Unlocking Locked-in State

Lay summary of the following article, written for a science writing class:
https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002593
(Note: The article has now been retracted.)

Imagine becoming totally paralyzed, unable even to blink at will, while still experiencing your full range of thoughts and emotions. How would you communicate with the world around you?

This is the terrifying reality for people in "locked-in state," who have literally become locked inside their own bodies. No one has yet found a way to communicate with those in locked-in state, but a new study offers hope that this could change.

Researchers worked with four patients with ALS who were in or entering locked-in state. Patients were hooked up to functional near infrared spectroscopy (fNIRS) sensors, a kind of souped-up headband that measures changes in blood flow near the front of the brain. Using the changes registered by fNIRS, researchers interpreted patients' responses to a small range of personal or open questions with yes/no answers.

We're not at the point of having socratic dialogues with patients in locked-in state, but these findings suggest that a small conversational repertoire might be possible. For people who have been trapped inside their own minds, even such a modest step could mean the difference between emotional imprisonment and freedom.