

BURIED ALIVE IN YOUR OWN SKULL.

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The wheels lock, the car skids, you see the 18-wheeler heading for your windshield. You have just enough time to open your mouth. Then the bite of glass and metal, and merciful blackness.

Somebody's talking. You try to open your eyes, but nothing happens. You can't move or feel anything. In the murmurs around you, you make out a few words: *prognosis, unresponsive, permanent*. They keep talking about somebody who's here, somebody who never speaks and is never spoken to.

A child cries. You've heard that cry before. Out of the blackness, the thought comes at you, engulfing you: The unspeaking person is you. You're dead. And then a more horrible idea: Maybe you're not. You try to call out, to scream. No one knows you're here, awake inside your skull. No one will ever know.

That nightmare is no longer science fiction. Five days ago, *Science* published a [report](#) on a young woman devastated by a car crash in England. For five months after the accident, tests showed no signs of awareness. Doctors declared her vegetative. Then, scientists put her in a Functional Magnetic Resonance Imaging scanner, which tracks blood flow to different parts of the brain. They asked her to imagine playing tennis and walking through her home. The scan lit up with telltale patterns of language, movement, and navigation [indistinguishable](#) from the brains of healthy people. Something was awake inside that woman's skull. Without the scanner, no one but her would have known.

How rarely does this happen? Until a decade ago, fMRI didn't even exist. According to the authors, 60 other vegetative patients have been tested on it and have flunked. The English patient had several factors in her favor: Her injury was traumatic, her brain was largely intact, and she had been vegetative for only a few months. At the other end of the spectrum are people such as Terri Schiavo. Their injuries are caused by oxygen starvation, their brains are [liquefied](#), and they've been vegetative for years. By various estimates, [25,000 to 35,000](#) Americans have been diagnosed as vegetative. How many of them have received fMRI scans? How many would light up? How many are awake in there?

The scientists who studied the English patient [report](#) that in the five months after her injury, "No elaborated motor behaviors, which are regarded as 'voluntary' or 'willed'

responses, were observed from the upper or lower limbs. There was no evidence of orientation, fixation greater than 5 seconds or tracking to visual or auditory stimuli. No overt motor responses to command were observed." In short, she was "unresponsive." She met the standard for a vegetative diagnosis, displaying "no reproducible evidence of purposeful behavior." In an analysis that accompanies the study, a French neuroscientist notes that she repeatedly failed to "manifest" such behavior.

Then they put her in the machine and gave her the imagination test. Result: "Significant activity was observed" in key brain areas. She managed "to respond to [commands] through her brain activity, rather than through speech or movement. Moreover, her decision to cooperate with the authors by imagining particular tasks when asked to do so represents a clear act of intention." According to the attached analysis, her "patterns of brain activation" suggest "an active mental performance."

Nothing about the patient changed. What changed was the test—and with it, our definitions of evidence and activity. Before the scan, "behavior," "response," "action," and "performance" were things done by your visible body. To be "manifest," "observed," or counted as "evidence," they had to be external. By making the brain's blood flow observable, the scan expanded our understanding of physical reality and human agency. Thought is activity. Imagination is performance. Intention, which used to be defined as separate from action, is now an "act of intention."

Try stretching your mind to comprehend that reality: a technology that stretches reality to comprehend your mind. Outside the scanner, your thoughts are invisible, immeasurable, meaningless. Inside it, they're visible, measurable, real. One minute, you aren't there. The next, you are.

Now scientists are debating what goes on in the English patient's head. Some call her performance a "decision"; others dismiss it as a mere "response." They ask why her body doesn't move, since her [motor pathways appear to be preserved](#). The analysis in *Science* concludes that she has a "rich mental life" but may not be "conscious." What in God's name does that mean? Would you pull the plug on a 24-year-old relative with a rich and responsive but unconscious mental life? Go ahead, raise your hand. Or just think about raising it, and we'll record your vote by brain scan.

Most hospitals don't have equipment that can find trapped souls like the English patient. Does the reality of your mental life depend on which hospital you're taken to? Does it depend on which tests your insurance covers or your family can afford? The Bible says it's harder for a rich man to get into heaven. Is it harder for a poor man to get out of hell?

In the forest, the old question goes: If a tree falls, and nobody hears it, does it make a sound? Does a vegetable not matter if no animal perceives it? In the city, the puzzle is different. What falls when a car jumps a curb is a person, not a tree. If nobody sees her thinking, is she a vegetable? Or should the rest of us animals look harder?