

Translational Neuroscience

Cogito ergo sum: A commentary

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Recently, Monti and colleagues reported that they were able to communicate with a patient who was in a vegetative state through simple autobiographical questions requiring “yes” and “no” responses as interpreted with functional MRI.^[2] After establishing control data with the help of 16 normal volunteers and 1 patient, the investigators examined 54 patients diagnosed as in the vegetative state or in the minimally conscious state.

The patient in question, no. 23, was a 22-year-old male, 60.8 months after sustaining a traumatic brain injury. Although totally unable to perceive his environment or react appropriately to it according to the best neurological evaluation he could receive from his physicians, he was able to provide a seemingly organized mental response to the aforementioned simple questions. These findings, as reported, define the most dramatic demonstration of the very essence of *Homo sapiens* as postulated by Rene Descartes when he began his quest of doubt ending in his declaration: I think, therefore I am.^[1] The patient, as reported, seems to be as Descartes envisioned himself to be when he reduced his being to just that which he could identify as “I.” The revelations of Monti and colleagues lead us to pose the question: How much more than “I” is patient 23?

As we move forward in response to the last question, Descartes’ simple yet profound philosophical statement provides direction. The research, of course, must be replicated.^[3] Then come the challenges: clinical, ethical, and legal. In today’s state of medical knowledge, there is nothing more we can do clinically for patient 23. He is who he is, where he is. Ethically, we are led back to the

beginning of our near-half-a-century or more debate on life, living, the nature of humanness, the list of questions goes on. The Multi-Society Task Force on Persistent Vegetative State^[4] and other groups, or their descendents, must look anew at where these patients rest in society. And of course the law will have to relearn from the debate and perhaps recodify what is learned, and how we do and what we do with it.

In the study referenced here, the investigators found similar reactivity in four other patients, or about 10% of those investigated. More importantly, all these patients were classified as in the vegetative state following a traumatic brain injury, as was with a total of 12 of the 54 studied. This means that almost one-half of patients in the vegetative state clinically following a traumatic brain injury may retain reactivity as determined by these methods. These patients, without special clinical needs, will nevertheless inevitably attract much scrutiny in terms of the ethical and legal questions they will generate.

Thus, it stands to reason that they should be distinguished from other patients currently classified as in the vegetative state. We need not expend much energy and time in searching through groups of associated words

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from Latin, English, and French to describe clinically, ethically, or legally, the condition in which patient 23 resides. Rarely have we seen a basic philosophical principle so dramatically and faultlessly reflected in a human condition as is seen here, when the declaration of Descartes is applied to the condition of patient 23. Thus, we propose that the clinical state patient 23 occupies be referred to as the Cartesian stage or state of consciousness, with the patient's findings, MRI data, and all, as the clinical reference for that condition. This will provide a descriptor that goes to the heart of the questions raised by these patients, and is not subject to variations across examiners with regard to clinical findings, as long as organized mental activity can be documented

as with patient 23. In addition, this appellation will be a constant reminder of the philosophical underpinnings of the inquiry which will naturally lead to those of ethics and law.

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