

Can psychedelics provide a glimpse into the experience of death?

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The subjective perception of death cannot be examined due to the nature of the notion. However, a person returning to life from the ongoing dying process can provide information about this mysterious mental state. Despite being famous for consuming a large amount of oxygen and glucose, the human brain has physiological mechanisms that make it quite resilient to anoxia (lack of oxygen) and ischemia (lack of blood supply), according to new evidence [1].

Near-death experiences (NDEs), thus, allow researchers to study the recollections of what people perceive during the dying process. While some people attribute NDEs to abnormal brain activity, a review of studies on this topic suggests that the patterns of experiences in NDEs are not consistent with those observed in hallucinations, illusions, or psychedelic drug-induced experiences [2].

While NDEs are heavily dependent on life-threatening circumstances, the use of psychedelic drugs is relatively more controlled. These two share certain similarities that indicate the potential value of examining psychedelic effects for scientific research purposes. Some believe that the human body produces a large amount of *N, N-Dimethyltryptamine* (DMT) in certain extreme physiological or mental conditions (such as dying), which induces alternative states of consciousness. However, the use of DMT as a psychedelic drug is less likely to cause permanent changes in one's perceptions and outlook compared to NDE [3]. The phenomenological similarity needed to justify DMT being the underlying cause of NDEs is lacking.

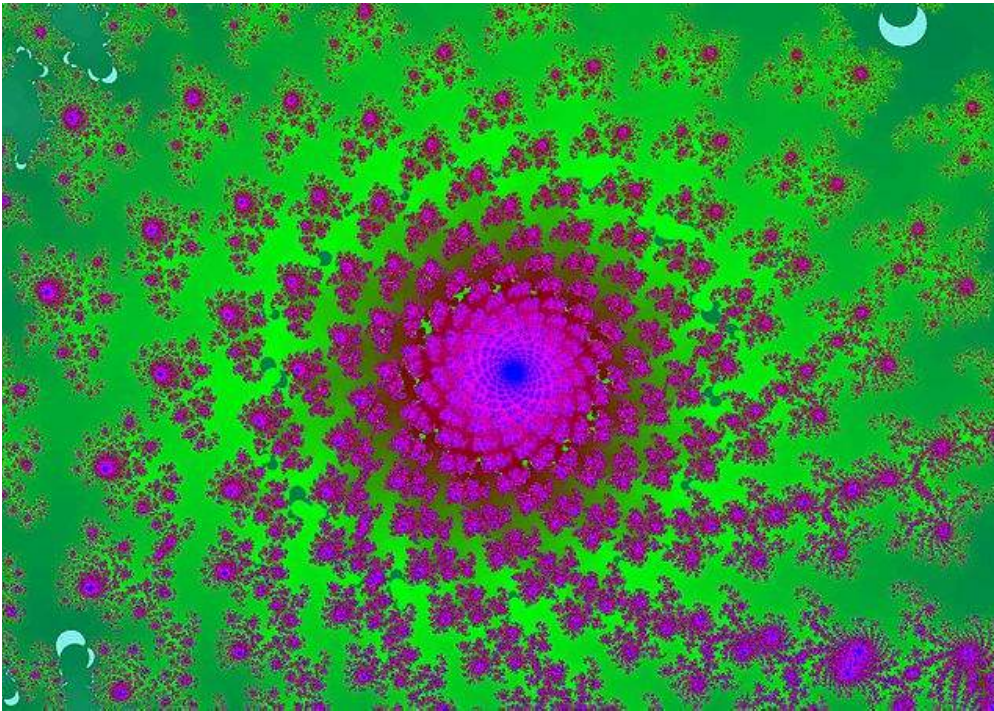


Figure: Fractal art by Nmondal (CC BY-SA 3.0); https://commons.wikimedia.org/wiki/File:Fractal_art_1361248_o.jpg

A recent study published in PLoS ONE compares the changes in attitudes toward death between people with NDE and those who use LSD, DMT, psilocybin, or ayahuasca [4]. The study has a relatively large sample with 933 non-drug-experience participants and 2259 psychedelic-experience participants. Both groups were reported to show similar changes in attitude, such as reduced fear of death and a high rating of spiritual significance. The NDE group was more likely to refer to the experience as the single most meaningful one in their lives. However, mystical feelings (e.g., oneness, transcendence, awe, etc.) were reported to be stronger in psychedelic experiences. Overall, both types of experiences induce positive psychological changes and give a more profound meaning to the concept of death.

From the viewpoint of information processing [5], the normal state of consciousness largely involves a high degree of information filtering – most of which is processed automatically without awareness. For example, one normally is unaware of the eyes' natural blind spots, or that raw visual inputs are upside down. On more advanced cognitive levels, social norms and personal beliefs can distort the interpretation of information based on trusted values stored in one's mindset. During NDEs or psychedelic-induced alternative states of consciousness, the filtering system may be partially inactivated or may not normally work due to insufficient nutrient supply (in NDEs) or neurochemical changes (by psychedelics). The temporary cessation of the filtering system may break various established boundaries

within the subjective sphere of influence, including self-perception [6]. Thus, information that is normally automatically discarded or distorted can now be allowed to enter the range of awareness.

Human awareness capacity is extremely limited compared to the existing information in the universe. Hopefully, with the help of research on mysterious physiological and psychological phenomena, someday, we will be able to unveil the mystery of the death experience fully.

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