Memento Cum Mortuus Es: Memory, Identity, and Near-Death Experiences

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> Sir L.C., one of the most famous apothecaries of Paris had in Italy, 25 years ago, a malign fever, and was treated by French physicians and surgeons, and sustained many blood-letters. After the last phlebotomy – which was very important – he had a syncope and was unconscious for such a long time that the assistants were particularly worried. He reported that after having lost all external sensations, he saw such a pure and extreme light that he thought he was in Heaven (literally: in the Kingdom of the Blessed). He remembered this sensation very well, and affirmed that never of all his life had he had a nicer moment. Other individuals of various ages and sexes reported a very similar sensation in the same circumstances. These observations seem to be comparable to those of a 12th c. theologian, who said that at the moment approaching our body and soul dissolution, the latter is lit by a primary light ray (luminositas lucis primae)?
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> Pierre-Jean du Monchaux, 1740

This account by Pierre-Jean du Monchaux (1733-1766), a French military physician, is the oldest medical or professional case report of a near-death experience (NDE) according to Phillipe Charlier's 2014 Letter to the Editor of *Resuscitation*, a journal dedicated to cardiac arrest. Even with this limited data, the apothecary's experience scored 12 points on the Greyson NDE Scale (Charlier 2014)—a test developed in 1983 to determine the accuracy and depth of a NDE, with a minimum cut-off of 7 points (Greyson 1983). While NDEs have surely been occurring since at least the development of human consciousness, the phenomenon would not be officially recognized or named until Raymond Moody's 1975 *Life After Life*. Even after nearly 50 years of research, it is still barely understood today. In what follows, I will explore the NDE phenomenon and its correlation to memory, identity, and religion. I propose that NDEs have long lasting effects on identity because they involve a transcendental breakdown of the self, the experience of which is integrated and made legible in memory through narrative coherence.

NDEs are loosely categorized as altered states of consciousness which are experienced while facing impending death (Martial et al. 2019, 62; Parnia 2014, 88) – although, as we will see, they do

not necessarily have to involve death at all. While each individual's account will vary in combination, detail, and intensity, scholars have been able to identify a number of major cognitive themes that are common during these experiences. The most well-known aspects of a NDE include feelings of comfort and peace, going through a dark tunnel, being drawn to a bright warm light, meeting deceased loved ones or beings of light, a review of life experiences known as "panoramic memory," and an out-of-body experience (OBE) involving a sense of being separate from the body and entering a new domain where events are perceived from above (Parnia 2014, 79). Other themes include a loss of fear, a sense of "shedding" the body, perceiving a cord which connects the self to the body, nonverbal communication, a sense of benevolence, a personal judgement or education process, learning previously unknown knowledge, acknowledging a hierarchy of levels of understanding, heightened consciousness, new perceptions of the importance of actions and intentions, and an altered value system (Parnia 2014, 88-89). Many explanations have been considered for this phenomenon—including but not limited to hallucinations, electrical activity in a dying brain, and biochemical reactions—but a singular, all-encompassing answer has yet to be found (Parnia 2014, 79-81). These experiences are considered to be generally universal, but research has tended to struggle with small sample sizes—often self-reported, with the possibility of bias or dishonesty—located almost entirely in Western communities.

Some scholars separate from the NDE category the active-death experience (ADE), in which a person has begun the physical process of dying (Parnia 2014), because the distinction allows for comparative research with cardiac arrest patients. Clinical death is defined by cardiac arrest, or cessation of the heartbeat, and is the criteria by which death is declared by physicians (with the rare exception of brain-death). Developments in medical science since the 1960s have made it possible for patients to be resuscitated after clinical death, even after relatively extended periods of time (Parnia 2014, 75-76). Sam Parnia prefers to make this distinction in his research because "the mental

state of cardiac arrest survivors is the closest model to that of a dying brain" (Parnia et al. 2001, 150). Research has found a higher prevalence of NDEs amongst cardiac arrest survivors as well: approximately 10%, although various studies have yielded various results ranging from 6% to 23% (Parnia 2014, 85-86). However, researchers place emphasis on the fact that the 10% statistic of cardiac arrest survivors who have an NDE is not reflective of total NDE occurrence. Rather, this 10% simply reflects those patients who both can recall their experiences and wish to share them, since cardiac arrest is often associated with amnesia and a fear of embarrassment or continued hospitalization may inspire patients to keep their experience a secret (Greyson 2003, 274; Parnia et al. 2001, 149).

There are seven major cognitive themes associated with cardiac arrest cases that are incompatible with conventional NDEs: fear, animals and plants, bright light, family, persecution or violence, deja vu, and recalling events which occurred following initial recovery. This data comes from the AWARE survey: a large, multinational NDE survey that was conducted over the course of four years between 2008 and 2012 with findings published in 2014. Out of 2,060 patients between the United States, United Kingdom, and Austria, 46 of the 101 survivors were able to complete the questionnaire and reported experiences with these themes. Nine of those survivors had conventional NDEs and two described awareness compatible with an OBE, although one was unable to have the accuracy verified. The other was confirmed to be consciously aware for approximately 3 minutes during cardiac arrest—far beyond the first 20-30 seconds after the heart had stopped that are associated with an electrical surge in the brain—and was able to correctly describe features surrounding his cardiac arrest that he should not have been able to experience. While it was not possible to determine if a higher number of patients had experienced awareness but were unable to recall it (Parnia 2014, 85-86), a similar case was reported in a study by Van Lommel et al., and two have been anecdotally described in books by Sabom and Hamilton (Facco,

Agrillo, Greyson 2015, 87). Previous studies between Britain, the Netherlands, and the United States also independently found that some cardiac arrest survivors had experiences involving "lucid, well-structured thought processes, together with reasoning and memory formation," with one patient reporting verifiable visual and audio awareness (Parnia 2014, 85-86). The implication of undetectable consciousness has led to increased medical interest in cardiac arrest NDEs, with some scholars calling for new anesthetic procedures to help alleviate some of the related trauma (West et al. 2022; Olvera-Lopez and Varon 2014).

While closeness to death is an important factor in NDE research—enough so to be in the name—not every experience involves death at all. Many NDE studies include stories in which drugs, alcohol, or spiritual practices such as meditation played a large role. In one study, 46% of participants had drugs or alcohol in their system at the time of their NDEs, and many did not actually experience cardiac arrest or a brush with death (Moore and Greyson 2017, 118). Ketamine in particular has been found to cause "NDE-like" highs, and been described as a way to make NDEs more "accessible" (Martial et al. 2019, 66; Facco, Agrillo, Greyson 2015, 87). "NDE-like" describes phenomena nearly indistinguishable from "classical" NDEs but lacking the four common core experiences of an NDE: OBE, passing into another dimension, perceiving a border or point of no return, and deciding to come back (Martial et. al. 2020, 18; Greyson 2003, 274). In effect, they lack those features which directly correlate with dying and returning in the manner that a resuscitated person theoretically would have. Yet despite these missing factors, little difference has been found in the content or intensity between NDE and NDE-like occurrences (Charland-Verville et al 2014) and their overlap lends credit to explanations that do not rely on biology (Parnia et al. 2001, 150). These two categories of experience thus hold interesting implications about death which push the limits of what science can verify.

One debate amongst researchers is the cultural variability of NDEs. It can be difficult to

determine which aspects of an account are universal as opposed to socially influenced. Yet only two themes appear to be variable: passing through a dark tunnel and undergoing panoramic memory appear to be culturally and religiously determined experiences due to their prevalence in areas with "historic religion" (such as Christianity or Buddhism) as opposed to indigenous cultures (Kellehear 1993). Allan Kellehear reviewed written reports of NDEs from Native American, aboriginal Australian, Micronesian, Melanesian, and Polynesian peoples, which he compared to traditional Western accounts as well as Chinese and Indian experiences in order to determine variation. He found that, while a transitory period of darkness was sometimes reported, there were no tunnel experiences in any of the indigenous accounts. Rather, some form of travel was experienced, whether flying or walking or traveling by boat (Kellehear 1993, 150-152). The tunnel experience was removed from the Greyson NDE Scale when it was determined to not be NDE-specific or helpful for determining the intensity of an experience (Greyson 1983, 377). A later study also showed the tunnel experience to be the only NDE theme to increase in frequency after the publication of *Life After Life* and subsequent popularization of the phenomenon (Athappilly, Bruce, Stevenson 2006). This evidence supported the overall impermeability of core NDE themes from outside influence—as well as the findings from Facco, Agrillo, and Greyson's 2015 study—but it also corroborated Kellehear's conclusion that the tunnel experience is socially determined.

TABLE 1
Summary of Non-Western NDE Features[a]

Country	Source	Cases	Tunnel	OBE	Life Review	Other Beings	Other World
China	Becker (1981, 1984)	20–100	X_c	X	/	/	/
India	Osis & Haraldsson (1977)	64					
	Panricha & Stevenson (1986)	16	X	/	/	/	/
Western New Britain	Counts (1983)	3	X_c	X_c	$/_c$	/	/
Guam	Green (1984)	4	X	/	X	/	/
Native North America	Schorer (1985–86)	2	X	/	X	/	/
Aboriginal Australia	Berndt & Berndt (1989)	1	X_c	X	X	/	/
Maori New Zealand	King (1985)	1	X_c	/	X	/	/

[a]Symbols for table: X_c, conditional negative; X, none reported; /, reported; $/_c$, conditional positive.

Kellehear 1993

Kellehear also found no reports of a life review or panoramic memory experience outside of the Western, Chinese, and Indian cases; and even within those, the details of the experience varied to reflect regional beliefs (for example, the reading of a person's record after death is a widely held Hindu belief in India) (Kellehear 1993, 150). To explain the lack of these experiences amongst his indigenous case studies, Kellehear referenced Butler's 1963 argument that the life review is tied to a search for identity, because (Western) identity is found in memory (Kellehear 1993, 154).

Indeed, it has been determined by scholars that identity is specifically constituted through autobiographical memories – introversive, first-person, "from the inside" memories (Schechtman 2011, 70) that give us information about ourselves rather than the outside world (Schechtman 2011, 76; Hutto 2017, 198). Self-defining memories (SDMs) are a kind of autobiographical memory which help define a person's identity and sense of self. They are "are emotionally intense, vivid, and frequently recalled memories that reflect important themes and conflicts in a person's life" (Cassol et al. 2019, 2). In one study, participants who recalled their NDE as a SDMs also rated their NDE as more central to their identity, and were found to have had richer experiences according to their Greyson NDE scale results. Since SDMs are key to a coherent sense of self continuity and construction of life narratives, NDE memories have thus been found to be particularly important to personal identity and self-defining (Cassol et al. 2019, 7-8). Because NDE-like cases were also included, it was additionally determined that "the self-defining aspect of the [NDE] might be related to its phenomenological content rather than its circumstances of occurrence" (Cassol et al. 2019, 1-2).

Other variations in NDE details can thus be thought of as based on interpretation rather than content. There are natural limitations to NDE research due to communication differences,

since reality is socially determined based on culture and belief (Parnia 2014, 84), which are also tied to language. Not only do these factors change the way that experiences are described but also how they are perceived, encoded, and remembered by the experiencer (Hutto 2017, 193), which are nearly impossible to verify for accuracy. The brain cannot distinguish between real or unreal events, nor memory errors that occurred during encoding (Parnia 2014, 81; Robins 2016, 441; Bernecker 2017, 52). It is easy to wonder the extent to which recalled NDEs even fully encompass what originally occurred for the experiencer.

Regardless, the context that cardiac arrest patients may retain some level of awareness even while no brain activity is detected allows us to firmly contextualize the experiences of survivors and other NDErs as memories rather than hallucinatory or imagined experiences. Additionally, accounts of those memories can generally be trusted as honest. One study comparing NDE memories to real and imagined memories found that NDEs have a greater indication of being real than even verifiably real memories do (Moore and Greyson 2017, 121). Another found that not only were NDE memories real, but they were also not influenced by pre-existing knowledge of NDEs, disproving any theories based on bias or confabulation (Facco, Agrillo, Greyson 2015, 86). Accounts of NDEs were also not found to be embellished over time, even after a period of twenty years—further suggesting their reliability as memories (Greyson 2007), and, thus, as identity-altering phenomenon.

Death and its boundaries—whether personally met or intimately contemplated through mind-altering substances or mysticism—has the ability to alter a person's life and sense of self. According to Georges Bataille, the latter presupposes the former; the breakdown of the self that we can only experience through death (and, for Bataille, sex) is transformational. Humanity evolved in the first place by understanding its own mortality (Bataille 2001). And despite our fear of it, embracing death has proven psychological benefits.

> The conscious awareness of mortality can motivate people to enhance their physical health and reprioritize intrinsically meaningful goals and values, and nonconscious death

> awareness can move people to live up to positive standards and beliefs, such as environmental concern or compassion; build positive relationships with friends, family, and loved ones; encourage helpful community involvement; support peaceful intergroup coexistence; and can foster certain self-enriching behaviors, such as creative expression or the exploration of novelty (Vail et al. 2012, 320).

This list of effects has significant overlap with mystical experiences, with which NDEs tend to be associated (Greyson 2003, 274; Parnia 2014, 82). It should thus be unsurprising that NDEs, with and without impending death, are specifically correlated with "less fear of death, a greater sense of altruism as evidenced by greater love, empathy and responsibility toward others, increased faith and interest in the meaning of life, and less materiality" within six months following the event (Parnia 2014, 79; Cassol et al. 2019, 2; Greyson 2003, 274). Some researchers have gone so far as to suggest a consideration of NDEs in therapeutic settings; ketamine has been recommended for therapeutic use in alleviating death anxiety for the terminally ill due to its resemblance to a NDE (Martial et al. 2019, 66). Of course, not everyone has a positive response to a NDE or awareness of their own mortality, but Bataille warns of this, too: "Man had to move in harmony with an extravagance of nature ending in the profusion of death, but he still had to have the strength to do this. Otherwise a feeling of nausea would gain the upper hand and reinforce the taboos" (Bataille 2001, 88).

At least one set of researchers have called for more room for mysticism in NDE studies (Facco, Agrillo, Greyson 2015, 87). There is an undeniable level of mysticism involved in NDEs and their reliance on memory make a purely empirical approach unreliable; for "our reliance on memory experiences [is] a matter of faith. If memory knowledge is basically a matter of faith, then this faith exists on a par with other faiths" (Bernecker 2017, 59). While religious beliefs do not tend to drastically change after a NDE (Parnia 2014, 89) they provide an interpretive framework with which the memory creates a narrative, allowing for the integration of the experience and its correlated life changes in a legible way. Pierre-Jean du Monchaux ended his account of the

apothecary's NDE with a theological contemplation by which he made his interpretation of events sensible, just as the apothecary had in his own mind. Nearly 300 years later, little has changed.

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