

Letters to the Editor

Optical Imaging and Near-Death Experiences

To the Editor:

Optical imaging has been described as "a new technique for investigation of the organization of the sensory and motor cortices, language, and other cognitive processes" of the human cortex (Haglund, Ojemann, and Hochman, 1992, p. 668). Michael Haglund, George Ojemann, and Daryl Hochman measured optical changes in five persons undergoing surgery for intractable epilepsy, mapped the sensory cortex and Broca's area on two awake patients under local anesthesia, and mapped Wernicke's area in three other patients. These investigators concluded that while their initial studies had some technical problems, "[n]evertheless, high resolution optical imaging of human epileptic and functional regions has the potential to allow studies of the fine structure of epileptic foci and cognitively evoked optical changes during motor, language, and memory tasks" (p. 671).

While Haglund, Ojemann, and Hochman did not mention near-death experiences (NDEs), I wonder whether optical imaging also has the potential to allow studies of the fine structure of the neuroanatomical site of the NDE. The near-death literature contains suggestions of a possible connection between the temporal lobes and NDEs. Melvin Morse, Paul Castillo, David Venecia, Jerrold Milstein, and Donald Tyler (1986) and Morse and Paul Perry (1990) based their temporal lobe/Sylvian fissure causal pathway model of the NDE on the work of Wilder Penfield and Theodore Rasmussen (Penfield, 1955; Penfield and Rasmussen, 1950), who reported that a few patients with epilepsy described something akin to an out-of-body experience when selective points along the Sylvian fissure were electrically stimulated.

Cherie Sutherland (1992) noted that Russell Noyes and Roy Kletti, Ernst Rodin, and Daniel Carr had each suggested a connection between the temporal lobes and NDEs prior to the Morse group's proposed model. Noyes and Kletti (1977) pointed out the possible association of NDEs with temporal lobe excitation; Rodin (1980) believed NDEs might be related to temporal lobe seizures; and Carr (1982)

suggested that NDEs may be similar to temporal lobe epilepsy or electrical brain stimulation.

Thus if Haglund, Ojemann, and Hochman continue to use the new technique of optical imaging on persons with intractable epilepsy, it is conceivable that one of these patients may have a near-death-like experience from the cortical stimulation or may actually undergo an NDE perhaps related to the surgery itself. Should an NDE occur during an optical imaging study, presumably we would then be able to determine the "fine structure" of the cortical area or areas related to the NDE. Such an optical imaging study, as fortuitous as it may be, would then provide us with a more definitive description of the neuroanatomy involved in NDEs. We might then begin to understand something of the nature of how the energy/soul/spirit/consciousness of a near-death or out-of-body experience interfaces with the brain.

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