. Near-Death Memory

In the previous section, we differentiated between different types of experiences (each with different physical attendant circumstances). In addition, a distinction should be made between the immediate *experience* during a particular period of time, and the *memory* of the experience [52]. In this section, we will therefore explicate what we mean by 'near-death memory'.

All empirical findings on NDEs are based on information collected after the experiences have occurred. In other words, people are questioned about their experiences during a comatose state or circulatory arrest after their potential NDE (e.g., through an interview with open-ended questions or a questionnaire consisting of closed-ended questions). Of course, a person can only describe what he or she remembers afterwards. However, memories stored in the human brain do not always correspond to actual experiences. Our memories of experiences can be distorted, repressed or fully fabricated – regardless of the fact that the memorized event never actually happened. In Psychology, these memories are called 'false memories'. Examples of obviously false memories are reports of people who believe they have been abducted by aliens. Moreover, various psychological studies have shown that it is possible to deliberately create false memories of childhood experiences in test subjects [53].

An ontological interpretation of NDEs should therefore consider the possibility that alleged NDEs might be based entirely on false memories. Even if NDEs really exist and people remember them after their experience (real memories), these memories might still be distorted. We will therefore distinguish between the near-death experience and the near-death memory of the experience. First, we define the term 'near-death memory in the narrower sense'.

Def. 5 A person x has a near-death memory in the narrower sense of a time span z at a point in time t if and only if:

- (1) z is prior to t ;
- (2) x has a circulatory arrest during z ;
- (3) x believes that he/she consciously perceived something during z at t .

Definition 5 does *not* imply that a person with a near-death memory in the narrower sense actually had a NDE in the narrower sense. It only suggests that a person believes he/she had a NDE in the narrower sense (see condition 3). If a person did not have a NDE in the narrower sense, but has a near-death memory in the narrower sense, we call that 'false near-death memory in the narrower sense'. In an analogous manner, we will explicate the term 'near-death memory a broader sense' in definition 6.

Def. 6 A person x has a near-death memory in the broader sense of a time span z at a point in time t if and only if:

- (1) z is prior to t ;
- (2) x is in comatose state during z ;
- (3) x believes that he/she consciously perceived something

during z at t .

Near-death memories in the narrower sense are thus a subset of near-death memories in the broader sense.

3.3. Near-Death Report

Finally, a distinction should be made between a near-death experience, a near-death memory and a near-death report. Broadly speaking, a near-death report is an account of a NDE [54]. Therefore, a near-death report is not a psychological experience, but a set of sentences. Analogous to the previous definitions, we will explicate the terms 'near-death report in the narrower sense' and 'near-death report in the broader sense'.

Def. 7 A set of sentences m is a near-death report in the narrower sense if and only if there is a person x , a time span z and a point in time t , and the following applies:

- (1) x has a near-death memory in the narrower sense of z at t ;
- (2) m describes what x believes to have consciously perceived during z at t .

Def. 8 A set of sentences m is a near-death report in the broader sense if and only if there is a person x , a time span z and a point in time t , and the following applies:

- (1) x has a near-death memory in the broader sense of z at t ;
- (2) m describes what x believes to have consciously perceived during z at t .

Near-death reports in the narrower sense are a subset of near-death reports in the broader sense. As can be seen in the provided definitions, a near-death report represents the actual beliefs/memories of a person. A made-up story about an alleged NDE would therefore not be considered a "real" near-death report. In contrast, a truthful account of a false near-death memory would be considered a real near-death report. Therefore, we cannot infer the existence of a near-death experience from the existence of a near-death report.

4. Conclusion

From a philosophical point of view, the main question concerns the ontological interpretation of NDEs. Are NDEs real experiences, or are they just hallucinations caused by the dying brain? Although this question cannot be answered with the presented definitions, they allow different ontological positions to be formulated clearly and precisely. In the tradition of Analytical Philosophy, this is a necessary step for a future systematic ontological discussion.

A highly skeptical position, for example, would reject both the existence of NDEs in the broader sense and the existence of near-death memories in the broader sense. In this case, near-death reports in the broader sense would be no more than made-up stories. However, the definitions presented in this paper also allow more differentiated critical positions to be expressed. One could, for example, reject the existence of NDEs in the broader sense, yet at the same time believe in the existence of near-death memories in the broader sense.

According to this view, it is assumed that the brain created false memories during the process of waking up from a coma. Likewise, a person might believe in the existence of NDEs in the broader sense, but not in the existence of NDEs in the narrower sense. In this case, NDEs would be most likely equated with hallucinations that may be caused by a serious medical condition. Finally, one might also argue near-death reports in the narrower sense support the "survival hypothesis", according to which there is a life after death [55]. According to this point of view, a person might very well believe in the existence of NDEs in the narrower sense.

The current discussion on NDEs is primarily led by scientists conducting empirical research. We hope that this topic will also be treated more intensely in philosophy in the future. The aim of this paper is thus to provide a basis for future systematic ontological discussions.

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