

Neuroethics, Consciousness and Death: Where Objective Knowledge Meets Subjective Experience

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Laura Specker Sullivan (2022) makes a fairly compelling case for the value of the perspectives of Buddhist practitioners in neuroethics. In this study, Tibetan Buddhist monks have been asked, among other things, whether consciousness, in brain-injured patients in a minimally conscious state, entails a duty to preserve life. In our view, some of the participants' responses could be used to inform the bioethical debate on death determination.

In the United States, among other countries, death is determined by the circulatory-respiratory criterion of death or by the brain criterion of death. According to the latter, death has been characterized by the irreversible cessation of all functions of the entire brain, including the brainstem. Since 1968, the brain criterion of death has been and continues to be challenged from multiple and diverse perspectives (Molina-Pérez et al. Forthcoming).

Recently and for the first time since 1981, the brain criterion of death is under revision. Some revision proposals focus only on the cessation of spontaneous breathing and capacity for consciousness—rather than the cessation of all functions of the entire brain,—as a way to determine brain death (see Shewmon 2021).

These revision proposals on the determination of death, focusing on the cessation of spontaneous breathing and capacity for consciousness, are based on the main assumption that consciousness is somehow a production or a function of the brain. In other words, although it is not yet clear how, consciousness is assumed to be caused by brain activity. This assumption allows the subjective experience of consciousness to be objectified, for example in the form of neural activity correlates, by the use of functional magnetic resonance imaging (fMRI) or electro-encephalography (EEG) (Edlow et al. 2017).

The idea that consciousness depends on and/or is caused by brain activity is neither an empirical fact or a scientific theory, but a premise or working hypothesis, i.e. something that is held to be true and that makes it possible to study consciousness within the methodological framework of contemporary neuroscience. This idea may partially be rooted in the debate on the mind-body problem within the Western philosophical tradition. Therefore, revision proposals of the brain criterion of death, focusing on the cessation of spontaneous breathing and ca-

capacity for consciousness, appear to be based on a culturally charged conception of consciousness, the self, and their relationship to the brain. Clinicians have unquestionable expertise in their judgments about human physiology, but they are arguably less authoritative when it comes to issues and concepts that are also philosophical in nature (Rodríguez-Arias et al. 2020).

Western views on consciousness and the self are both reasonable and legitimate, but can be enhanced, complemented, or challenged by other views from different cultural traditions. In particular, if we consider consciousness as a subjective experience, Buddhist practitioners—and anyone with extended experience in observing the mind and communicating their observations in a systematic way—deserve some epistemic authority on consciousness, even if only from a phenomenological point of view. More generally, meditative practices and subjective studies of the mind may shed important light on consciousness and the self, and how they relate to the brain and the body at large. If death is related to consciousness, their insights may be relevant to the determination of death.

In Sullivan's study, two interviewees mention a state of consciousness, called "subtle mind", only attainable by the most experienced practitioners, when meditating individuals appear to be clinically dead but their bodies do not exhibit rigor mortis or decompose (Sullivan 2022). This echoes the teachings of Tibetan scholars, such as Karma Lekshe Tsomo (2006, 65): "...the subtle consciousness may be present even in the absence of any gross conscious functions or physical signs of life such as breathing and pulse. [...] even in the absence of brain function, a person's subtle mental consciousness may continue."

According to the traditional narrative, before passing away, the Buddha attained the state of cessation of perception and feeling, whereby "all of the normal physiological processes are suspended and the subject exists in a state of suspended animation", meaning that "the Buddha, at this point, was poised between life and death" (Keown 2010).

Also, from a Buddhist perspective (Keown 2019, 6): "there is no single seat of consciousness, whether in the

brain or anywhere else. Instead, consciousness is thought to suffuse the body in the way that electricity suffuses the components of a computer”.

Similarly, in Japan, people consider that their true inner self is not “located” in the brain or any one organ but somehow co-extensive with the whole body, meaning that a brain-dead body can be seen both as alive and as a person (Lock 2002).

This raises the question of whether Buddhist views on consciousness, the self, and death are compatible with contemporary science, or, to put it another way, whether science could and should consider Buddhist views when it comes to determining human death. After all, modern science was formed in opposition to Christian and neo-Aristotelian views of nature and humanity, and this secularization strategy is undoubtedly one of the keys to its success.

If the determination of death is a scientific matter, and if the cessation of consciousness is crucial in determining death, the problem lies in determining scientifically if and when consciousness has ceased. Now, what does consciousness mean? As a subjective experience, consciousness might not be the same for, say, an American neurologist or a Tibetan nun, insofar as they might have different experiences of it. What they refer to as consciousness might be phenomenologically different things and, therefore, different phenomena. Moreover, they may have a different intellectual understanding of consciousness, depending on their respective cultural background, language, and education. In particular, they may have a different conception of the fundamental nature of consciousness, its relation to the self, and its relation to the brain and the body.

Therefore, when we talk about determining scientifically the cessation of consciousness—as a way to determine death,—what are we talking about? Are we referring to what the American neurologist understands by consciousness, from her particular subjective experience and her worldview, or to what the Tibetan nun understands by this term, or to something that, being universal, can be experienced and conceived in different ways from different points of view? When seeking an unbiased scientific criterion of death, it may be beneficial to broaden the focus and consider a wide range of views and manifestations of consciousness, both in theoretical or conceptual terms and in terms of subjective experiences and phenomenological explorations, including contemplative practices, especially if they provide novel forms of verifiable experience (Varela 1996).

However, in Sullivan’s study, it is not clear how the subjective experiences of meditation practitioners can be assessed and what exactly is assessed. In semi-structured in-

terviews, interviewees may respond based on what they have learned, i.e., their knowledge, beliefs, and intellectual analyses, rather than based on insights from their meditative practice. From this point of view, such interviews are not necessarily more instructive than the written tradition.

What the written tradition cannot tell us, because it was produced long before the development of life-sustaining technologies, is what happens to patients who have suffered catastrophic brain damage and whose body functions are sustained by artificial means for days, months, even years. What, if anything, do contemporary Buddhist practitioners have to say about consciousness in this situation and about these patient’s vital state? Also, what would experienced meditators have to say about how patients currently considered as brain-dead should be treated in terms of analgesia, withdrawing life-sustaining treatments, or organ procurement? These are interesting questions for further study.

Finally, a relevant notion brought by the interviewees in Sullivan’s study is the notion of family and relationships. According to some interviewees, “ending someone’s life prematurely could have terrible effect for the family” (Sullivan 2022). Matters of life and death may be much broader than the scientific perspective. Matters of life and death touch our humanity, our relationship with one another, a relationship that may not know the visible and traditional boundaries of life and death.

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