dreammachine

SYSTEMS ARCHITECTURE FOR THE HUMAN MIND



| LOG ID | BOOK REFERENCE | RCT FILTER | CONFIDENCE TIER |
|---|---|---|---|
| **SEC D.1** | DIRECTORY D: THEORETICAL SANDBOX - END-OF-LIFECYCLE THEORIES (Receiver Hypothesis) | **OFF** | **CONSENSUS** |

AUDITED CLAIM

# HARDWARE BUG (MATERIALISTIC REDUCTIONISM)

SYSTEMS MODEL — AS STATED IN THE BOOK

> Clinically, prospective studies show that between 4% and 18% (and up to 39.3% in recent monitored cohorts) of cardiac arrest survivors report conscious **Near-Death Experiences (NDEs)**, though it remains heavily contested whether these experiences occur during absolute **electrocerebral silence** or during periods of covert, residual brain activity.

VALIDATION QUERY

Do patients report conscious near-death experiences (NDEs) occurring during periods of clinical flatline or zero measurable brain activity?

EMPIRICAL FINDING

Extensive clinical resuscitation research demonstrates that a significant minority of cardiac arrest survivors (typically between 4% and 18%, and up to 39.3% in recently monitored clinical cohorts) report conscious **Near-Death Experiences (NDEs)** following clinical death. However, whether these vivid subjective experiences occur during documented periods of absolute **zero measurable brain activity** (electrocerebral silence) or during states of covert, residual, or resurgent brain activity remains highly contested.

PRIMARY ANCHORS

→ Parnia et al., 2023, Resuscitation

→ Van Lommel et al., 2001, The Lancet

ABOUT THIS RECORD

Each claim in the book is decompiled from its IT metaphor into a naked, falsifiable scientific claim, then anchored to a **primary peer-reviewed source**. Claim and anchor are queried against the Consensus academic database (200M+ papers) under a fixed protocol — top-tier **Q1/Q2 journals only**, preprints excluded, human studies only. If a hypothesis fails the audit, the build is rejected: the AI generates the syntax; the peer-reviewed grid validates the physics.

CONFIDENCE TIERS

- **CONSENSUS ◀ this log** — broadly established, highly replicated mechanics.
- **EMERGING** — plausible, actively researched; no universal consensus yet.
- **EXPERIMENTAL** — contested, extrapolated, or purely theoretical.

**RCT FILTER** — Controlled Studies is ON for interventions (a forced action must beat a control) and OFF for mechanisms (so foundational neuroscience isn't blocked).

## THE DREAM MACHINE

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# Yes, patients **do report NDEs** during cardiac arrest, but **proof of zero brain activity** is lacking.

## 1. Introduction

Patients do report conscious near-death experiences during cardiac arrest and other states of profound unresponsiveness, including some cases described as occurring during “clinical death” or when cerebral function was not expected (Parnia et al., 2023; Parnia et al., 2014; Van Lommel et al., 2001). Prospective cardiac-arrest studies consistently find that a minority of survivors later describe memories with NDE features, typically around 4–18% depending on the cohort and definition, with one recent in-hospital series finding 21.4% reporting a transcendent recalled experience of death among interviewed survivors (Van Lommel et al., 2001; Parnia et al., 2001; Parnia et al., 2023). A scoping review of prospective post-arrest studies found incidence estimates ranging from 6.3% to 39.3%, underscoring that the phenomenon is reported but variable across methods and populations (Kovoor et al., 2024).

The harder question is not whether reports exist, but whether they occurred during a documented period of electrocerebral silence or truly zero measurable brain activity. Cardiac arrest usually causes loss of cortical electrical activity within 10–30 seconds, and during CPR brain activity may remain absent or severely disturbed, which is why these reports are scientifically provocative (Angeli-Faez et al., 2025). But the same literature also stresses that the timing of the subjective experience is usually reconstructed retrospectively, not captured in real time, and that direct linkage of an NDE to a period of verified EEG flatline has not been established (Romand & Ehret, 2023; Greyson et al., 2025; Angeli-Faez et al., 2025).

**Do patients report conscious near-death experiences (NDEs) occurring during periods of clinical flatline or zero measurable brain activity?**
Requires at least 5 papers that directly answer your question. Try adjusting your query to find more papers.

FIGURE 1 Research consensus on NDE reports during clinical flatline

Patients clearly report such experiences after cardiac arrest, but the evidence that they occurred during a documented interval of zero measurable brain activity is incomplete rather than conclusive (Angeli-Faez et al., 2025; Parnia et al., 2023).

## 2. Methods

The search ran over more than 170 million research papers indexed in Consensus, spanning Semantic Scholar, PubMed, and other sources. The workflow identified 14,683 papers from the primary query, discovered 1,218 additional papers by citation crawling, and screened 230 machine-filtered papers for relevance. From these, 150 met the relevance threshold after deduplication, and the top 50 were included for this synthesis.

The strategy emphasized six research groups: foundational NDE studies, reports centered on flatline or absent brain activity, technical rephrasings around EEG silence and electrocerebral inactivity, contrasting skeptical interpretations, adjacent states such as coma and syncope, and studies on the limits of consciousness measurement.

### Search Strategy

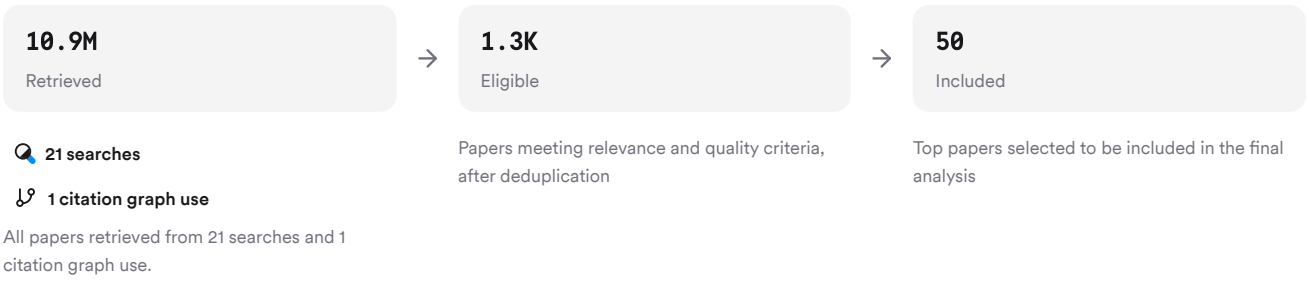


FIGURE 2 Deep search screening flow for NDE flatline literature

Searches combined cardiac arrest, NDE, EEG silence, unresponsiveness, consciousness detection, and measurement-limitation terms to capture both supportive and skeptical evidence.

## 3. Results

### 3.1 Key Papers

Three papers anchor this literature because they prospectively studied survivors after cardiac arrest, rather than relying only on retrospective testimony. The two AWARE studies are the most direct attempts to relate recalled experience to resuscitation timing and physiology, while the 2001 Lancet study established the modern prospective incidence literature (Parnia et al., 2023; Parnia et al., 2014; Van Lommel et al., 2001).

| Paper | Summary |
|---|---|
| (Parnia et al., 2023) | CPR study with EEG monitoring and recalled experiences (Parnia et al., 2023) |
| (Martial et al., 2025) | Prospective awareness study after cardiac arrest (Parnia et al., 2014) |
| (Martial et al., 2019) | Foundational prospective incidence estimate in survivors (Van Lommel et al., 2001) |

FIGURE 3 Key prospective papers on NDEs after cardiac arrest

### 3.2 Cardiac Arrest Evidence

Prospective studies show that recalled experiences after cardiac arrest are real and not rare, but they occur in only a minority of survivors. In AWARE-II, 11 of 28 interviewed survivors reported memories or perceptions suggestive of consciousness, including six with transcendent recalled experiences of death (Parnia et al., 2023). In the original AWARE study, 9% had NDEs and 2% described explicit awareness of actual resuscitation events, with one patient judged to have a verifiable period of awareness when cerebral function was not expected (Parnia et al., 2014). Earlier prospective cohorts found 18% reporting NDEs in Dutch hospitals and 11.1% reporting memories after cardiac arrest in a UK cohort (Van Lommel et al., 2001; Parnia et al., 2001).

A later Vienna cohort illustrates why incidence varies with method. Sixteen percent gave a detailed account of impressions after arrest, but only 4% crossed the Greyson threshold for a strict NDE, suggesting that meaningful recalled experience is broader than strict scale-defined NDE (Sterz et al., 2023).

### 3.3 Physiology and Timing

| Feature | Result |
|---|---|
| Study type | Prospective multicenter in-hospital cardiac arrest study (Parnia et al., 2023) |
| Population | 567 in-hospital cardiac arrests (Parnia et al., 2023) |
| Monitoring | Real-time EEG and cerebral oxygenation during CPR (Parnia et al., 2023) |
| Main experiential finding | 39.3% of interviewed survivors reported CA memories/perceptions (Parnia et al., 2023) |
| Physiologic finding | Normal delta/theta/alpha EEG patterns emerged up to 35–60 minutes into CPR (Parnia et al., 2023) |
| Limitation | No visual target identifications; one auditory hit (Parnia et al., 2023) |

FIGURE 4 Landmark monitored cardiac arrest study findings

The most direct monitored evidence does not show that NDEs require a literal flat EEG. Instead, it shows that some survivors recalled experiences while intermittent EEG activity compatible with consciousness could emerge during CPR despite severe cerebral ischemia (Parnia et al., 2023).

### 3.4 Measurement Limits and Analog Models

The literature repeatedly warns that “flatline” is often a clinical shorthand, not proof of absolute absence of all brain activity. Reviews note that NDE reports are retrospective and usually gathered after recovery from an unconscious phase, so precise timing remains uncertain (Romand & Ehret, 2023). A recent scale paper on veridical NDEs states that many reported cases lack precise timing confirmation ensuring the perceptions occurred during periods of clinical death or flatlined brain activity (Greyson et al., 2025). Likewise, a 2025 narrative review argues NDEs probably arise during unresponsiveness in cardiac arrest, but also acknowledges there is no evidence directly tying recorded cortical activations during dying or CPR to the subjective experiences (Angeli-Faez et al., 2025).

Controlled analogs show that NDE-like experiences can occur with measurable brain activity rather than brain silence. Syncope experiments induced NDE-like episodes in 36% of volunteers during brief unresponsiveness, accompanied by structured delta, theta, and beta-related activity and higher network complexity (Martial et al., 2024). This supports the broader view that NDE phenomenology can arise from altered but active brain states, not necessarily zero activity (Romand & Ehret, 2023; Martial et al., 2020).

### Results Timeline

NDE research has shifted from survivor testimony to monitored resuscitation and mechanistic models.

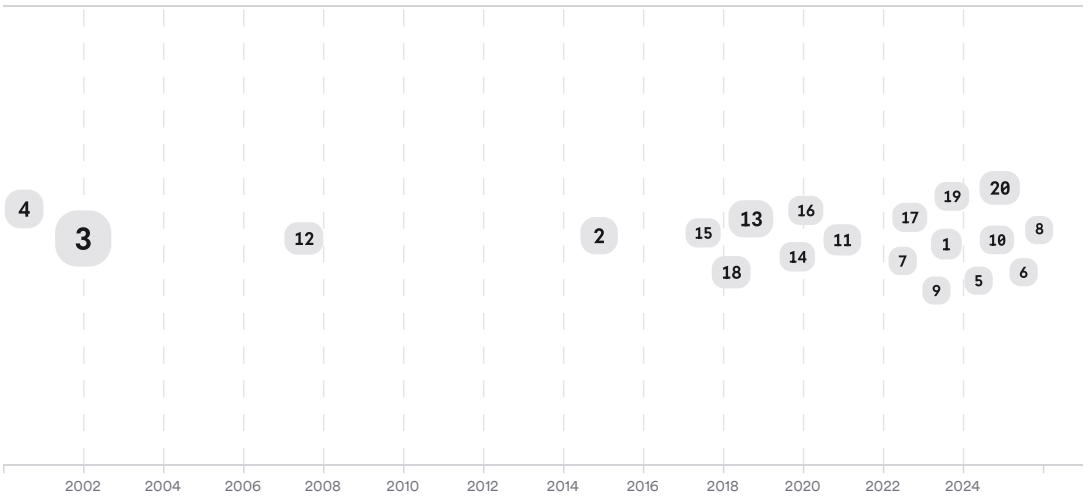


FIGURE 5 Timeline of NDE research; larger markers indicate more citations

Early work established that cardiac-arrest survivors sometimes report NDEs and set rough incidence estimates (Van Lommel et al., 2001; Parnia et al., 2001). Later work emphasized phenomenology, memory stability, and analog models such as syncope, psychedelics, and hypnosis (Greyson, 2007; Timmermann et al., 2018; Martial et al., 2019). The newest phase adds physiologic monitoring during CPR and formal discussion of measurement limits (Parnia et al., 2023; Greyson et al., 2025).

### Top Contributors

| Type | Name | Papers |
|---|---|---|
| Author | C. Martial | [5202946d71f35a62a03e70fb7ece2ab1][ee7fc608909d579c9bc09b7e4fa5319b] [c6a1d76712a859d0b989588955456787][d5b55f06fbab5134972e472e48354aa9] [90ebebb0d83f5738aa7054854a1e068b][2a2044be7407562fb2774c2dbe5dc073] [df994f57b7b65d38ace48254b3b47f8f][386fac91663e59eaa00a6933de9f728f] |
| Author | S. Laureys | [ee7fc608909d579c9bc09b7e4fa5319b][c6a1d76712a859d0b989588955456787] [eedbaf2202cf50c5a6d9706f7b5a02bc][d5b55f06fbab5134972e472e48354aa9] |

| Type | Name | Papers |
|---|---|---|
| | | [90ebebb0d83f5738aa7054854a1e068b][2a2044be7407562fb2774c2dbe5dc073] [df994f57b7b65d38ace48254b3b47f8f][1b80e7c0a15e5c98a475dee42e71345f] |
| Author | S. Parnia | [f003a1fcc7b359c49f2e95295c69efd2][a764b1e291d55b3184a3a1f49c67b0e4] [febe8853d5295574b26b300e9ba15ba2][af7c702efc0a501b8e30bb47dc74eb7a] [8f55e775a4255a3183fa747bac0b5d31] |
| Journal | *Resuscitation* | [f003a1fcc7b359c49f2e95295c69efd2][a764b1e291d55b3184a3a1f49c67b0e4] [af7c702efc0a501b8e30bb47dc74eb7a][8f55e775a4255a3183fa747bac0b5d31] [09229681d4bb5fef9c976cf87a59a531][68c8b5ab1d1d58a3ba8daf832ea8b6b9] |
| Journal | *Explore* | [e8c7edfbc6a153c0aca4b2fdb7d2e009][c368acb0ec0d5e9f8f33c363a35e2972] [d4ce2975c8e9560685cfc1d3c8d20bb5] |
| Journal | *Frontiers in Psychology* | [3ae5933506a158e584e22b324bc29991][27bf570ba6cd5693bd8f7e48f58edf8f] [f583b3a259b854609333b4b07f53a88a][15f00b01d895546ebd10ba600bec4ecc] |

FIGURE 6 Authors and journals appearing most often in corpus

## 4. Discussion

The strongest conclusion is narrow: survivors do report conscious experiences after cardiac arrest, sometimes including vivid, structured, and stable memories that meet standard NDE criteria (Greyson, 2007; Martial et al., 2017; Peinkhofer et al., 2019). These reports are not confined to one country or one design and appear across prospective cardiac-arrest cohorts, ICU cohorts, and qualitative series (Rousseau et al., 2023; Kovoor et al., 2024; Cassol et al., 2018).

The weaker and contested conclusion is the specific claim that these experiences occur during verified zero measurable brain activity. The main obstacle is temporal resolution: most studies interview survivors days to years later, so the experience could have arisen before full circulatory collapse, during partially perfusing CPR, or during early recovery rather than during true electrocerebral silence (Romand & Ehret, 2023; Hashemi et al., 2023; Angeli-Faez et al., 2025). This matters because modern work shows residual or resurgent covert brain activity can exist in states once labeled unconscious, including command-following on EEG or fMRI in 25% of unresponsive disorders-of-consciousness patients (Bodien et al., 2024).

A second limitation is measurement itself. “Zero measurable brain activity” depends on what is measured, where, and when. AWARE-II detected EEG patterns consistent with consciousness during CPR in some patients with severe ischemia (Parnia et al., 2023). Syncope and drug models also reproduce NDE-like phenomenology with active neural signatures rather than silence (Martial et al., 2024; Timmermann et al., 2023). By contrast, some authors interpret the mismatch between lucid reports and expected loss of cortical activity as evidence for consciousness beyond the brain, but that interpretation remains controversial and not directly proven by simultaneous physiology and report (Angeli-Faez et al., 2025; Greyson et al., 2025).

| Claim | Evidence Strength | Reasoning | Papers |
|---|---|---|---|
| Patients report NDEs after cardiac arrest and other critical illness. | Strong | Replicated prospective cohorts and reviews show nontrivial incidence. | (Van Lommel et al., 2001; Rousseau et al., 2023; Kovoor et al., 2024) |
| Some reports describe awareness during resuscitation when normal consciousness was not expected. | Moderate | Prospective AWARE data support reports, but verified cases are rare. | (Parnia et al., 2014; Parnia et al., 2023) |

| Claim | Evidence Strength | Reasoning | Papers |
|---|---|---|---|
| NDEs are proven to occur during documented zero measurable brain activity. | Weak | Timing is usually retrospective, and direct proof is missing. | (Angeli-Faez et al., 2025; Greyson et al., 2025) |
| Altered but active brain states can generate NDE-like phenomenology. | Strong | Syncope, ketamine, DMT, and hypnosis studies support mechanistic plausibility. | (Martial et al., 2024; Timmermann et al., 2018; Martial et al., 2019) |
| Existing measurements likely miss some covert consciousness near death. | Moderate | CPR EEG findings and covert-consciousness literature support this possibility. | (Parnia et al., 2023; Bodien et al., 2024) |

FIGURE 7 Key claims and evidence strength across included studies

## 5. Conclusion

The literature supports a clear yes to the first half of the question and a no to the strongest version of the second half. Patients do report conscious NDEs after cardiac arrest, sometimes with features implying awareness during profound unresponsiveness, but current evidence does not prove that these experiences occurred during a documented period of absolute brain flatline or zero measurable activity (Van Lommel et al., 2001; Parnia et al., 2014; Greyson et al., 2025). The most defensible interpretation is that NDEs occur around periods of critical brain compromise, while their exact timing relative to complete electrical silence remains unresolved (Angeli-Faez et al., 2025; Parnia et al., 2023).

### Research Gaps

The largest gaps concern precise timing, better physiologic monitoring during arrest, and distinguishing true absence of brain activity from limits of current detection.

| Topic/Outcome | RCT Data | Real-Time EEG | Precise Timing | External Verification | Long-Term Follow-Up |
|---|---|---|---|---|---|
| Cardiac arrest NDE incidence | GAP | 4 | 2 | 3 | 4 |
| NDEs during EEG flatline | GAP | 1 | GAP | 1 | GAP |
| ICU and non-cardiac critical illness | GAP | 1 | 1 | GAP | 2 |
| Analog models of NDE-like states | GAP | 4 | 4 | GAP | 1 |

### Open Research Questions

Future studies need synchronized physiology and post-recovery interviewing rather than retrospective inference alone.

| Question | Why |
|---|---|
| **Do recalled NDEs map to specific EEG or cerebral oxygenation patterns during CPR?** | This would directly test whether conscious experience tracks residual, resurgent, or absent measurable brain activity. |

| Question | Why |
| --- | --- |
| **Can hidden auditory targets be verified during monitored cardiac arrest more reliably than visual targets?** | Auditory cues may remain more accessible than visual perception during resuscitation and offer a practical test of connected awareness. |
| **How often does covert consciousness occur in critical illness without later explicit recall?** | This would separate the biology of conscious experience from the separate problem of memory formation and retrieval. |

In short, patients do report NDEs around clinical flatline, but the literature has not yet shown that these experiences happen during proven zero measurable brain activity.

*These search results were found and analyzed using Consensus, an AI-powered search engine for research. Try it at https://consensus.app. © 2026 Consensus NLP, Inc. Personal, non-commercial use only; redistribution requires copyright holders' consent.*

## References

Angeli-Faez, B., Greyson, B., & Van Lommel, P. (2025). Near-death experience during cardiac arrest and consciousness beyond the brain: a narrative review. *International Review of Psychiatry, 37*, 130 - 141. https://doi.org/10.1080/09540261.2025.2503729

Bodien, Y. G., Allanson, J., Cardone, P., Bonhomme, A., Carmona, J., Chatelle, C., Chennu, S., Conte, M. M., Dehaene, S., Finoia, P., Heinonen, G., Hersh, J. E., Kamau, E., Lawrence, P. K., Lupson, V., Meydan, A., Rohaut, B., Sanders, W. R., Sitt, J., . . . Schiff, N. (2024). Cognitive Motor Dissociation in Disorders of Consciousness. *The New England journal of medicine, 391*, 598 - 608. https://doi.org/10.1056/nejmoa2400645

Cassol, H., Petre, B., Degrange, S., Martial, C., Charland-Verville, V., Lallier, F., Bragard, I., Guillaume, M., & Laureys, S. (2018). Qualitative thematic analysis of the phenomenology of near-death experiences. *PLoS ONE, 13*. https://doi.org/10.1371/journal.pone.0193001

Greyson, B., Long, J., Holden, J., Jourdan, J., King, R. A., Mays, S., Mays, R., Rivas, T., Tassell-Matamua, N., Van Lommel, P., Woollacott, M., & Tressoldi, P. E. (2025). The veridical Near-Death Experience Scale: construction and a first validation with human and artificial raters. *Frontiers in Psychology, 16*. https://doi.org/10.3389/fpsyg.2025.1661390

Greyson, B. (2007). Consistency of near-death experience accounts over two decades: are reports embellished over time?. *Resuscitation, 73 3*, 407-11. https://doi.org/10.1016/j.resuscitation.2006.10.013

Hashemi, A., Oroojan, A. A., Rassouli, M., & Ashrafizadeh, H. (2023). Explanation of near-death experiences: a systematic analysis of case reports and qualitative research. *Frontiers in Psychology, 14*. https://doi.org/10.3389/fpsyg.2023.1048929

Kovoor, J., Santhosh, S., Stretton, B., Tan, S., Gouldooz, H., Moorthy, S., Pietris, J., Hannemann, C., Yu, L., Johnson, R., Reddi, B., Gupta, A. K., Wagner, M., Page, G. J., Kovoor, P., Bastiampillai, T., Maddocks, I., Perry, S., Wong, M.-L., . . . Bacchi, S. (2024). Near-death experiences after cardiac arrest: a scoping review. *Discover Mental Health, 4*. https://doi.org/10.1007/s44192-024-00072-7

Martial, C., Piarulli, A., Gosseries, O., Cassol, H., Ledoux, D., Charland-Verville, V., & Laureys, S. (2024). EEG signature of near-death-like experiences during syncope-induced periods of unresponsiveness. *NeuroImage*, 120759. https://doi.org/10.1016/j.neuroimage.2024.120759

Martial, C., Simon, J. R., Puttaert, N., Gosseries, O., Charland-Verville, V., Nyssen, A., Greyson, B., Laureys, S., & Cassol, H. (2020). The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation.. *Consciousness and cognition, 86*, 103049. https://doi.org/10.1016/j.concog.2020.103049

Martial, C., Mensen, A., Charland-Verville, V., Vanhaudenhuyse, A., Rentmeister, D., Bahri, M., Cassol, H., Englebert, J., Gosseries, O., Laureys, S., & Faymonville, M. (2019). Neurophenomenology of near-death experience memory in hypnotic recall: a within-subject EEG study. *Scientific Reports, 9*. https://doi.org/10.1038/s41598-019-50601-6

Martial, C., Charland-Verville, V., Cassol, H., Didone, V., & Laureys, S. (2017). Intensity and memory characteristics of near-death experiences.. *Consciousness and cognition, 56*, 120-127. https://doi.org/10.1016/j.concog.2017.06.018

Martial, C., Fritz, P., Gosseries, O., Bonhomme, V., Kondziella, D., Nelson, K., & Lejeune, N. (2025). A neuroscientific model of near-death experiences. *Nature Reviews Neurology, 21*, 297 - 311. https://doi.org/10.1038/s41582-025-01072-z

Parnia, S., Shirazi, T. K., Patel, J. K., Tran, L., Sinha, N., O'Neill, C., Roellke, E., Mengotto, A., Findlay, S., Mcbrine, M., Spiegel, R., Tarpey, T., Huppert, E. L., Jaffe, I., Gonzales, A., Xu, J., Koopman, E., Perkins, G., Vuylsteke, A., . . . Deakin, C. (2023). AWAreness during REsuscitation - II: A Multi-Center Study of Consciousness and Awareness in Cardiac Arrest.. *Resuscitation*, 109903. https://doi.org/10.2139/ssrn.4246760

Parnia, S., Spearpoint, K., De Vos, G. D., Fenwick, P., Goldberg, D., Yang, J., Zhu, J., Baker, K.-A., Killingback, H., McLean, P., Wood, M., Zafari, A., Dickert, N., Beisteiner, R., Sterz, F., Berger, M. L., Warlow, C., Bullock, S., Lovett, S., . . . Schoenfeld, E. (2014). AWARE-AWAreness during REsuscitation-a prospective study.. *Resuscitation, 85 12*, 1799-805. https://doi.org/10.1016/j.resuscitation.2014.09.004

Parnia, S., Waller, D. G., Yeates, R., & Fenwick, P. (2001). A qualitative and quantitative study of the incidence, features and aetiology of near death experiences in cardiac arrest survivors.. *Resuscitation, 48 2*, 149-56. https://doi.org/10.1016/s0300-9572(00)00328-2

Peinkhofer, C., Dreier, J., & Kondziella, D. (2019). Semiology and Mechanisms of Near-Death Experiences. *Current Neurology and Neuroscience Reports, 19*. https://doi.org/10.1007/s11910-019-0983-2

Romand, R., & Ehret, G. (2023). Neuro-functional modeling of near-death experiences in contexts of altered states of consciousness. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.846159

Rousseau, A., Dams, L., Massart, Q., Choquer, L., Cassol, H., Laureys, S., Misset, B., Dardenne, N., Gosseries, O., & Martial, C. (2023). Incidence of near-death experiences in patients surviving a prolonged critical illness and their long-term impact: a prospective observational study. *Critical Care, 27*. https://doi.org/10.1186/s13054-023-04348-2

Sterz, F., Berger, M. L., Ruzicka, G., & Beisteiner, R. (2023). Lapses of the Heart: Frequency and Subjective Salience of Impressions Reported by Patients after Cardiac Arrest. *Journal of Clinical Medicine, 12*. https://doi.org/10.3390/jcm12051968

Timmermann, C., Roseman, L., Williams, L. T. J., Erritzoe, D., Martial, C., Cassol, H., Laureys, S., Nutt, D., & Carhart-Harris, R. L. (2018). DMT Models the Near-Death Experience. *Frontiers in Psychology, 9*. https://doi.org/10.3389/fpsyg.2018.01424

Timmermann, C., Roseman, L., Haridas, S., Rosas, F., Luan, L. X., Kettner, H., Martell, J., Erritzoe, D., Tagliazucchi, E., Pallavicini, C., Girn, M., Alamia, A., Leech, R., Nutt, D., & Carhart-Harris, R. L. (2023). Human brain effects of DMT assessed via EEG-fMRI. *Proceedings of the National Academy of Sciences of the United States of America, 120*. https://doi.org/10.1073/pnas.2218949120

Van Lommel, P., Van Wees, R., Meyers, V., & Elfferich, I. (2001). Near-death experience in survivors of cardiac arrest: a prospective study in the Netherlands.. *Lancet, 358 9298*, 2039-45. https://doi.org/10.1016/s0140-6736(01)07100-8